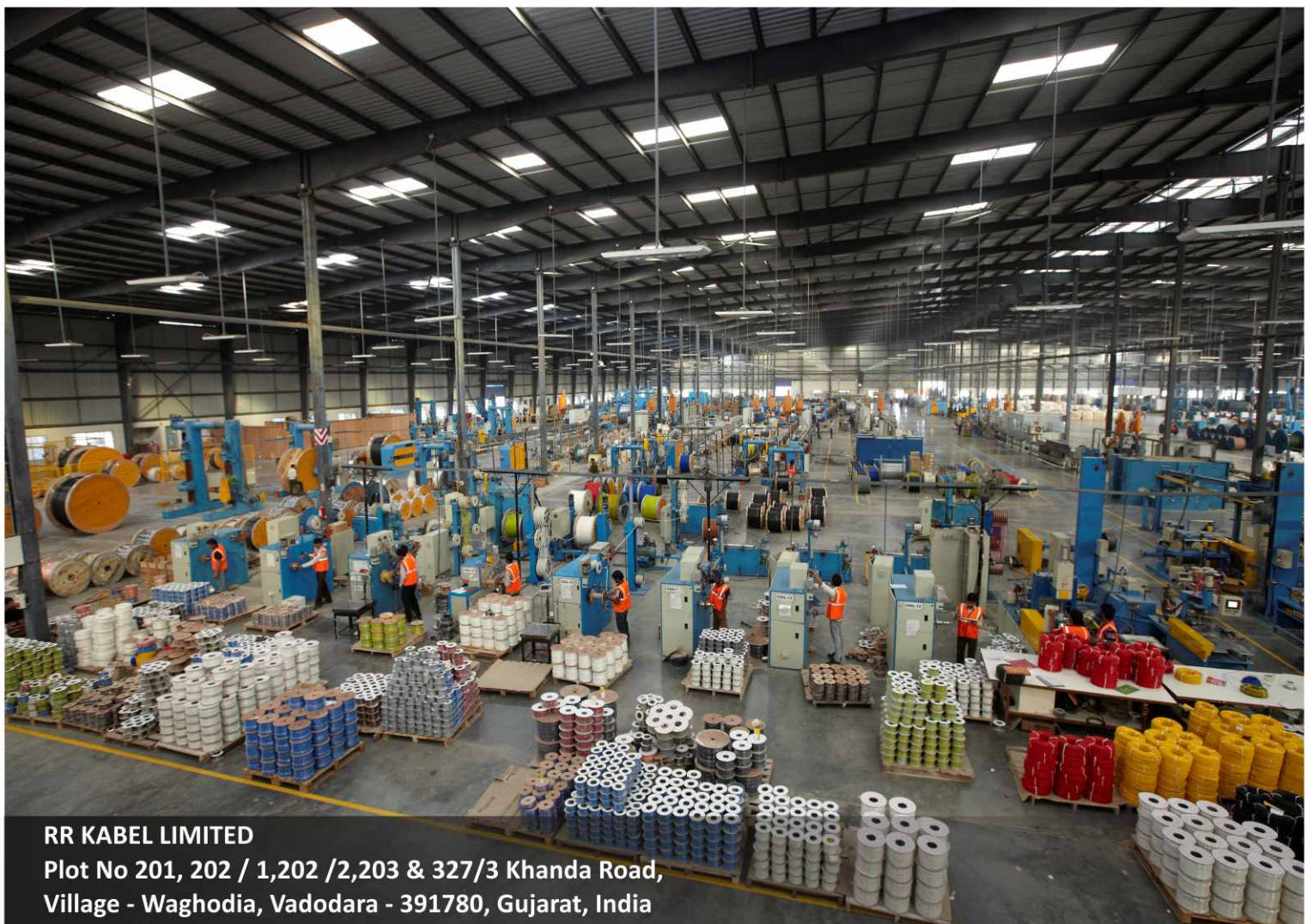






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CHAPTER-I

SINGLE CORES



Single Core flexible cables for electrical panel switch boards upto and including 1100 V

RATNAFLEX-SINGLE CORE



RoHS
COMPLIANT

Technical Data

- **Conductor** : Electrolytic grade annealed copper with high flexibility Class 5 and uniform resistance properties. Conductor with Annealed tin copper can also be made available on request.
- **Cable colours** : Available in Red, Yellow, Blue, Green, Green/Yellow, Grey & Black. Other colors available on request.
Legends in marking on cable : RR KABEL, Ratnaflex ISI, CM/L, CE
- **Insulation** : All insulation grades in PVC exceed the requirements as stated in IS 5831/1984. All grades of insulation offered are ROHS compliant.
- **Packing** : Standard packing of 100 meters in coils. Longer length available as per request.

Table 1 : Variants available

Brand	Applications	Specifications
RATNAFLEX	General wiring of panels for use in max operating temp upto & including 70°C	IS 694, IS 8130 Class 5, IS 5831
RATNAFLEX FR	Wiring in high density & critical installations	IS 694, category C 1, IS 8130 Class 5, IS 5831
RATNAFLEX FRLSH	Wiring in public places	BS 6004/IEC 60227-3/EN 50525-2-31 - H07V-K, H05V-K

Table 2 : Cable as per International Specification

Brand	Applications	Specifications
RR KABEL HFFR	Wiring for critical installation in public places & in vicinity of electronic systems	IEC 60228 Class 5, IEC 60332-1 & 3, IEC 60754-1 & 2
HR PVC 80°C/105°C	In high ambient temperature panels which can withstand up to & including 105°C	BS 6004-H07V2-K, BS 6231-type CK, UL 1569 300V, UL 1015 600V, UL 1275 600V
PVC 70°C	Wiring in public places & fire prone areas	IS 694, Category C2, IS 8130 Class 5, IS 5831

PHYSICAL AND ELECTRICAL PROPERTIES

PART NUMBER	Nominal Cross Section mm ²	No. Of strands/ Max. Strand Diameter mm	Max. DC Conductor Resistance at 20°C Ω /km	Nominal Insulation Thickness mm	Nominal Diameter over insulation mm	Max. Permissible current
01 01 001C 0X50	0.5	16/0.2	39.0	0.6	2.1	5
01 01 001C 0X75	0.75	24/0.2	26.0	0.6	2.3	8
01 01 001C 0001	1.0	32/0.2	19.5	0.6	2.5	13
01 01 001C 01X5	1.5	30/0.25	13.3	0.6	3.0	17
01 01 001C 02X5	2.5	50/0.25	7.98	0.8	3.5	24
01 01 001C 0004	4.0	56/0.3	4.95	0.8	4.1	30
01 01 001C 0006	6.0	84/0.3	3.30	0.8	4.8	38
01 01 001C 0010	10.0	140/0.3	1.91	1.0	6.1	52
01 01 001C 0016	16.0	126/0.4	1.21	1.0	7.2	70
01 01 001C 0025	25.0	196/0.4	0.780	1.2	9.0	88
01 01 001C 0035	35.0	276/0.4	0.554	1.2	10.2	112
01 01 001C 0050	50.0	396/0.4	0.386	1.4	12.5	146
01 01 001C 0070	70.0	360/0.5	0.272	1.4	14.5	216
01 01 001C 0095	95.0	480/0.5	0.206	1.6	16.3	262
01 01 001C 0120	120.0	608/0.5	0.161	1.6	18.0	310
01 01 001C 0150	150.0	750/0.5	0.129	1.8	20.0	355
01 01 001C 0185	185.0	931/0.5	0.106	2.0	22.3	415
01 01 001C 0240	240.0	1200/0.5	0.0801	2.2	25.3	500
01 01 001C 0300	300.0	1500/0.5	0.0641	2.4	28.0	550
01 01 001C 0400	400.0	2013/0.5	0.0486	2.6	33.0	590
01 01 001C 0500	500.0	2562/0.5	0.0384	2.8	37.0	660
01 01 001C 0630	630.0	3416/0.5	0.0287	2.8	41.5	725

H05V-K and H07V-K



Technical Data

- **Insulation Colour:** Black, Brown, Grey, Orange, Pink, Red, Violet, White Green/yellow
Other Mono colors Yellow and Green are not covered in harmonization
- **Insulation:** PVC (polyvinyl Chloride) T12 to BS EN 50363-3
- **Minimum Bending Radius:** 6 x overall diameter
- **Voltage Rating:** 0.5 to 1 mm² - 300/500V, 1.5 to 240 mm² - 450/750V,
- **Temperature Rating** - Max rated for 70°C applications
- **Standards :** DIN EN 50525-2-31, VDE 0285-525-2-31, BS EN 50525-2-31
- **Conductor:** Class 5 flexible plain/metal coated copper conductor to BS EN 60228:2005 (previously BS6360)

- **Application:** Heat resistant cable designed for internal wiring in switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers.

- **Properties:** PVC self-extinguishing and flame retardant according to IEC 60332-1

No of Cores x Nominal Cross Sectional Area mm ²	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm
H05V-K		
1 x 0.50	0.6	2.10
1 x 0.75	0.6	2.30
1 x 1	0.6	2.45
H07V-K		
1 x 1.5	0.7	3.0
1 x 2.5	0.8	3.6
1 x 4	0.8	4.2
1 x 6	0.8	5.0
1 x 10	1.0	6.7
1 x 16	1.0	7.8
1 x 25	1.2	9.6
1 x 35	1.2	10.5
1 x 50	1.4	13.0
1 x 70	1.4	14.0
1 x 95	1.6	16.2
1 x 120	1.6	17.2
1 x 150	1.8	20.0
1 x 185	2.0	22.3
1 x 240	2.2	25.3

Note: cables up to 1 x 120 mm² certified under DIN EN 50525-2-31(VDE 0285-525-2-31)

Conductors : Class 5 flexible Copper Conductors for Single Core cables

PART NUMBER	Nominal Cross Sectional Area mm ²	Maximum Diameter of Wires in Conductor mm	Maximum Resistance of Conductor at 20°C, Ohm/Km	
			Plain wires	Metal coated wires
H05V-K				
01 02 001C 0X50	0.5	0.21	39.0	40.1
01 02 001C 0X75	0.75	0.21	26.0	26.7
01 02 001C 0001	0.75	0.21	19.5	20.0
H07V-K				
01 02 001C 01X5	1.5	0.26	13.3	13.7
01 02 001C 02X5	2.5	0.26	7.98	8.21
01 02 001C 0004	4	0.31	4.95	5.09
01 02 001C 0006	6	0.31	3.30	3.39
01 02 001C 0010	10	0.41	1.91	1.95
01 02 001C 0016	16	0.41	1.21	1.24
01 02 001C 0025	25	0.41	0.780	0.795
01 02 001C 0035	35	0.41	0.554	0.565
01 02 001C 0050	50	0.51	0.386	0.393
01 02 001C 0070	70	0.51	0.272	0.277
01 02 001C 0095	95	0.51	0.206	0.210
01 02 001C 0120	120	0.51	0.161	0.164
01 02 001C 0150	150	0.51	0.129	0.132
01 02 001C 0185	185	0.51	0.106	0.108
01 02 001C 0240	240	0.51	0.0801	0.0817

Table in accordance with BS EN 60228:2005 (previously BS6360)

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 030 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

H05V2-K and H07V2-K



Technical Dat

- **Standards:** BS/VDE EN 50525-2-31
- **Voltage Rating:** 0.5 to 1 mm² - 300/500V , 1.5 to 35 mm² - 450/750V
- **Conductor:** Class 5 flexible plain/metal coated copper conductor to BS EN 60228:2005 (previously BS6360)
- **Temperature Rating:** Max rated for 90°C applications
- **Insulation Colour:** Black, Brown, Grey, Orange, Pink, Red, Violet, White Green/yellow
Other Mono colors Yellow and Green are not covered in harmonization
- **Insulation:** PVC (polyvinyl Chloride) Ti3 to BS 50363-3
- **Minimum Bending Radius:** 6 x overall diameter

- **Application:** Cable designed for internal wiring in switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers.

- **Properties:** PVC self-extinguishing and flame retardant according to IEC 60332-1

Dimensions

PART NUMBER	No of Cores x Nominal Cross Sectional Area mm ²	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm
H05V2-K			
01 03 001C 0X50	1 x 0.5	0.60	2.10
01 03 001C 0X75	1 x 0.75	0.60	2.30
01 03 001C 0001	1 x 1	0.60	2.45
H07V2-K			
01 03 001C 01X5	1 x 1.5	0.70	3.00
01 03 001C 02X5	1 x 2.5	0.80	3.60
01 03 001C 0004	1 x 4	0.80	4.20
01 03 001C 0006	1 x 6	0.80	5.00
01 03 001C 0010	1 x 10	1.00	6.70
01 03 001C 0016	1 x 16	1.00	7.80
01 03 001C 0025	1 x 25	1.20	9.60
01 03 001C 0035	1 x 35	1.20	10.50

Conductors

Class 5 flexible Copper Conductors for Single Core cables

Nominal Cross Sectional Area mm²	Maximum Diameter of Wires in Conductor mm	Maximum Resistance of Conductor at 20°C, Ohm/Km	
		Plain wires	Metal coated wires
H05V-K			
0.5	0.21	39.0	40.1
0.75	0.21	26.0	26.7
1.0	0.21	19.5	20.0
H07V-K			
1.5	0.26	13.3	13.7
2.5	0.26	7.98	8.21
4	0.31	4.95	5.09
6	0.31	3.30	3.39
10	0.41	1.91	1.95
16	0.41	1.21	1.24
25	0.41	0.78	0.795
35	0.41	0.554	0.565

Note: The configuration mentioned above are for reference purpose only. The conductors shall meet the resistance requirements as per class 5, IS 8130 or the relevant standards as applicable.

Ratnaflex Single Core : They are typically used for wiring in high ambient temperature, such as wiring of internal electrical appliances. Apart from this, Ratnaflex-FRLSH is also used in high density critical installations especially in public places and fire prone areas and vicinity of electronics systems.

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 030 0050 Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

* The above data is indicative and may be revised without prior information.

H05V2-K and H07V2-K



Electrical Characteristics

CURRENT CARRYING CAPACITY (amperes) and **VOLTAGE DROP** (per ampere per metre)

Nominal Cross Sectional Area mm ²	Current Rating(Peak) Amps	Voltage Drop mV/A/m
0.50	8	46.0
0.75	12	31.0
1.00	15	22.0
1.50	20	15.0
2.50	30	9.10
4.00	41	5.70
6.00	53	3.80
10.00	75	2.20
16.00	100	1.40
25.00	136	0.89
35.00	167	0.64

Current ratings are based on a conductor operating temperature of 85°C and an ambient air Temperature of 45°C and assumes single cable isolated in free air.

Correction Factors

Ambient Temperature	45°C	50°C	55°C	60°C	65°C	70°C	75°C
Reduction Factor	1.0	0.97	0.90	0.82	0.73	0.63	0.52

Where Cables are to be grouped, the following factors should be applied :

Number of cables in group	2	3	4	5	6	7	8
Reduction Factor	0.80	0.70	0.65	0.60	0.56	0.53	0.50

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 030 0050
Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

H05Z-K & H07Z-K SINGLE CORES, HALOGEN FREE



- **Technical data:**
- Polyolefin cross linked-insulated single core cables for low emission of smoke and corrosive gases in case of fire to DIN/BS EN 50525-3-41
- **Cable construction:** Bare of tinned copper conductor, fine wire stranded according to DIN/BS EN 60228 cl. 5, Core identification according to DIN/BS EN 50525-1
- **conductor resistance** according to DIN/BS EN 60228 cl.5,
- **Temperature range** -20°C to +90°C
- **Permissible working temperature** at the conductor +90°C
- **Nominal voltage** H05Z-K U₀/U 300/500V, H07Z-K U₀/U 450/750V,
- **Test voltage** 2500 V
- **Minimum bending radius** approx 8 x cable ø
- **Tests:** Self-extinguishing and flame retardant according to EN 60332-1-2
- **Ozone resistant** according to EN 60811-2-1 or HD 505.2.1
- **Smoke density** according to EN 61034-2

- **Application:** Halogen-free single-core wires are used for installation in dry environments for wiring up lighting fixtures and units where valuable assets are to protected from further damage resulting from fire. These cables may be installed on, in and beneath plaster, as well as in closed installation ducts. The direct operating voltages is permitted up to 900 V against ground when they are used in rail-coaches. For the inner wiring of switch boards and distributors are to be used with an alternating nominal voltage up to 1000 V or a direct voltage up to 750 V against ground. CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No of Cores x Nominal Cross Sectional Area mm ²	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm
H05V-K			
01 04 001C 0X50	1 x 0.50	0.6	2.10
01 04 001C 0X75	1 x 0.75	0.6	2.30
01 04 001C 0001	1 x 1	0.6	2.45
H07V-K			
01 04 001C 01X5	1 x 1.5	0.7	3.0
01 04 001C 02X5	1 x 2.5	0.8	3.6
01 04 001C 0004	1 x 4	0.8	4.2
01 04 001C 0006	1 x 6	0.8	5.0
01 04 001C 0010	1 x 10	1.0	6.7
01 04 001C 0016	1 x 16	1.0	7.8
01 04 001C 0025	1 x 25	1.2	9.6
01 04 001C 0035	1 x 35	1.2	10.5
01 04 001C 0050	1 x 50	1.4	13.0
01 04 001C 0070	1 x 70	1.4	14.0
01 04 001C 0095	1 x 95	1.6	16.2
01 04 001C 0120	1 x 120	1.6	17.2
01 04 001C 0150	1 x 150	1.8	20.0
01 04 001C 0185	1 x 185	2.0	22.3
01 04 001C 0240	1 x 240	2.2	25.3

Note:- Dimensions and specifications may be changed without prior notice.

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 030 0050
 Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

H05Z1-K & H07Z1-K SINGLE CORES, HALOGEN FREE



Technical data:

- Halogen free thermoplastic-insulated single core cables for low emission of smoke and corrosive gases in case of fire to DIN/BS EN 50525-3-31
- **Conductor resistance:** according to DIN/BS EN 60228 cl.5
- **Temperature range:** -20°C to +70°C
- **Permissible working temperature:** at the conductor +70°C
- **Nominal voltage:** H05Z1-K U₀/U 300/500V, H07Z1-K U₀/U 450/750V
- **Test voltage:** 2500 V
- **Minimum bending radius:** approx 8 x cable ø
- **Cable construction:** Plain or tinned copper conductor, fine wire stranded according to DIN/BS EN 60228 cl. 5,
- Core identification according to DIN/BS EN 50525-1
- Core insulation of thermoplastic halogen free compound type TI7 to EN 50363-7
- **Core Colour :-** Black, GN/YL, Blue, Brown, Red, White, Grey, Violet, Dark Blue, Yellow, Orange, Blue
- **LSOH** = Low Smoke Zero Halogen-free

Tests:

Self-extinguishing and flame retardant according to EN 60332-1-2 • Ozone resistant according to EN 60811-2-1 or HD 505.2.1 • Smoke density according to EN 61034-2

Application:

Halogen-free single-core wires are used for installation in dry environments for wiring up lighting fixtures and units where valuable assets are to be protected from further damage resulting from fire. These cables may be installed on, in and beneath plaster, as well as in closed installation ducts. The direct operating voltages is permitted up to 900 V against ground when they are used in rail-coaches. For the inner wiring of switch boards and distributors are to be used with an alternating nominal voltage up to 1000 V or a direct voltage up to 750 V against ground. CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No of Cores x Nominal Cross Sectional Area mm ²	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm
H05Z1-K			
01 05 001C 0X50	1 x 0.50	0.6	2.10
01 05 001C 0X75	1 x 0.75	0.6	2.30
01 05 001C 0001	1 x 1	0.6	2.45
H07Z1-K			
01 05 001C 01X5	1 x 1.5	0.7	3.0
01 05 001C 02X5	1 x 2.5	0.8	3.6
01 05 001C 0004	1 x 4	0.8	4.2
01 05 001C 0006	1 x 6	0.8	5.0
01 05 001C 0010	1 x 10	1.0	6.7
01 05 001C 0016	1 x 16	1.0	7.8
01 05 001C 0025	1 x 25	1.2	9.6
01 05 001C 0035	1 x 35	1.2	10.5
01 05 001C 0050	1 x 50	1.4	13.0
01 05 001C 0070	1 x 70	1.4	14.0
01 05 001C 0095	1 x 95	1.6	16.2
01 05 001C 0120	1 x 120	1.6	17.2
01 05 001C 0150	1 x 150	1.8	20.0
01 05 001C 0185	1 x 185	2.0	22.3
01 05 001C 0240	1 x 240	2.2	25.3

Note:- Dimensions and specifications may be changed without prior notice.

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sq mm red colour instead of 100 001 0050, the part number will be 100 030 0050
Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

CHAPTER-II

CONTROL CABLES



RATNAFLEX-M

Multicore flexible cables for appliances & machine tools upto & including 1100 V

Technical Data:

- Flexible cables PVC Insulated and Sheathed for appliances & machine tools upto & including 1100V compact construction. Rugged yet flexible for industrial use. Combination of sheath available depending on type of application.
- Conductor** : Electrolytic grade annealed copper with high flexibility Class 5 and uniform resistance properties. Conductor with annealed tin copper can also be made available on request.
- Sheath colors** : Generally available in Black and Grey colors. White and other colors are offered on special request.
- Insulation** : All insulation grades in PVC exceed the requirements as stated in IS 5831/1984. All grades of insulation offered are RoHS compliant.
- Sheath colors** : Generally available in Black and Grey colors. White and other colors are offered on special request.
- Packing** : 100 mtr. Coils. Longer length made available in suitable wooden drums or spools.
- Legends in marking on cable** : RR KABEL, Ratnaflex M ISI, CM/L, CE

Brand	Applications	Specifications
RATNAFLEX-M	Power cords for appliances, temporary power supplies	IS 694, IS 8130 Class 5, IS 5831
FR	Wiring of critical installations	IS 694, IS 8130 Class 5, IS 5831
FRLSH	Wiring in high density locations	IS 694, IS 8130 Class 5, IS 5831

Sheath color	Packaging
Black, Grey & White	(Available in 100 meters coils. Longer length of 300, 500 & 1000 Meters)

PART NUMBER	No. of cores x Nominal Cross section	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Cable Dimension mm
Round sheathed cable				
02 01 005C 0X50	5 x 0.5	0.6	0.9	7.5
02 01 002C 0X75	2 x 0.75	0.6	0.9	6.5
02 01 003C 0X75	3 x 0.75			6.8
02 01 004C 0X75	4 x 0.75			7.4
02 01 005C 0X75	5 x 0.75			
02 01 002C 0001	2 x 1	0.6	0.9	6.7
02 01 003C 0001	3 x 1			7.1
02 01 004C 0001	4 x 1			7.7
02 01 005C 0001	5 x 1			
02 01 002C 01X5	2 x 1.5	0.7	0.9	7.7
02 01 003C 01X5	3 x 1.5		0.9	8.2
02 01 004C 01X5	4 x 1.5		1.0	9.1
02 01 005C 01X5	5 x 1.5			
02 01 002C 02X5	2 x 2.5	0.8	1.0	8.9
02 01 003C 02X5	3 x 2.5		1.0	9.5
02 01 004C 02X5	4 x 2.5		1.0	10.3
02 01 005C 02X5	5 x 2.5			
02 01 002C 0004	2 x 4	0.8	1.0	10.2
02 01 003C 0004	3 x 4		1.0	10.9
02 01 004C 0004	4 x 4		1.0	11.9
02 01 005C 0004	5 x 4		1.1	13.2

RATNAFLEX-M

PART NUMBER	No. of cores x Nominal Cross section	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Cable Dimension mm
02 01 001C 0X50	1 x 0.5	0.6	0.9	4
02 01 001C 0X75	1 x 0.75	0.6	0.9	4.2
02 01 001C 0001	1 x 1.0	0.6	0.9	4.7
02 01 001C 01X5	1 x 1.5	0.7	0.9	4.9
02 01 001C 02X5	1 x 2.5	0.8	1.0	5.6
02 01 001C 0004	1 x 4.0	0.8	1.0	6.2
02 01 001C 0006	1 x 6.0	0.8	1.0	6.9
02 01 001C 0010	1 x 10	1.0	1.1	8.4
02 01 001C 0016	1 x 16	1.0	1.1	9.5
02 01 001C 0025	1 x 25	1.2	1.3	11.7
02 01 001C 0035	1 x 35	1.2	1.3	12.9
02 01 001C 0050	1 x 50	1.4	1.5	15.6
Twin sheathed cable				
02 01 F02C 0X50	2 x 0.5	0.6	0.9	6.0 x 4.0
02 01 F02C 0X75	2 x 0.75	0.6	0.9	6.4 x 4.1
02 01 F02C 0001	2 x 1	0.6	0.9	6.7 x 4.3
Round sheathed cable				
02 01 002C 0X50	2 x 0.5			6.1
02 01 003C 0X50	3 x 0.5	0.6	0.9	6.4
02 01 004C 0X50	4 x 0.5			6.9

PART NUMBER	No. of cores x Nominal Cross section	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Cable Dimension mm
02 01 002C 0006	2 x 6	0.8	1.1	11.8
02 01 003C 0006	3 x 6		1.1	12.7
02 01 004C 0006	4 x 6		1.2	14.1
02 01 002C 0010	2 x 10	1.0	1.2	14.8
02 01 003C 0010	3 x 10		1.2	15.8
02 01 004C 0010	4 x 10		1.3	17.6
02 01 002C 0016	2 x 16	1.0	1.3	17.0
02 01 003C 0016	3 x 16		1.3	18.0
02 01 004C 0016	4 x 16		1.4	20.1

RATNAFLEX-M

PART NUMBER	No. of cores x Nominal Cross section	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Cable Dimension mm
		Round sheathed cable		
02 01 002C 0025	2 x 25	1.2	1.4	20.5
02 01 003C 0025	3 x 25		1.5	22.1
02 01 004C 0025	4 x 25		1.6	24.6
02 01 002C 0035	2 x 35	1.2	1.5	23.2
02 01 003C 0035	3 x 35		1.6	24.9
02 01 004C 0035	4 x 35		1.7	27.7
02 01 002C 0050	2 x 50	1.4	1.6	26.6
02 01 003C 0050	3 x 50		1.7	29.1
02 01 004C 0050	4 x 50		1.8	32.5

Table 5 : Electrical Parameters on flexible multicore cables IS 694

Corss Sectional Area mm ²	0.5	0.75	1	1.5	2.5	4
No./Size of wire mm	16/0.2	24/0.2	32/0.2	30/0.25	50/0.25	56/0.3
DC resistance at 20°C Ω /km (max.)	39.0	26.0	19.5	13.3	7.98	4.95
Twin core Amps	3.5	6.5	11	13	18	24
Three core Amps	3	5	9	11	14	18
Four core Amps	2.5	4.5	8	10	13	17

Table 6 : Electrical Parameters on flexible multicore cables IS 694

Corss Sectional Area mm ²	6	10	16	25	35	50
No./Size of wire mm	84/0.3	140/0.3	126/0.4	196/0.4	276/0.4	396/0.4
DC resistance at 20°C Ω /km (max.)	3.30	1.91	1.21	0.780	0.554	0.386
Twin core Amps	32	42	56	72	92	124
Three core Amps	24	32	43	56	71	97
Four core Amps	23	30	39	52	66	90

Note - Table 5 + 6, the data mentioned in individual is indicative for ambient temperature of 40°C The conformity of conductor strand diameter and conductor resistance is as per requirements of IS 694 + IS 8130

Table VII : Color codes

Type	Core colors
Single core sheathed	Red, Yellow, Blue, Black, Grey
Twin flat sheathed	Red, Black
Twin round sheathed	Red, Black
Three core round sheathed	Red, Black & Green
Four core round sheathed	Red, Yellow, Blue & Green

Application:

They are used as power cords for appliances such as Hi - power appliances like ovens and as temporary power supplies. They are also used as power cords for appliances that are used in fire prone areas, flame proof equipments, machine tools used in critical locations and heat zones and other high temperature areas.

Note:

Dimensions & Specifications may be changed without prior notice.

JB-500 COLOUR CODED CONTROL CABLES (500 VOLTS)



Technical Data:

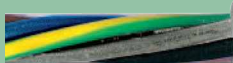
- **Standards:** BS 6500, Table 27 BS EN 50525-2-11
- **Temperature Rating** 70°C
- **Voltage Rating:** 300/500V 300/300V(H03VVH2-F)
- **Minimum Bending Radius:** 5 x overall diameter
- **Conductor:** Class 5 flexible plain copper conductor to BS EN 60228 (previously BS6360)
- **Insulation:** PVC (Polyvinyl Chloride) TI2 to BS EN 50363-3
- **Sheath:** PVC (Polyvinyl Chloride) TM2 to BS EN 50363 -4.1



Application: For use in connections of household appliances, Plant & Machinery, wiring purposes, Manufacturing cords

PART NUMBER	Construction	Conductor construction		Insulation		Cable	
	No. of cores x nominal cross section	Diameter of single wire max	DC electrical resistance at 20°C max	Wall thickness nom.	Diameter of core nom.	Wall thickness of sheath nom.	Approx. Dimension over sheath
	mm ²	mm	Ω/km	mm	mm	mm	mm
	H03VVH2-F						
02 02 F02C 0X50	2 x 0.5	0.21	39.0	0.5	1.9	0.6	5.1 X 3.2
02 02 F02C 0X75	2 x 0.75	0.21	26.0	0.5	2.1	0.6	5.5 X 3.4
	H05VVH2-F						
02 03 F02C 0X75	2 x 0.75	0.21	26.0	0.6	2.30	0.8	6.3 X 4.0
02 03 F02C 0001	2 x 1	0.21	19.5	0.6	2.45	0.8	6.6 X 4.1
	H05VV-F						
02 03 002C 0X75	2 x 0.75	0.21	26.0	0.6	2.30	0.8	6.2
02 03 002C 0001	2 x 1	0.21	19.5	0.6	2.45	0.8	6.4
02 03 002C 1X25	2 x 1.25	0.21	15.6	0.7	2.80	0.8	7.2
02 03 002C 01X5	2 x 1.5	0.26	13.3	0.7	2.95	0.8	7.5
02 03 002C 02X5	2 x 2.5	0.26	7.98	0.8	3.45	1.0	9.1
02 03 003G 0X75	3 G 0.75	0.21	26.0	0.6	2.30	0.8	6.6
02 03 003C 0X75	3 x 0.75	0.21	26.0	0.6	2.30	0.8	6.6
02 03 003G 0001	3 G 1	0.21	19.5	0.6	2.45	0.8	6.9
02 03 003C 0001	3 x 1	0.21	19.5	0.6	2.45	0.8	6.9
02 03 003G 1X25	3 G 1.25	0.21	15.6	0.7	2.80	0.9	7.9
02 03 003C 1X25	3 x 1.25	0.21	15.6	0.7	2.80	0.9	7.9
02 03 003G 01X5	3 G 1.5	0.26	13.3	0.7	2.95	0.9	8.1
02 03 003C 01X5	3 x 1.5	0.26	13.3	0.7	2.95	0.9	8.1
02 03 003G 02X5	3 G 2.5	0.26	7.98	0.8	3.45	1.0	9.7
02 03 003C 02X5	3 x 2.5	0.26	7.98	0.8	3.45	1.0	9.7
02 03 004G 0X75	4 G 0.75	0.21	26.0	0.6	2.30	0.8	7.1
02 03 004C 0X75	4 x 0.75	0.21	26.0	0.6	2.30	0.8	7.1
02 03 004G 0001	4 G 1	0.21	19.5	0.6	2.45	0.8	7.5
02 03 004C 0001	4 x 1	0.21	19.5	0.6	2.45	0.8	7.5
02 03 004G 01X5	4 G 1.5	0.26	13.3	0.7	2.95	1.0	9.1
02 03 004C 01X5	4 x 1.5	0.26	13.3	0.7	2.95	1.0	9.1
02 03 004G 02X5	4 G 2.5	0.26	7.98	0.8	3.45	1.1	10.7
02 03 004C 02X5	4 x 2.5	0.26	7.98	0.8	3.45	1.1	10.7
02 03 005G 0X75	5 G 0.75	0.21	26.0	0.6	2.30	0.9	8.0
02 03 005C 0X75	5 x 0.75	0.21	26.0	0.6	2.30	0.9	8.0
02 03 005G 0001	5 G 1	0.21	19.5	0.6	2.45	0.9	8.4
02 03 005C 0001	5 x 1	0.21	19.5	0.6	2.45	0.9	8.4
02 03 005G 01X5	5 G 1.5	0.26	13.3	0.7	2.95	1.1	10.2
02 03 005C 01X5	5 x 1.5	0.26	13.3	0.7	2.95	1.1	10.2
02 03 005G 02X5	5 G 2.5	0.26	7.98	0.8	3.45	1.2	12.0
02 03 005C 02X5	5 x 2.5	0.26	7.98	0.8	3.45	1.2	12.0

JB 750 COLOUR CODED (750 VOLTS)



RR KABEL JB 750 450/ 750 VOLTS

Technical data:

- **PVC Control cables**, adapted to DIN VDE 0281, 0293, 0295 with insulation thickness for 1.0 kV type
- **Temperature range:** flexing -5°C to +70°C fixed installation -30°C to +70°C
- **Nominal voltage:** U_0/U 0.6/1kV
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Power ratings:** per DIN VDE 0298
- **Minimum bending radius:** flexing 7.5 x cable ϕ , Fixed installation 4 x cable ϕ

Cable construction:

- Bare copper, fine wire conductors, as per DIN VDE 0295 cl. 5, and IEC 60228 cl.5
- Special PVC core insulation T12, to DIN EN 50363-3
- Harmonized core colors to HD 308
- Cables above 5 cores shall have Black core with white figure imprint to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath TM2, to DIN EN 50363-4-1
- Colour Grey (RAL 7001)

Application:

For use in connections of household appliances, Plant & Machinery, wiring purposes, Manufacturing cords

Properties :

- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1 / IEC 60332 -1 (equivalent DIN VDE 0472 part 804 test method B)

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter
02 04 002C 02X5	2 x 2.5	9.1
02 04 003G 02X5	3G 2.5	9.9
02 04 003C 02X5	3 x 2.5	9.9
02 04 004G 02X5	4G 2.5	11.1
02 04 004C 02X5	4 x 2.5	11.1
02 04 005G 02X5	5G 2.5	12.4
02 04 005C 02X5	5 x 2.5	12.4
02 04 006G 02X5	6G 2.5	13.3
02 04 007G 02X5	7G 2.5	14.6
02 04 002C 0004	2 x 4	10.4
02 04 003G 0004	3G 4	11.2
02 04 004G 0004	4G 4	12.5
02 04 005G 0004	5G 4	13.9
02 04 007G 0004	7G 4	16.8
02 04 011G 0004	11G 4	22.3
02 04 003G 0006	3G 6	12.6
02 04 004G 0006	4G 6	14.0
02 04 005G 0006	5G 6	15.5

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter
02 04 007G 0006	7G 6	19.0
02 04 003G 0010	3G 10	16.0
02 04 004G 0010	4G 10	18.0
02 04 005G 0010	5G 10	20.0
02 04 007G 0010	7G 10	23.1
02 04 003G 0016	3G 16	18.5
02 04 004G 0016	4G 16	20.8
02 04 005G 0016	5G 16	23.0
02 04 007G 0016	7G 16	31.0
02 04 003G 0025	3G 25	23.3
02 04 004G 0025	4G 25	26.0
02 04 005G 0025	5G 25	29.0
02 04 003G 0035	3G 35	26.6
02 04 004G 0035	4G 35	29.7

Part Number	No. cores x cross-sec. mm ²	Nominal Cable Diameter
02 04 005G 0035	5G 35	33.1
02 04 003G 0050	3G 50	30.2
02 04 004G 0050	4G 50	33.9
02 04 005G 0050	5G 50	37.6
02 04 003G 0070	3G 70	37.1
02 04 004G 0070	4G 70	41.6
02 04 005G 0070	5G 70	46.3
02 04 003G 0095	3G 95	40.1
02 04 004G 0095	4G 95	44.8
02 04 005G 0095	5G 95	50.2
02 04 003G 0120	3G 120	45.5
02 04 004G 0120	4G 120	50.8
02 04 004G 0150	4G 150	57.0
02 04 004G 0185	4G 185	65.8

Note:- Dimensions and specifications may be changed without prior notice.

Note:-

G = with green-yellow earth core.
X = without Green-Yellow earth core

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC

HEAT RESISTANT FLEXIBLE MULTI CORES

RR KABEL HEAT RESISTANT CABLES

Technical Data:

- **Standards:** BS 6500, Table 29 BS EN 50525-2-11
- **Temperature Rating** 90°C
- **Voltage Rating:** 300/500V(H05V2V2-F) 300/300V(H03V2V2H2-F)
- **Minimum Bending Radius** 5 x overall diameter
- **Conductor:** Class 5 flexible plain copper conductor to BS EN 60228 (previously BS6360)
- **Insulation:** PVC (Polyvinyl Chloride) TI3 to BS EN 50363-3
- **Sheath:** PVC (Polyvinyl Chloride) TM3 to BS EN 50363-4.1



Application: For use in connections of household appliances and internal wiring purposes with high ambient temperatures and humid spaces

PART NUMBER	Construction	Conductor construction		Insulation	Cable	
	No. of cores x nominal cross section	Diameter of single wire max	DC electrical resistance at 20°C max	Wall thickness nom.	Wall thickness of sheath nom.	Nominal Diameter
	mm ²	mm	Ω/km	mm	mm	mm
	H03V2V2H2-F					
02 05 F02C 0X50	2 x 0.5	0.21	39.0	0.5	0.6	5.1 X 3.2
02 05 F02C 0X75	2 x 0.75	0.21	26.0	0.5	0.6	5.5 X 3.4
	H05V2V2H2-F					
02 06 F02C 0X75	2 x 0.75	0.21	26.0	0.6	0.8	6.3 X 4.0
02 06 F02C 0001	2 x 1	0.21	19.5	0.6	0.8	6.6 X 4.1
	H05V2V2-F					
02 06 002C 0X75	2 x 0.75	0.21	26.0	0.6	0.8	6.20
02 06 002C 0001	2 x 1	0.21	19.5	0.6	0.8	6.40
02 06 002C 1X25	2 x 1.25	0.21	15.6	0.7	0.8	7.20
02 06 002C 01X5	2 x 1.5	0.26	13.3	0.7	0.8	7.50
02 06 002C 02X5	2 x 2.5	0.26	7.98	0.8	1.0	9.10
02 06 003G 0X75	3 G 0.75	0.21	26.0	0.6	0.8	6.60
02 06 003C 0X75	3 X 0.75	0.21	26.0	0.6	0.8	6.60
02 06 003G 0001	3 G 1	0.21	19.5	0.6	0.8	6.90
02 06 003C 0001	3 X 1	0.21	19.5	0.6	0.8	6.90
02 06 003G 1X25	3 G 1.25	0.21	15.6	0.7	0.9	7.90
02 06 003C 1X25	3 X 1.25	0.21	15.6	0.7	0.9	7.90
02 06 003G 01X5	3 G 1.5	0.26	13.3	0.7	0.9	8.10
02 06 003C 01X5	3 X 1.5	0.26	13.3	0.7	0.9	8.10
02 06 003G 02X5	3 G 2.5	0.26	7.98	0.8	1.1	9.90
02 06 003C 02X5	3 X 2.5	0.26	7.98	0.8	1.1	9.90
02 06 004G 0X75	4 G 0.75	0.21	26.0	0.6	0.8	7.10
02 06 004C 0X75	4 X 0.75	0.21	26.0	0.6	0.8	7.10
02 06 004G 0001	4 G 1	0.21	19.5	0.6	0.8	7.50
02 06 004C 0001	4 X 1	0.21	19.5	0.6	0.8	7.50
02 06 004G 01X5	4 G 1.5	0.26	13.3	0.7	1.0	9.10
02 06 004C 01X5	4 X 1.5	0.26	13.3	0.7	1.0	9.10
02 06 004G 02X5	4 G 2.5	0.26	7.98	0.8	1.1	10.70
02 06 004C 02X5	4 X 2.5	0.26	7.98	0.8	1.1	10.70
02 06 005G 0X75	5 G 0.75	0.21	26.0	0.6	0.9	8.00
02 06 005C 0X75	5 X 0.75	0.21	26.0	0.6	0.9	8.00
02 06 005G 0001	5 G 1	0.21	19.5	0.6	0.9	8.40
02 06 005C 0001	5 X 1	0.21	19.5	0.6	0.9	8.40
02 06 005G 01X5	5 G 1	0.26	13.3	0.7	1.1	10.20
02 06 005C 01X5	5 X 1	0.26	13.3	0.7	1.1	10.20
02 06 005G 02X5	5 G 2.5	0.26	7.98	0.8	1.2	12.00
02 06 005C 02X5	5 X 2.5	0.26	7.98	0.8	1.2	12.00

Note:- Dimensions and specifications may be changed without prior notice.

JB- CY (COLOUR CODED)



Technical data:

- **PVC Control cables**, adapted to DIN/BS EN 50525-2-51
- **Conductor resistance** to DIN/BS EN 60228
- **Temperature range** flexing -5°C to +70°C fixed installation -30°C to +70°C
- **Nominal voltage** U_0/U 300/500 V up to 1.5 mm², U_0/U 450/750 V 2.5 mm² & above
- **Test voltage** 4000 V
- Breakdown voltage min. 8000 V
- **Insulation resistance** min. 20 MOhm x km
- **Mutual capacitance** according to different cross-sections 0.5mm² to 2.5mm²• core/core approx. 150 nF/km core/screen approx. 270 nF/km
- **Minimum bending radius** flexing 20 x cable ø fixed installation 6 x cable ø

Cable construction:

- Bare copper, fine wire conductors, bunch stranded DIN/BS EN 60228 cl. 5,
- Core insulation of TI2, EN 50363-3
- Cores colour coded as per JB/OB colour code
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC inner jacket
- Tinned copper, braided screen, approx 85% coverage
- Transparent special PVC outer sheath Core identification code Up to 5 cores: acc. to VDE 0293-308

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application:

- For use as a data and control cable in machinery, computer systems etc. The screening ensures a high degree of interference protection. The shield density assures disturbance-free transmission of all signals and impulses. The transparent PVC outer sheath o view of the tinned copper braid. These cables are used for medium mechanical stresses.

EMC:- Electromagnetic compatibility To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 07 002C 00X5	2 x 0.5	7.9	37	124
02 07 003G 00X5	3G 0.5	8.3	44	139
02 07 004G 00X5	4G 0.5	8.8	53	168
02 07 005G 00X5	5G 0.5	9.6	60	205
02 07 007G 00X5	7G 0.5	10.2	76	243
02 07 002C 0X75	2 x 0.75	8.3	44	140
02 07 003G 0X75	3G 0.75	8.7	54	160
02 07 004G 0X75	4G 0.75	9.5	66	198
02 07 005G 0X75	5G 0.75	10.1	78	239
02 07 007G 0X75	7G 0.75	10.8	99	286
02 07 002C 0001	2 x 1	8.6	53	156
02 07 003G 0001	3G 1	9.2	65	182
02 07 004G 0001	4G 1	9.8	79	221
02 07 005G 0001	5G 1	10.7	94	272
02 07 007G 0001	7G 1	11.5	122	328
02 07 002C 01X5	2 x 1.5	9.72	66	198
02 07 003G 01X5	3G 1.5	10.2	87	231
02 07 004G 01X5	4G 1.5	11.1	106	286
02 07 005G 01X5	5G 1.5	12.4	129	368

JB- CY (COLOUR CODED)

Dimensions

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 07 007G 01X5	7G 1.5	13.2	165	442
02 07 002C 02X5	2 x 2.5	11.2	95	271
02 07 003G 02X5	3G 2.5	11.8	126	318
02 07 004G 02X5	4G 2.5	13.1	159	412
02 07 005G 02X5	5G 2.5	14.3	193	511
02 07 007G 02X5	7G 2.5	15.4	257	624
02 07 004G 0004	4G 4	13.4	264	565
02 07 005G 0004	5G 4	14.8	317	697
02 07 004G 0006	4G 6	15.6	365	732
02 07 005G 0006	5G 6	17.0	442	909
02 07 003G 0010	3G 10	17.8	453	889
02 07 004G 0010	4G 10	19.7	580	1125
02 07 005G 0010	5G 10	21.6	711	1408
02 07 003G 0016	3G 16	20.7	707	1274
02 07 004G 0016	4G 16	22.6	917	1618
02 07 005G 0016	5G 16	25.2	1128	2047
02 07 003G 0025	3G 25	26.3	1064	1965
02 07 004G 0025	4G 25	28.9	1386	2512
02 07 005G 0025	5G 25	31.8	1708	3153
02 07 003G 0035	3G 35	29.4	1453	2554
02 07 004G 0035	4G 35	32.2	1900	3259
02 07 005G 0035	5G 35	36.0	2347	4133
02 07 003G 0050	3G 50	35.1	2048	3653
02 07 004G 0050	4G 50	38.8	2688	4701
02 07 004G 0070	4G 70	43.7	3732	6229
02 07 004G 0095	4G 95	50.4	4915	8123
02 07 004G 0120	4G 120	56.8	6198	10118
02 07 004G 0150	4G 150	62.2	7600	12511
02 07 004G 0185	4G 185	67.8	9334	15306

Note:

G= with green-yellow earth core.

X= without Green-Yellow earth core (OB)

JB-SY (COLOUR CODED)



Technical data:

- **PVC Control cables** adapted to DIN/BS EN 50525-2-51
- **conductor resistance:** to DIN/BS EN 60228
- **Temperature range: flexing** -5°C to +70°C fixed installation -30°C to +70°C
- **Nominal voltage:** U₀/U 300/500 V to 1.5 mm² U₀/U 450/750 V at 2.5 mm²
- **Test voltage** 4000 V
- **Breakdown voltage:** min. 8000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** flexing 20 x cable ø, Fixed installation 6 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to bunch stranded DIN/BS EN 60228 cl. 5,
- Core insulation of TI2, EN 50363-3
- Cores colour coded as per JB/OB colour code
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC inner jacket
- Galvanized steel wire screening
- Special PVC outer jacket
- Colour transparent (also available in grey) Core identification code Up to 5 cores: acc. to VDE 0293-308

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application:

- These cables are used as measuring and control cables in tool machinery, plant installation, power stations and in data equipment. The steel braid ensures possible protection against mechanical damage. The galvanized coating on the steel wire braiding ensures protection against corrosion and improves soldering properties.
- CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 08 002C 0X75	2 x 0.75	9.0	18	120
02 08 003G 0X75	3G 0.75	9.4	27	138
02 08 004G 0X75	4G 0.75	10.2	36	176
02 08 005G 0X75	5G 0.75	10.9	44	204
02 08 007G 0X75	7G 0.75	11.7	62	250
02 08 012G 0X75	12G 0.75	14.4	107	398
02 08 002C 0001	2 x 1	9.3	24	129
02 08 003G 0001	3G 1	9.9	36	166
02 08 004G 0001	4G 1	10.6	47	196
02 08 005G 0001	5G 1	11.5	59	234
02 08 007G 0001	7G 1	12.3	83	290
02 08 025G 0001	25G 1	19.5	296	857

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 08 002C 01X5	2 x 1.5	10.4	35	171
02 08 003G 01X5	3G 1.5	10.9	52	205
02 08 004G 01X5	4G 1.5	11.9	69	252
02 08 005G 01X5	5G 1.5	13.1	87	307
02 08 007G 01X5	7G 1.5	14.1	122	381
02 08 012G 01X5	12G 1.5	17.3	208	618
02 08 018G 01X5	18G 1.5	19.7	313	873
02 08 025G 01X5	25G 1.5	22.6	434	1183
02 08 032G 01X5	32G 1.5	24.7	556	1480
02 08 002C 02X5	2 x 2.5	11.9	58	238
02 08 003G 02X5	3G 2.5	12.5	87	285

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 08 004G 02X5	4G 2.5	13.8	116	371
02 08 005G 02X5	5G 2.5	15.0	145	442
02 08 007G 02X5	7G 2.5	16.3	203	558
02 08 002C 0004	2 x 4	12.9	92	304
02 08 004G 0004	4G 4	15.0	184	477
02 08 005G 0004	5G 4	16.4	230	574
02 08 003G 0006	3G 6	15.2	207	492
02 08 004G 0006	4G 6	16.6	276	638
02 08 005G 0006	5G 6	18.1	345	770
02 08 004G 0010	4G 10	21.3	470	1042
02 08 005G 0010	5G 10	23.3	588	1270
02 08 004G 0016	4G 16	24.1	783	1479
02 08 005G 0016	5G 16	26.6	979	1858
02 08 004G 0025	4G 25	29.4	1218	2258
02 08 005G 0025	5G 25	32.6	1522	2831
02 08 004G 0035	4G 35	32.4	1715	2955
02 08 005G 0035	5G 35	36.0	2144	3711
02 08 004G 0050	4G 50	38.8	2461	4256

Note:- Dimensions and specifications may be changed without prior notice.

G = Green-Yellow earth core.

X = without Green-Yellow earth core (OB) Further dimensions available on request.

JB- BLACK 0.6/1 kV



JB- BLACK 0.6/1 kV

Technical data:

- **Core identification:** Upto 5 cores: color coded according to VDE 0293-308
From 6 cores: all black core(IJ/OZ), protective conductor gn-ye in the outer most layer
- **Temperature range:** Ocassional flexing -5°C to +70°C fixed installation - 20°C to +70°C
- **Permissible operating temperature:** Max. 70°C at conductor
- **Nominal voltage:** U₀/U 06/1 kV
- **Test voltage** 4000 V
- **Breakdown voltage:** min. 8000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** flexing 15 x cable ø, Fixed installation 4 x cable ø

Cable construction

- Bare copper, fine wire conductors, to DIN / BS EN 60228 cl. 5
- Core insulation of PVC, TI2 to EN 50363-3
- Jacket of TM2, EN 50363-4-1, color black RAL 9005

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2
- Resistant to ultra violet rays

Application:

PVC Single cores suitable for installation for flexible use for medium mechanical stresses with free movement without tensile stress of forced movements in dry, moist and wet rooms as well as outside (fixed installation). Is not suitable to be used as direct burial-or as underwater cable.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 09 002C 0001	2 x 1	8.6	19	101
02 09 003G 0001	3G 1	9.0	28	117
02 09 004G 0001	4G 1	9.6	38	138
02 09 005G 0001	5G 1	10.4	47	164
02 09 002C 01X5	2 x 1.5	9.6	28	129
02 09 003G 01X5	3G 1.5	10.1	42	152
02 09 004G 01X5	4G 1.5	10.8	56	181
02 09 005G 01X5	5G 1.5	11.7	69	216
02 09 002C 02X5	2 x 2.5	10.8	46	173
02 09 003G 02X5	3G 2.5	11.3	69	205
02 09 004G 02X5	4G 2.5	12.2	93	249
02 09 005G 02X5	5G 2.5	13.3	116	301
02 09 004G 0004	4G 4	13.8	147	344
02 09 004G 0006	4G 6	15.1	221	450
02 09 004G 0010	4G 10	18.7	376	723
02 09 004G 0016	4G 16	21.3	626	1058
02 09 004G 0025	4G 25	26.2	974	1623
02 09 004G 0035	4G 35	29.1	1372	2150
02 09 004G 0050	4G 50	35.6	1968	3144
02 09 004G 0070	4G 70	40.5	2747	4245
02 09 004G 0095	4G 95	46.6	3663	5639
02 09 004G 0120	4G 120	53.3	4639	7242

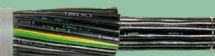
Note:- Dimensions and specifications may be changed without prior notice.

G= Green-Yellow earth core.

X= without Green-Yellow earth core

JZ-500 (NUMBER CODED)

RR KABEL JZ 500



Technical data:

- control cables, PVC insulated and sheathed Requirement adapted to DIN VDE 0245, 0281, 0293, 0295
- Temperature range:** flexing -5°C to +70°C fixed installation -20°C to +70°C
- Nominal voltage** U₀/U 300/500 V
- Test voltage** 4000 V
- Breakdown voltage** min. 8000 V
- Insulation resistance** min. 20 MOhm x km
- Minimum bending radius** flexing 15 x cable ø, Fixed installation 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.5
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC, TM2 to DIN/BS EN 50363-4.1
- Colour grey (RAL 7001)

Properties:

- Extensively oil resistant
- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application

- These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress of forced movements in dry, moist and wet rooms but not suitable for open air, as measuring and control cables in tool machines, conveyor belts, production lines in machinery production, in air-conditioning and steel production. The earth core is laid in the outer layer. Selected PVC-compounds guarantee a good flexibility as well as economics and fast installation.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 10 002C 00X5	2 x 0.5	4.8	9.5	35
02 10 003G 00X5	3G 0.5	5.1	14.0	42
02 10 003C 00X5	3 x 0.5	5.1	14.2	42
02 10 004G 00X5	4G 0.5	5.6	19.0	51
02 10 004C 00X5	4 x 0.5	5.6	19.0	51
02 10 005G 00X5	5G 0.5	6.0	24.0	61
02 10 005C 00X5	5 x 0.5	6.0	24.0	61
02 10 006G 00X5	6G 0.5	6.6	28.5	74
02 10 007G 00X5	7G 0.5	6.7	33.5	80
02 10 007C 00X5	7 x 0.5	6.7	33.5	80
02 10 008G 00X5	8G 0.5	7.9	38.0	103
02 10 008C 00X5	8 x 0.5	7.9	38.0	103
02 10 010G 00X5	10G 0.5	8.8	47.5	130
02 10 012G 00X5	12G 0.5	8.9	57.0	140
02 10 012C 00X5	12 x 0.5	8.9	57.0	140
02 10 014G 00X5	14G 0.5	10.0	66.5	170
02 10 016G 00X5	16G 0.5	10.2	76.0	184
02 10 018G 00X5	18G 0.5	10.5	85.5	200
02 10 020G 00X5	20G 0.5	11.8	95.0	239
02 10 021G 00X5	21G 0.5	11.9	100.0	246
02 10 025G 00X5	25G 0.5	12.9	118.5	293
02 10 030G 00X5	30G 0.5	13.5	142.5	329
02 10 032G 00X5	32G 0.5	14.0	152.0	354
02 10 034G 00X5	34G 0.5	14.3	161.5	373
02 10 040G 00X5	40G 0.5	15.3	190.0	429
02 10 042G 00X5	42G 0.5	16.6	199.0	486
02 10 050G 00X5	50G 0.5	18.2	237.0	581
02 10 052G 00X5	52G 0.5	18.2	246.5	589
02 10 061G 00X5	61G 0.5	19.4	289.5	680
02 10 065G 00X5	65G 0.5	20.4	308.5	740
02 10 080G 00X5	80G 0.5	22.4	379.5	898
02 10 100G 00X5	100G 0.5	25.0	474.0	1119

JZ-500 (NUMBER CODED)

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 10 002C 00X5	2 x 0.5	4.8	9.5	35
02 10 003G 00X5	3G 0.5	5.1	14.0	42
02 10 003C 00X5	3 x 0.5	5.1	14.2	42
02 10 004G 00X5	4G 0.5	5.6	19.0	51
02 10 004C 00X5	4 x 0.5	5.6	19.0	51
02 10 005G 00X5	5G 0.5	6.0	24.0	61
02 10 005C 00X5	5 x 0.5	6.0	24.0	61
02 10 006G 00X5	6G 0.5	6.6	28.5	74
02 10 007G 00X5	7G 0.5	6.7	33.5	80
02 10 007C 00X5	7 x 0.5	6.7	33.5	80
02 10 008G 00X5	8G 0.5	7.9	38.0	103
02 10 008C 00X5	8 x 0.5	7.9	38.0	103
02 10 010G 00X5	10G 0.5	8.8	47.5	130
02 10 012G 00X5	12G 0.5	8.9	57.0	140
02 10 012C 00X5	12 x 0.5	8.9	57.0	140
02 10 014G 00X5	14G 0.5	10.0	66.5	170
02 10 016G 00X5	16G 0.5	10.2	76.0	184
02 10 018G 00X5	18G 0.5	10.5	85.5	200
02 10 020G 00X5	20G 0.5	11.8	95.0	239
02 10 021G 00X5	21G 0.5	11.9	100.0	246
02 10 025G 00X5	25G 0.5	12.9	118.5	293
02 10 030G 00X5	30G 0.5	13.5	142.5	329
02 10 032G 00X5	32G 0.5	14.0	152.0	354
02 10 034G 00X5	34G 0.5	14.3	161.5	373
02 10 040G 00X5	40G 0.5	15.3	190.0	429
02 10 042G 00X5	42G 0.5	16.6	199.0	486
02 10 050G 00X5	50G 0.5	18.2	237.0	581
02 10 052G 00X5	52G 0.5	18.2	246.5	589
02 10 061G 00X5	61G 0.5	19.4	289.5	680
02 10 065G 00X5	65G 0.5	20.4	308.5	740
02 10 080G 00X5	80G 0.5	22.4	379.5	898
02 10 100G 00X5	100G 0.5	25.0	474.0	1119

JZ-500 (NUMBER CODED)

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 10 002C 0X75	2 x 0.75	5.3	14.5	44
02 10 003G 0X75	3G 0.75	5.6	21.5	54
02 10 003C 0X75	3 x 0.75	5.6	21.5	54
02 10 004G 0X75	4G 0.75	6.1	28.5	66
02 10 004C 0X75	4 x 0.75	6.1	28.5	66
02 10 005G 0X75	5G 0.75	6.9	36.0	85
02 10 005C 0X75	5 x 0.75	6.9	36.0	85
02 10 006G 0X75	6G 0.75	7.4	43.0	100
02 10 006C 0X75	6 x 0.75	7.4	43.0	100
02 10 007G 0X75	7G 0.75	7.6	50.0	108
02 10 007C 0X75	7 x 0.75	7.6	50.0	108
02 10 008G 0X75	8G 0.75	9.4	57.0	150
02 10 008C 0X75	8 x 0.75	9.4	57.0	150
02 10 009G 0X75	9G 0.75	9.8	64.0	164
02 10 010G 0X75	10G 0.75	10.0	71.0	175
02 10 012G 0X75	12G 0.75	10.1	85.5	190
02 10 012C 0X75	12 x 0.75	10.1	85.5	190
02 10 014G 0X75	14G 0.75	10.7	100.0	215
02 10 015G 0X75	15G 0.75	11.3	107.0	238
02 10 018G 0X75	18G 0.75	11.9	128.0	273
02 10 019G 0X75	19G 0.75	12.3	135.0	288
02 10 020G 0X75	20G 0.75	13.0	142.5	315
02 10 021G 0X75	21G 0.75	13.2	149.5	327
02 10 025G 0X75	25G 0.75	14.6	178.0	396
02 10 027G 0X75	27G 0.75	14.8	192.0	416
02 10 032G 0X75	32G 0.75	15.7	228.0	477
02 10 034G 0X75	34G 0.75	15.7	242.0	491
02 10 037G 0X75	37G 0.75	16.1	263.0	521
02 10 040G 0X75	40G 0.75	16.6	284.5	559
02 10 041G 0X75	41G 0.75	17.4	292.0	599
02 10 042G 0X75	42G 0.75	17.7	299.0	613
02 10 050G 0X75	50G 0.75	19.2	356.0	725
02 10 061G 0X75	61G 0.75	20.3	434.0	846
02 10 065G 0X75	65G 0.75	21.4	462.5	922
02 10 080G 0X75	80G 0.75	22.9	569.0	1087
02 10 100G 0X75	100G 0.75	27.8	711.5	1494

JZ-500 (NUMBER CODED)

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 10 002C 0001	2 x 1	5.6	19.0	52
02 10 003G 0001	3G 1	6.0	28.5	66
02 10 003C 0001	3 x 1	6.0	28.5	66
02 10 004G 0001	4G 1	6.8	38.0	86
02 10 004C 0001	4 x 1	6.8	38.0	86
02 10 005G 0001	5G 1	7.5	47.5	104
02 10 005C 0001	5 x 1	7.5	47.5	104
02 10 006G 0001	6G 1	8.3	57.0	128
02 10 007G 0001	7G 1	8.9	66.5	148
02 10 007C 0001	7 x 1	8.9	66.5	148
02 10 008G 0001	8G 1	9.7	76.0	174
02 10 009G 0001	9G 1	10.5	85.5	199
02 10 010G 0001	10G 1	10.8	95.0	215
02 10 010C 0001	10 x 1	10.8	95.0	215
02 10 012G 0001	12G 1	11.1	114.0	239
02 10 012C 0001	12 x 1	11.1	114.0	239
02 10 014G 0001	14G 1	11.7	133.0	272
02 10 016G 0001	16G 1	12.5	152.0	308
02 10 018G 0001	18G 1	13.2	171.0	346
02 10 018C 0001	18 x 1	13.2	171.0	346
02 10 019G 0001	19G 1	13.5	180.5	363
02 10 020G 0001	20G 1	14.0	190.0	388
02 10 020C 0001	20 x 1	14.0	190.0	388
02 10 021G 0001	21G 1	14.2	199.5	403
02 10 024G 0001	24G 1	15.7	228.0	477
02 10 025G 0001	25G 1	16.2	237.5	504
02 10 025C 0001	25 x 1	16.2	237.5	504
02 10 026G 0001	26G 1	16.2	246.5	512
02 10 027G 0001	27G 1	16.4	256.0	528
02 10 030G 0001	30G 1	16.6	284.5	561
02 10 034G 0001	34G 1	18.1	322.5	652
02 10 036G 0001	36G 1	18.1	341.5	668
02 10 037G 0001	37G 1	19.1	351.0	719
02 10 040G 0001	40G 1	19.6	379.5	767
02 10 040C 0001	40 x 1	19.6	379.5	767
02 10 041G 0001	41G 1	19.7	389.0	776
02 10 042G 0001	42G 1	19.7	398.5	785
02 10 050G 0001	50G 1	21.8	474.5	952
02 10 056G 0001	56G 1	22.3	531.0	1027
02 10 061G 0001	61G 1	23.1	578.5	1107
02 10 065G 0001	65G 1	23.7	616.5	1175
02 10 080G 0001	80G 1	26.4	759.0	1451
02 10 100G 0001	100G 1	29.4	948.5	1803

JZ-500 (NUMBER CODED)

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 10 002C 01X5	2 x 1.5	6.3	29.0	69
02 10 003G 01X5	3G 1.5	6.7	43.5	87
02 10 003C 01X5	3 x 1.5	6.7	43.5	87
02 10 004G 01X5	4G 1.5	7.3	58.0	109
02 10 004C 01X5	4 x 1.5	7.3	58.0	109
02 10 005G 01X5	5G 1.5	8.2	72.5	137
02 10 005C 01X5	5 x 1.5	8.2	72.5	137
02 10 006G 01X5	6G 1.5	8.9	86.7	162
02 10 007G 01X5	7G 1.5	9	101.0	176
02 10 007C 01X5	7 x 1.5	9	101.0	176
02 10 008G 01X5	8G 1.5	10.6	116.0	224
02 10 008C 01X5	8 x 1.5	10.6	116.0	224
02 10 009G 01X5	9G 1.5	11.5	130.0	259
02 10 010G 01X5	10G 1.5	11.7	145.0	276
02 10 011G 01X5	11G 1.5	12.0	159.0	299
02 10 012G 01X5	12G 1.5	12.1	173.5	311
02 10 012C 01X5	12 x 1.5	12.1	173.5	311
02 10 014G 01X5	14G 1.5	12.9	202.5	357
02 10 016G 01X5	16G 1.5	13.6	202.5	403
02 10 018G 01X5	18G 1.5	14.5	260.0	455
02 10 021G 01X5	21G 1.5	15.7	303.5	533
02 10 025G 01X5	25G 1.5	17.2	361.0	637
02 10 026G 01X5	26G 1.5	17.3	361.0	654
02 10 032G 01X5	32G 1.5	19.1	462.5	799
02 10 034G 01X5	34G 1.5	19.8	491.0	854
02 10 041G 01X5	41G 1.5	21.0	592.5	994
02 10 050G 01X5	50G 1.5	23.7	722.5	1240
02 10 061G 01X5	61G 1.5	25.2	881.5	1461
02 10 065G 01X5	65G 1.5	26.0	939.0	1550
02 10 002C 02X5	2 x 2.5	7.6	40.1	100
02 10 003G 02X5	3G 2.5	8.3	60.2	129
02 10 004G 02X5	4G 2.5	9.1	80.3	162
02 10 005G 02X5	5G 2.5	10.2	100.3	203
02 10 007G 02X5	7G 2.5	11.2	140.4	261
02 10 012G 02X5	12G 2.5	14.8	240.8	452
02 10 014G 02X5	14G 2.5	15.7	280.9	517
02 10 018G 02X5	18G 2.5	17.5	361.1	653
02 10 025G 02X5	25G 2.5	20.8	501.6	915
02 10 034G 02X5	34G 2.5	24.4	682.1	1253
02 10 050G 02X5	50G 2.5	29.4	1003.2	1831

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 10 003G 0004	3G 4	9.9	96.0	192
02 10 004G 0004	4G 4	10.8	128.0	241
02 10 005G 0004	5G 4	12.1	159.5	301
02 10 007G 0004	7G 4	13.3	223.5	390
02 10 011G 0004	11G 4	17.6	351.0	649
02 10 012G 0004	12G 4	18.1	383.0	696
02 10 003G 0006	3G 6	11.7	144.0	277
02 10 004G 0006	4G 6	13.0	191.5	354
02 10 005G 0006	5G 6	14.5	239.5	441
02 10 007G 0006	7G 6	16.0	335.0	574
02 10 003G 0010	3G 10	14.2	244.5	436
02 10 004G 0010	4G 10	15.5	326.0	548
02 10 005G 0010	5G 10	17.1	407.5	676
02 10 007G 0010	7G 10	19.0	570.5	892
02 10 004G 0016	4G 16	18.8	543.0	860
02 10 005G 0016	5G 16	21.0	678.5	1074
02 10 007G 0016	7G 16	23.4	950.0	1424
02 10 004G 0025	4G 25	23.4	844.5	1335
02 10 005G 0025	5G 25	25.8	1055.5	1648
02 10 007G 0025	7G 25	28.7	1478.0	2184
02 10 004G 0035	4G 35	26.4	1189.0	1795
02 10 005G 0035	5G 35	29.6	1486.5	2251

Note

G= Green-Yellow earth core.

X= without Green-Yellow earth core (OZ)

Important for assemblers: We supply any "desired length" if stranded cores without outer sheath, core insulation colour acc.

RAL 9005 with number combination acc. customers requirement.

JZ- CY (NUMBER CODED)



Technical data:

- PVC Control cables, adapted to DIN VDE 0245, 0281 part 13
- **Conductor resistance** to EN 60228 cl. 5
- **Temperature range** flexing -5°C to +70°C fixed installation -20°C to +70°C
- **Nominal voltage** U_o/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Mutual capacitance** according to different cross-sections 0.5mm² to 2.5mm² core/core approx. 150 nF/km core/screen approx. 270 nF/km
- **Minimum bending radius** flexing 10 x cable ϕ , Fixed installation 5 x cable ϕ

Cable construction:

- Bare copper, fine wire conductors, bunch stranded EN 60228 cl. 5
- Core insulation of PVC TI2 EN 60228 cl. 5
- Black Core with continuous white numbering to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC inner jacket
- Tinned copper, braided screen, approx 85% coverage
- Transparent special PVC outer sheath

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332 -1

Application:

- These cables are used for flexible use in plant and machinery for medium mechanical stresses with free movement without tensile stress of forced movements.

EMC:- Electromagnetic compatibility To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product conforms with the EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 11 002C 00X5	2 x 0.5	7	21.6	68.2
02 11 003G 00X5	3G 0.5	7.3	27.6	78.0
02 11 003C 00X5	3 X 0.5	7.3	27.6	78.0
02 11 004G 00X5	4G 0.5	7.9	32.5	91.7
02 11 004C 00X5	4 X 0.5	7.9	32.5	91.7
02 11 005G 00X5	5G 0.5	8.4	38.7	105.7
02 11 005C 00X5	5 X 0.5	8.4	38.7	105.7
02 11 007G 00X5	7G 0.5	8.9	47.7	122.6
02 11 007C 00X5	7 X 0.5	8.9	47.7	122.6
02 11 012G 00X5	12G 0.5	11.3	75.2	198.2
02 11 012C 00X5	12 X 0.5	11.3	75.2	198.2
02 11 018G 00X5	18G 0.5	13.3	102.2	273.5
02 11 025G 00X5	25G 0.5	15.2	153.7	371.7
02 11 030G 00X5	30G 0.5	16.1	178.7	423.1
02 11 040G 00X5	40G 0.5	18.2	228.0	542.5

JZ- CY (NUMBER CODED)



PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 11 002C 0X75	2 x 0.75	7.4	27.5	79
02 11 003G 0X75	3G 0.75	7.9	36.2	95
02 11 003C 0X75	3 X 0.75	7.9	36.2	95
02 11 004G 0X75	4G 0.75	8.4	42.4	109
02 11 004C 0X75	4 X 0.75	8.4	42.4	109
02 11 005G 0X75	5G 0.75	8.9	48.7	123
02 11 005C 0X75	5 X 0.75	8.9	48.7	123
02 11 007G 0X75	7G 0.75	9.7	64.0	152
02 11 007C 0X75	7 X 0.75	9.7	64.0	152
02 11 012G 0X75	12G 0.75	12.3	101.1	246
02 11 012C 0X75	12 X 0.75	12.3	101.1	246
02 11 018G 0X75	18G 0.75	14.5	160.6	355
02 11 018C 0X75	18 X 0.0.75	14.5	160.6	355
02 11 025G 0X75	25G 0.75	16.6	214.1	472
02 11 034G 0X75	34G 0.75	18.9	279.0	615
02 11 040G 0X75	40 X 0.75	20.5	337.4	728
02 11 041G 0X75	41G 0.75	20.6	345.2	740
02 11 002C 0001	2 x 1	7.9	32.0	91
02 11 003G 0001	3G 1	8.2	42.2	105
02 11 003C 0001	3 x 1	8.2	42.2	105
02 11 004G 0001	4G 1	8.7	50.7	121
02 11 004C 0001	4 x 1	8.7	50.7	121
02 11 005G 0001	5G 1	9.5	61.3	146
02 11 007G 0001	7G 1	10.2	79.5	176
02 11 012G 0001	12G 1	13.3	146.2	308
02 11 016G 0001	16G 1	14.6	185.5	380
02 11 018G 0001	18G 1	15.5	202.5	423
02 11 025G 0001	25G 1	17.5	271.5	554
02 11 034G 0001	34G 1	20.2	354.0	734
02 11 041G 0001	41G 1	22.0	437.1	882
02 11 050G 0001	50G 1	23.8	521.9	1044

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 11 002C 01X5	2 x 1.5	8.5	42.1	110
02 11 003G 01X5	3G 1.5	8.9	56.0	130
02 11 003C 01X5	3 x 1.5	8.9	56.0	130
02 11 004G 01X5	4G 1.5	9.6	69.1	155
02 11 004C 01X5	4 x 1.5	9.6	69.1	155
02 11 005G 01X5	5G 1.5	10.3	99.2	193
02 11 005C 01X5	5 x 1.5	10.3	99.2	193
02 11 007G 01X5	7G 1.5	11.3	124.6	237
02 11 007C 01X5	7 x 1.5	11.3	124.6	237
02 11 012G 01X5	12G 1.5	14.8	198.6	397
02 11 018G 01X5	18G 1.5	17.2	279.6	548
02 11 025G 01X5	25G 1.5	20.1	375.2	746
02 11 034G 01X5	34G 1.5	22.8	497.4	977
02 11 041G 01X5	41G 1.5	24.7	611.9	1168
02 11 050G 01X5	50G 1.5	27.1	730.1	1402
02 11 002C 02X5	2 x 2.5	9.9	61.2	154
02 11 003G 02X5	3G 2.5	10.3	99.1	193
02 11 004G 02X5	4G 2.5	11.3	121.1	234
02 11 005G 02X5	5G 2.5	12.6	146.4	289
02 11 007G 02X5	7G 1.5	13.9	192.3	364
02 11 012G 02X5	12G 2.5	17.6	304.4	585
02 11 002C 0004	2 x 4	11.4	104.4	222
02 11 004G 0004	4G 4	13.4	173.2	333
02 11 005G 0004	5G 4	14.7	212.4	405
02 11 002C 0006	2 x 6	13.6	141.6	312
02 11 004G 0006	4G 6	15.8	250.2	474
02 11 005G 0006	5G 6	17.3	303.7	573
02 11 002C 0010	2 x 10	16.4	220.4	468
02 11 003G 0010	3G 10	17.4	308.7	579
02 11 004G 0010	4G 10	19.0	395.2	715
02 11 005G 0010	5G 10	21.2	482.7	884
02 11 007G 0010	7G 10	23.2	653.4	1124
02 11 002C 0016	2 x 16	18.6	367.3	672
02 11 004G 0016	4G 16	22.2	657.4	1075
02 11 005G 0016	5G 16	26.7	807.2	1433
02 11 004G 0025	4G 25	28.7	984.1	1703
02 11 005G 0025	5G 25	31.6	1210.5	2083
02 11 004G 0035	4G 35	32	1352.0	2235
02 11 005G 0035	5G 35	35.5	1670.1	2760

Note:- Dimensions and specifications may be changed without prior notice.

G= with green-yellow earth core.

X= without Green-Yellow earth core (OZ)

JZ-SY



Technical data:

- PVC Control cables
- Adapted to DIN VDE 0245, 0281, 0293, 0295
- **Temperature range** flexing -5°C to +70°C fixed installation -30°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 20 x cable ø, Fixed installation 6 x cable ø

Cable construction

- Bare copper, fine wire conductors, Bunch stranded EN 60228 cl.5
- Core insulation of PVC TI2, EN 50363-3
- Black core with white figure imprint to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC inner jacket
- Galvanized steel wire screening
- Special PVC outer jacket
- Colour transparent (also available in grey)

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1/IEC 60322-1-2

Application:

- These cables are used as measuring and control cables in tool machinery, plant installation, power stations and in data equipment. The steel braid ensures possible protection against mechanical damage. The galvanized coating on the steel wire braiding ensures protection against corrosion and improves soldering properties.
- CE** = The product conforms to the EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 12 002C 00X5	2 x 0.5	7.8	8.4	91
02 12 003G 00X5	3G 0.5	8.1	12.6	100
02 12 004G 00X5	4G 0.5	8.5	16.8	111
02 12 005G 00X5	5G 0.5	9.2	21.0	139
02 12 007G 00X5	7G 0.5	9.7	29.4	155
02 12 010G 00X5	10G 0.5	11.6	42.0	223
02 12 012G 00X5	12G 0.5	11.9	50.4	237
02 12 014G 00X5	14G 0.5	12.5	58.8	261
02 12 018G 00X5	18G 0.5	13.9	75.5	319
02 12 021G 00X5	21G 0.5	14.9	88.1	360
02 12 025G 00X5	25G 0.5	15.6	104.9	397
02 12 030G 00X5	30G 0.5	16.5	125.9	445
02 12 040G 00X5	40G 0.5	18.8	167.9	588
02 12 061G 00X5	61G 0.5	21.9	256.0	801

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 12 002C 0X75	2 x 0.75	8.2	12.6	99
02 12 003G 0X75	3G 0.75	8.5	18.9	111
02 12 004G 0X75	4G 0.75	9.2	25.2	142
02 12 005G 0X75	5G 0.75	9.7	31.5	157
02 12 007G 0X75	7G 0.75	10.3	44.1	179
02 12 009G 0X75	9G 0.75	12.4	56.7	254
02 12 012G 0X75	12G 0.75	12.9	75.5	282
02 12 015G 0X75	15G 0.75	14.1	94.4	335
02 12 018G 0X75	18G 0.75	14.9	113.3	389
02 12 025G 0X75	25G 0.75	17.0	157.4	512
02 12 034G 0X75	34G 0.75	19.3	214.0	650
02 12 050G 0X75	50G 0.75	22.8	314.8	905
02 12 002C 0001	2 x 1	8.5	16.8	109
02 12 003G 0001	3G 1	8.8	25.2	135
02 12 004G 0001	4G 1	9.5	33.6	155
02 12 005G 0001	5G 1	10.1	42.0	173
02 12 007G 0001	7G 1	11.0	58.8	207
02 12 008G 0001	8G 1	12.5	67.1	265
02 12 009G 0001	9G 1	13.2	75.5	291
02 12 012G 0001	12G 1	13.9	100.7	333
02 12 014G 0001	14G 1	14.4	117.5	362
02 12 018G 0001	18G 1	15.9	151.1	452
02 12 020G 0001	20G 1	16.8	167.9	500
02 12 025G 0001	25G 1	18.1	209.8	597
02 12 034G 0001	34G 1	20.5	285.4	761
02 12 041G 0001	41G 1	22.2	344.1	896
02 12 050G 0001	50G 1	24.2	419.7	1070
02 12 065G 0001	65G 1	27.2	545.6	1355

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 11 002C 01X5	2 x 1.5	8.5	42.1	110
02 11 003G 01X5	3G 1.5	8.9	56.0	130
02 11 003C 01X5	3 x 1.5	8.9	56.0	130
02 11 004G 01X5	4G 1.5	9.6	69.1	155
02 11 004C 01X5	4 x 1.5	9.6	69.1	155
02 11 005G 01X5	5G 1.5	10.3	99.2	193
02 11 005C 01X5	5 x 1.5	10.3	99.2	193
02 11 007G 01X5	7G 1.5	11.3	124.6	237
02 11 007C 01X5	7 x 1.5	11.3	124.6	237
02 11 012G 01X5	12G 1.5	14.8	198.6	397
02 11 018G 01X5	18G 1.5	17.2	279.6	548
02 11 025G 01X5	25G 1.5	20.1	375.2	746
02 11 034G 01X5	34G 1.5	22.8	497.4	977
02 11 041G 01X5	41G 1.5	24.7	611.9	1168
02 11 050G 01X5	50G 1.5	27.1	730.1	1402

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02 11 002C 02X5	2 x 2.5	9.9	61.2	154
02 11 003G 02X5	3G 2.5	10.3	99.1	193
02 11 004G 02X5	4G 2.5	11.3	121.1	234
02 11 005G 02X5	5G 2.5	12.6	146.4	289
02 11 007G 02X5	7G 1.5	13.9	192.3	364
02 11 012G 02X5	12G 2.5	17.6	304.4	585
02 11 002C 0004	2 x 4	11.4	104.4	222
02 11 004G 0004	4G 4	13.4	173.2	333
02 11 005G 0004	5G 4	14.7	212.4	405
02 11 002C 0006	2 x 6	13.6	141.6	312
02 11 004G 0006	4G 6	15.8	250.2	474
02 11 005G 0006	5G 6	17.3	303.7	573
02 11 002C 0010	2 x 10	16.4	220.4	468
02 11 003G 0010	3G 10	17.4	308.7	579
02 11 004G 0010	4G 10	19.0	395.2	715
02 11 005G 0010	5G 10	21.2	482.7	884
02 11 007G 0010	7G 10	23.2	653.4	1124
02 11 002C 0016	2 x 16	18.6	367.3	672
02 11 004G 0016	4G 16	22.2	657.4	1075
02 11 005G 0016	5G 16	26.7	807.2	1433
02 11 004G 0025	4G 25	28.7	984.1	1703
02 11 005G 0025	5G 25	31.6	1210.5	2083
02 11 004G 0035	4G 35	32	1352.0	2235
02 11 005G 0035	5G 35	35.5	1670.1	2760

PART NUMBER	No. cores x cross- sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 12 002C 01X5	2 x 1.5	9.3	24.1	143
02 12 003G 01X5	3G 1.5	9.7	36.1	161
02 12 004G 01X5	4G 1.5	10.2	48.2	181
02 12 005G 01X5	5G 1.5	11.1	60.2	213
02 12 007G 01X5	7G 1.5	11.9	84.3	265
02 12 008G 01X5	8G 1.5	14.0	96.3	330
02 12 012G 01X5	12G 1.5	15.4	144.5	430
02 12 014G 01X5	14G 1.5	15.9	168.5	469
02 12 018G 01X5	18G 1.5	17.6	216.7	574
02 12 025G 01X5	25G 1.5	20.3	300.9	771
02 12 032G 01X5	32G 1.5	22.1	385.2	926
02 12 041G 01X5	41G 1.5	24.9	493.6	1174
02 12 050G 01X5	50G 1.5	27.1	601.9	1403

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02 12 003G 02X5	3G 2.5	11.1	60.2	211
02 12 004G 02X5	4G 2.5	12.1	80.3	267
02 12 005G 02X5	5G 2.5	13.2	100.3	314
02 12 007G 02X5	7G 2.5	14.3	140.4	392
02 12 012G 02X5	12G 2.5	18.2	240.8	626
02 12 018G 02X5	18G 2.5	21.4	361.1	875
02 12 025G 02X5	25G 2.5	24.4	501.6	1159
02 12 003G 0004	3G 4	12.7	95.7	295
02 12 004G 0004	4G 4	14.0	127.6	358
02 12 005G 0004	5G 4	15.1	159.5	420
02 12 007G 0004	7G 4	16.4	223.3	530
02 12 004G 0006	4G 6	16.2	191.4	498
02 12 005G 0006	5G 6	17.7	239.3	593
02 12 007G 0006	7G 6	19.2	335.0	749
02 12 004G 0010	4G 10	19.4	325.9	745
02 12 005G 0010	5G 10	21.5	407.3	908
02 12 007G 0010	7G 10	23.4	570.3	1147
02 12 004G 0016	4G 16	22.4	542.8	1086
02 12 005G 0016	5G 16	24.6	678.5	1324
02 12 004G 0025	4G 25	28.9	844.4	1704
02 12 005G 0025	5G 25	31.8	1055.5	2093
02 12 004G 0035	4G 35	32.2	1189.0	2247

Note:- Dimensions and specifications may be changed without prior notice.

G= Green-Yellow earth core.

X= without Green-Yellow earth core (OZ)

- These cables can be also delivered with coloured conductors (SY-JB).
- Further dimensions available on request.

JZ-YCY



RR KABEL JZ-YCY

Technical data

- PVC Control cables, adapted to DIN VDE 0245, 0281 part 13
- **Temperature range:** flexing -5°C to +70°C fixed installation -30°C to +70°C
- **Nominal voltage:** U_n/U 300/500 V
- **Test voltage:** Core / Core 4000 V, Core / Screen 2000 V
- **Insulation resistance:** min. 20 M Ohm x km
- **Mutual capacitance:** according to different cross-sections 0.5mm² to 2.5mm² core/core approx. 150 nF/km core/screen approx. 270 nF/km
- **Coupling resistance:** max. 250 Ohm/km
- **Minimum bending radius:** flexing 10 x cable Ø, Fixed installation 5 x cable Ø

Cable construction

- Bare copper, fine wire conductors, bunch stranded EN 60228 cl.5
- Core insulation of special PVC TI2, EN 50363-3
- Black Core with continuous white figure imprint to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Foil separator
- Tinned copper, braided screen, approx 85% coverage
- Outer Sheath of Special PVC, TM2 to DIN / BS EN 50363-4.1
- Colour grey (RAL 7001)

Properties:

- Extensively oil resistant Chemical Resistance
- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application:

- For use as a data cable in control circuits, Tool & Machine Industry. The absence of inner PVC sheath in these cables and use of foil separator, ensures the reduction in overall diameter of the cables considerably and reduces the bending radius, total weight etc.

EMC= Electromagnetic compatibility

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 13 002C 00X5	2 x 0.5	5.8	18.8	44.9
02 13 003G 00X5	3G 0.5	6.1	24.7	55.0
02 13 003C 00X5	3 x 0.5	6.1	24.7	55.0
02 13 004G 00X5	4G 0.5	6.5	29.2	63.4
02 13 004C 00X5	4 x 0.5	6.5	29.2	63.4
02 13 005G 00X5	5G 0.5	7	34.6	73.9
02 13 005C 00X5	5 x 0.5	7	34.6	73.9
02 13 007G 00X5	7G 0.5	7.5	45.1	90.6
02 13 007C 00X5	7 x 0.5	7.5	45.1	90.6
02 13 012G 00X5	12G 0.5	9.9	71.4	149.1
02 13 012C 00X5	12 x 0.5	9.9	71.4	149.1
02 13 018G 00X5	18G 0.5	11.5	100.1	205.6
02 13 018C 00X5	18 x 0.5	11.5	100.1	205.6
02 13 025G 00X5	25G 0.5	13.4	134.1	271.7
02 13 025C 00X5	25 x 0.5	13.4	134.1	271.7
02 13 002C 0X75	2 x 0.75	6.2	25.0	53.2
02 13 003G 0X75	3G 0.75	6.5	31.3	64.0
02 13 003C 0X75	3 x 0.75	6.5	31.3	64.0
02 13 004G 0X75	4G 0.75	7.0	39.0	77.0
02 13 004C 0X75	4 x 0.75	7.0	39.0	77.0

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02 13 005G 0X75	5G 0.75	7.7	47.2	93.4
02 13 005C 0X75	5 x 0.75	7.7	47.2	93.4
02 13 007G 0X75	7G 0.75	8.3	62.0	116.4
02 13 007C 0X75	7 x 0.75	8.3	62.0	116.4
02 13 012G 0X75	12G 0.75	10.9	98.9	189.7
02 13 018G 0X75	18G 0.75	12.7	141.0	265.0
02 13 025G 0X75	25G 0.75	14.8	210.6	363.6
02 13 025C 0X75	25 x 0.75	14.8	210.6	363.6
02 13 002C 0001	2 x 1	6.5	29.5	59.7
02 13 003G 0001	3G 1	6.8	38.9	73.6
02 13 003C 0001	3 x 1	6.8	38.9	73.6
02 13 004G 0001	4G 1	7.3	49.1	89.0
02 13 004C 0001	4 x 1	7.3	49.1	89.0
02 13 005G 0001	5G 1	8.1	58.4	108.1
02 13 005C 0001	5 x 1	8.1	58.4	108.1
02 13 007G 0001	7G 1	8.8	77.2	136.8
02 13 007C 0001	7 x 1	8.8	77.2	136.8
02 13 012G 0001	12G 1	11.5	125.5	223.3
02 13 018G 0001	18G 1	13.9	180.0	328.9
02 13 025G 0001	25G 1	15.9	266.1	439.8

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 13 002C 01X5	2 x 1.5	7.1	39.4	73.9
02 13 003G 01X5	3G 1.5	7.5	51.7	92.7
02 13 003C 01X5	3 x 1.5	7.5	51.7	92.7
02 13 004G 01X5	4G 1.5	8.2	66.2	115.9
02 13 004C 01X5	4 x 1.5	8.2	66.2	115.9
02 13 005G 01X5	5G 1.5	8.9	80.9	138.7
02 13 005C 01X5	5 x 1.5	8.9	80.9	138.7
02 13 007G 01X5	7G 1.5	9.9	108.0	182.3
02 13 007C 01X5	7 x 1.5	9.9	108.0	182.3
02 13 012G 01X5	12G 1.5	13.0	175.1	298.0
02 13 018G 01X5	18G 1.5	15.6	276.0	450.8
02 13 025G 01X5	25G 1.5	17.9	377.6	596.4
02 13 034G 01X5	34G 1.5	20.8	488.3	787.3

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02 13 003G 02X5	3G 2.5	8.9	80.9	136.6
02 13 004G 02X5	4G 2.5	9.9	102.9	174.0
02 13 005G 02X5	5G 2.5	11.0	125.0	213.7
02 13 007G 02X5	7G 1.5	11.9	168.4	272.9
02 13 012G 02X5	12G 2.5	16.0	301.0	477.1
02 13 018G 02X5	18G 2.5	19.0	433.3	688.1
02 13 025G 02X5	25G 2.5	22.2	588.0	924.6
02 13 004G 0004	4G 4	11.6	153.4	250.4
02 13 005G 0004	5G 4	14.4	256.1	412.1
02 13 004G 0006	4G 6	14.2	222.7	370.5
02 13 005G 0006	5G 6	17.0	396.3	600.0
02 13 004G 0010	4G 10	17.2	384.1	589.2
02 13 005G 0010	5G 10	19.5	475.8	748.2
02 13 004G 0016	4G 16	20.2	616.3	877.4
02 13 005G 0016	5G 16	22.6	760.4	1093.1
02 13 004G 0025	4G 25	25.1	937.4	1347.6
02 13 005G 0025	5G 25	28.0	1160.0	1676.0
02 13 004G 0035	4G 35	28.0	1300.4	1769.2

Note:- Dimensions and specifications may be changed without prior notice.

- G = with green-yellow earth core.
- X = without Green-Yellow earth core (OZ)
- To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

JZ-BLACK 0.6/1 kV

RR KABEL JZ-BK 0.6-1KV

Technical data:

- PVC Control cables, with insulation thickness for 1 kV type
- **Temperature range** flexing -5°C to +70°C fixed installation -20°C to +70°C
- **Nominal voltage** U_n/U 0.6/1kV
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 15 x cable ϕ , Fixed installation 4 x cable ϕ

Cable construction:

- Bare copper, fine wire conductors, as per DIN/BS EN60228 cl. 5,
- Special PVC core insulation TI2, to EN 50363-3
- Black core with white figure imprint to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath TM2, to EN 50363-4-1
- Colour Black (RAL 9005)

Properties:

- PVC self-extinguishing and flame retardant according to IEC 60332-1.2
- Resistant to ultra violet rays

Application:

- This cable is used in measuring & control purpose in Machines, Coveyor belts, Plant Installations, Steel Industry, Rolling Mills,Cement Industries.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 14 002C 0X75	2 x 0.75	8.3	13.0	90
02 14 003G 0X75	3G 0.75	8.7	19.6	103
02 14 003C 0X75	3 x 0.75	8.7	19.6	103
02 14 004G 0X75	4G 0.75	9.2	26.1	119
02 14 005G 0X75	5G 0.75	9.9	32.6	139
02 14 007G 0X75	7G 0.75	10.7	45.6	169
02 14 012G 0X75	12G 0.75	13.4	78.2	271
02 14 018G 0X75	18G 0.75	15.6	117.3	377
02 14 041G 0X75	41G 0.75	23.2	267.3	840
02 14 002C 0001	2 x 1	8.6	17.4	99.0
02 14 003G 0001	3G 1	9.0	26.1	114.4
02 14 003C 0001	3 x 1	9.0	26.1	114.4
02 14 004G 0001	4G 1	9.6	34.8	134.5
02 14 004C 0001	4 x 1	9.6	34.8	134.5
02 14 005G 0001	5G 1	10.4	43.5	160.1
02 14 005C 0001	5 x 1	10.4	43.5	160.1
02 14 007G 0001	7G 1	11.4	60.8	199.8
02 14 012G 0001	12G 1	14.5	104.3	328.2
02 14 018G 0001	18G 1	16.5	156.5	443.2

JZ-BLACK 0.6/1 kV

02 14 025G 0001	25G 1	19.7	217.3	626.9
02 14 034G 0001	34G 1	22.5	295.5	828.0
02 14 041G 0001	41G 1	24.4	356.4	981.3
02 14 002C 01X5	2 x 1.5	9.6	25.5	127
02 14 003G 01X5	3G 1.5	10.1	38.2	149
02 14 003C 01X5	3 x 1.5	10.1	38.2	149
02 14 004G 01X5	4G 1.5	10.8	50.9	176
02 14 005G 01X5	5G 1.5	11.7	63.7	210
02 14 007G 01X5	7G 1.5	12.6	89.1	257
02 14 012G 01X5	12G 1.5	16.1	152.8	425
02 14 014G 01X5	14G 1.5	17.0	178.3	481
02 14 018G 01X5	18G 1.5	18.8	229.2	598
02 14 025G 01X5	25G 1.5	21.7	318.3	807
02 14 034G 01X5	34G 1.5	24.9	407.4	1053
02 14 050G 01X5	50G 1.5	29.8	636.6	1553

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 14 002C 02X5	2 X 2.5	10.8	42.4	169
02 14 003G 02X5	3G 2.5	11.3	63.7	200
02 14 004G 02X5	4G 2.5	12.2	84.9	242
02 14 005G 02X5	5G 2.5	13.3	106.1	292
02 14 007G 02X5	7G 2.5	14.4	148.5	363
02 14 012G 02X5	12G 2.5	18.7	254.6	615
02 14 014G 02X5	14G 2.5	19.8	297.1	699
02 14 018G 02X5	18G 2.5	22.0	382.0	876
02 14 025G 02X5	25G 2.5	25.8	530.5	1210
02 14 004G 0004	4G 4	13.8	135.0	332
02 14 005G 0004	5G 4	15.1	168.7	403
02 14 007G 0004	7G 4	16.4	236.2	507
02 14 004G 0006	4G 6	15.1	202.4	432
02 14 005G 0006	5G 6	16.8	253.1	537
02 14 007G 0006	7G 6	18.2	354.3	679

JZ-BLACK 0.6/1 kV

02 14 004G 0010	4G 10	18.7	344.7	692
02 14 005G 0010	5G 10	20.7	430.8	855
02 14 004G 0016	4G 16	21.3	574.1	1006
02 14 005G 0016	5G 16	23.6	717.7	1245
02 14 007G 0016	7G 16	26.2	1004.7	1637
02 14 004G 0025	4G 25	26.2	893.1	1542
02 14 005G 0025	5G 25	29.0	1116.3	1908
02 14 004G 0035	4G 35	29.1	1257.6	2035
02 14 005G 0035	5G 35	32.5	1572.0	2541
02 14 004G 0050	4G 50	35.6	1804.4	2980
02 14 004G 0070	4G 70	40.7	2549.7	4058
02 14 004G 0095	4G 95	46.8	3399.7	5389
02 14 004G 0120	4G 120	53.5	4306.2	6926

Note:- Dimensions and specifications may be changed without prior notice.

G= with green-yellow earth core.

X= without Green-Yellow earth core

JZ-CY BLACK 0.6/1 kV

RR KABEL JZ-BK-CY-0.6-1KV



Technical data:

- PVC Control cables, adapted to DIN VDE 0262/12.95 and 0281 part 13 with insulation thickness for 1 kV type
- **Temperature range** flexing -5°C to +70°C fixed installation -20°C to +70°C
- **Nominal voltage** U_n/U 0.6/1kV
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 20 x cable ϕ , Fixed installation 6 x cable ϕ

Cable construction:

- Bare copper, fine wire conductors, as per DIN / BS EN 60228 cl. 5
- Special PVC core insulation TI2, to EN 50363-3
- Black core with white figure imprint to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- PVC inner jacket, Black color
- Tinned copper, braided screen, approx 85% coverage
- Special PVC outer sheath TM2, to EN 50363-4.1
- Colour Black (RAL 9004)

Properties:

- Extensively oil resistant
- PVC self-extinguishing and flame retardant according to IEC 60332-1.2
- Resistant to ultra violet rays

Application:

- This cable is used in measuring & control purpose in Machines, Coveyor belts, Plant Installations, Steel Industry, Rolling Mills,Cement Industries.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 15 002C 0X75	2 x 0.75	10.5	34.4	150
02 15 003G 0X75	3G 0.75	10.9	40.9	165
02 15 003C 0X75	3 x 0.75	10.9	40.9	165
02 15 004G 0X75	4G 0.75	11.4	49.8	185
02 15 004C 0X75	4 x 0.75	11.4	49.8	185
02 15 005G 0X75	5G 0.75	12.1	60.0	212
02 15 005C 0X75	5 x 0.75	12.1	60.0	212
02 15 007G 0X75	7G 0.75	12.9	74.9	247
02 15 007C 0X75	7 x 0.75	12.9	74.9	247
02 15 012G 0X75	12G 0.75	15.8	138.7	389
02 15 012C 0X75	12 x 0.75	15.8	138.7	389
02 15 018G 0X75	18G 0.75	18.0	185.5	510
02 15 025G 0X75	25G 0.75	20.7	243.4	676
02 15 002C 0001	2 x 1	10.8	38.9	161
02 15 003G 0001	3G 1	11.2	50.4	181
02 15 003C 0001	3 x 1	11.2	50.4	181
02 15 004G 0001	4G 1	11.8	59.4	203
02 15 004C 0001	4 x 1	11.8	59.4	203
02 15 005G 0001	5G 1	12.6	70.8	235
02 15 007G 0001	7G 1	13.3	107.3	281

02 15 012G 0001	12G 1	16.4	165.7	433
02 15 018G 0001	18G 1	18.7	233.9	581
02 15 025G 0001	25G 1	21.6	304.6	771
02 15 002C 01X5	2 x 1.5	11.8	50.3	196
02 15 003G 01X5	3G 1.5	12.3	62.4	219
02 15 003C 01X5	3 x 1.5	12.3	62.4	219
02 15 004G 01X5	4G 1.5	13.0	77.9	252
02 15 004C 01X5	4 x 1.5	13.0	77.9	252
02 15 005G 01X5	5G 1.5	13.9	93.4	293

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 15 007G 01X5	7G 1.5	15	143.3	366
02 15 012G 01X5	12G 1.5	18.7	222.3	572
02 15 018G 01X5	18G 1.5	21.8	309.0	785
02 15 025G 01X5	25G 1.5	25.1	411.1	1045
02 15 003G 02X5	3G 2.5	13.5	91.9	279
02 15 004G 02X5	4G 2.5	14.6	137.7	349
02 15 005G 02X5	5G 2.5	15.7	158.8	403
02 15 007G 02X5	7G 2.5	17	209.0	493
02 15 012G 02X5	12G 2.5	21.7	333.7	802
02 15 004G 0004	4G 4	16.2	190.0	448
02 15 005G 0004	5G 4	17.7	231.5	540
02 15 007G 0004	7G 4	19	304.9	656
02 15 004G 0006	4G 6	17.7	268.5	571
02 15 005G 0006	5G 6	19.2	321.2	677
02 15 007G 0006	7G 6	21.2	435.0	864
02 15 004G 0010	4G 10	21.7	425.5	880
02 15 005G 0010	5G 10	23.0	521.9	1027
02 15 004G 0016	4G 16	24.3	666.5	1219
02 15 005G 0016	5G 16	26.7	820.1	1487
02 15 004G 0025	4G 25	29.8	1007.0	1844
02 15 005G 0025	5G 25	31.6	1242.1	2167
02 15 004G 0035	4G 35	32.7	1384.4	2368
02 15 004G 0050	4G 50	39.6	2032.2	3471
02 15 004G 0070	4G 70	44.5	2824.2	4602
02 15 004G 0095	4G 95	51.0	3706.2	6050
02 15 004G 0120	4G 120	58.1	4650.3	7727

Note:- Dimensions and specifications may be changed without prior notice.
G = with green-yellow earth core.
X = without Green-Yellow earth core

JZ-EB (NUMBER CODED)



Technical data:

- Control cables, PVC insulated and sheathed to DIN EN 60079-14: Section 12.2.2 (VDE 0165 Part1)
- Temperature range:** flexing -5°C to +70°C fixed installation -20°C to +70°C
- Nominal voltage:** $U_0/U < 50 \text{ V AC} < 75 \text{ V DC}$
- Test voltage:** 3000 V
- Mutual capacitance:** Core to core approx. 110 nF/km
- Insulation resistance** min. 20 MOhm x km
- Minimum bending radius** flexing 15 x cable $\varnothing$, Fixed installation 4 x cable $\varnothing$

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.5
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC, TM2 to DIN/BS EN 50363-4.1
- Colour Blue (RAL 5005)

Properties:

PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application:

Installation of intrinsically safe circuits.

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 16 002C 0X75	2 x 0.75	5.3	14.5	44
02 16 003C 0X75	3 x 0.75	5.6	21.5	54
02 16 004C 0X75	4 x 0.75	6.1	28.5	66
02 16 005C 0X75	5 x 0.75	6.9	36.0	85
02 16 012G 0X75	12G 0.75	10.1	85.5	190
02 16 018G 0X75	18G 0.75	11.9	128.0	273
02 16 025G 0X75	25G 0.75	14.6	178.0	396
02 16 002C 0001	2 x 1	5.6	19.0	52
02 16 003C 0001	3 x 1	6.0	28.5	66
02 16 004C 0001	4 x 1	6.8	38.0	86
02 16 005C 0001	5 x 1	7.5	47.5	104
02 16 007C 0001	7 x 1	8.9	66.5	148
02 16 012C 0001	12 x 1	11.1	114.0	239
02 16 018C 0001	18 x 1	13.2	171.0	346
02 16 002C 01X5	2 x 1.5	6.3	29.0	69
02 16 003C 01X5	3 x 1.5	6.7	43.5	87
02 16 004C 01X5	4 x 1.5	7.3	58.0	109
02 16 005C 01X5	5 x 1.5	8.2	72.5	137
With protective conductor GN-YE				
02 16 003G 01X5	3 G 1.5	6.7	43.5	87
02 16 004G 01X5	4 G 1.5	7.3	58.0	109
02 16 005G 01X5	5 G 1.5	8.2	72.5	137
02 16 018G 01X5	18G 1.5	14.5	260.0	455
02 16 025G 01X5	25G 1.5	17.2	361.0	637

Note:- Dimensions and specifications may be changed without prior notice.

G = with green-yellow earth core.

X = without Green-Yellow earth core

JZ-EB CY (NUMBER CODED)



RR KABEL JZ-EB CY

Technical data:

- Control cables, PVC insulated and sheathed to DIN EN 60079-14: Section 12.2.2 (VDE 0165 Part1)
- Temperature range** flexing -5°C to +70°C fixed installation -20°C to +70°C
- Nominal voltage** $U_0/U < 50 \text{ V AC} < 75 \text{ V DC}$
- Test voltage** 3000 V
- Inductivity:** approx 0.65 mH/km
- Mutual capacitance:** Core to core approx. 110 nF/km core to screen approx. 185 nF/km
- Insulation resistance** min. 20 MOhm x km
- Minimum bending radius** flexing 20 x cable ϕ , Fixed installation 6 x cable ϕ

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.5
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Cores stranded in layers with optimal lay-length
- Plastic foil wrapping
- Tinned-copper braiding
- Outer sheath of special PVC, TM2 to
- DIN/BS EN with above point of sheath
- Colour Blue (RAL 5005)

Properties:

PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application:

Installation of intrinsically safe circuits.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

Without circuit protective conductor GN-YE

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 17 002C 0X75	2 x 0.75	6.2	25.0	53.2
02 17 003C 0X75	3 x 0.75	6.5	31.3	64.0
02 17 004C 0X75	4 x 0.75	7.0	39.0	77.0
02 17 004G 0X75	4G 0.75	7.0	39.0	77.0
02 17 005C 0X75	5 x 0.75	7.7	47.2	93.4
02 17 007C 0X75	7 x 0.75	8.3	62.0	116.4
02 17 012C 0X75	12 x 0.75	10.9	98.9	189.7
02 17 018C 0X75	18 x 0.75	12.7	141.0	265.0
02 17 025C 0X75	25 x 0.75	14.8	210.6	363.6
02 17 002C 0001	2 x 1	6.5	29.5	59.7
02 17 003C 0001	3 x 1	6.8	38.9	73.6
02 17 004C 0001	4 x 1	7.3	49.1	89.0
02 17 005C 0001	5 x 1	8.1	58.4	108.1
02 17 007C 0001	7 x 1	8.8	77.2	136.8
02 17 012C 0001	12 x 1	11.5	125.5	223.3
02 17 018C 0001	18 x 1	13.9	180.0	328.9
02 17 025C 0001	25 x 1	15.9	266.1	439.8
02 17 002C 01X5	2 x 1.5	7.1	39.4	73.9
02 17 003C 01X5	3 x 1.5	7.5	51.7	92.7
02 17 004C 01X5	4 x 1.5	8.2	66.2	115.9
02 17 005C 01X5	5 x 1.5	8.9	80.9	138.7
02 17 007C 01X5	7 x 1.5	9.9	108.0	182.3
02 17 012C 01X5	12 x 1.5	13.0	175.1	298.0
02 17 018C 01X5	18 x 1.5	15.6	276.0	450.8
02 17 025C 01X5	25 x 1.5	17.9	377.6	596.4

Note:- Dimensions and specifications may be changed without prior notice.

X = without Green-Yellow earth core (0Z)

JB-H (HALOGEN FREE)



Technical data:

- Halogen-free flexible control cable, adapted to DIN VDE 0281 part 14 and DIN VDE 0281 part 13.
- **Temperature range:** flexing -15°C to +70°C, Fixed installation -30°C to +70°C
- **Nominal voltage:** U₀/U 450/750 V
- **Test voltage:** 3000 V
- **Minimum bending radius:** flexing approx 15 x cable ø, Fixed installation approx 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to EN 60228 cl. 5,
- Core insulation of halogen-free compound T17 to EN 50363-7
- Colour coded to DIN VDE 0293-308
- Green-Yellow earth core in outer layer • Cores stranded in layers with optimal lay-length
- Halogen-free sheath compound TM7, to EN 50363-8
- Outer jacket colour grey (RAL 7001) • LSOH = Low Smoke Zero Halogen-free

Tests:

- Flame test to IEC 60332-1-2 • No flame propagation according to IEC 60332-3-24(flame spread on Vertical cable or wire bundle)
- Halogen free according to IEC 60754-1 • Corrosive gas evolution to IEC 60754-2

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 18 003G 01X5	3 G 1.5	8.2	38.2	110
02 18 004G 01X5	4 G 1.5	8.9	50.9	135
02 18 005G 01X5	5 G 1.5	10.0	63.7	169
02 18 003G 02X5	3G 2.5	10.0	63.7	169
02 18 004G 02X5	4G 2.5	10.9	84.9	209
02 18 005G 02X5	5G 2.5	12.0	106.1	256
02 18 003G 0004	3G 4	11.2	101.2	231
02 18 004G 0004	4G 4	12.5	135.0	295
02 18 005G 0004	5G 4	13.9	168.7	366
02 18 004G 0006	4G 6	14.0	202.4	398
02 18 005G 0006	5G 6	15.5	253.1	492
02 18 004G 0010	4G 10	17.4	344.7	642
02 18 005G 0010	5G 10	19.4	430.8	800

JB-H (HALOGEN FREE)

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 18 004G 0016	4G 16	20.2	574.1	959
02 18 005G 0016	5G 16	22.5	717.7	1194
02 18 004G 0025	4G 25	25.1	893.1	1486
02 18 005G 0025	5G 25	28.1	1116.3	1860
02 18 004G 0035	4G 35	28.6	1257.6	2013
02 18 005G 0035	5G 35	32.1	1572.0	2525
02 18 004G 0050	4G 50	33.9	1804.4	2860
02 18 004G 0070	4G 70	39.2	2549.7	3940
02 18 004G 0095	4G 95	44.8	3399.7	5205
02 18 004G 0120	4G 120	50.3	4306.2	6579

Note:- Dimensions and specifications may be changed without prior notice.

G = with green-yellow earth core.

X = Without green-yellow earth core

JZ-H (HALOGEN FREE)



Technical data:

- **Temperature range:** flexing -15°C to +70°C, Fixed installation -30°C to +70°C
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage:** 4000 V
- **Minimum bending radius:** flexing approx 10 x cable ø, Fixed installation approx 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to EN 60228 cl. 5,
- Core insulation of halogen-free compound T17 to EN 50363-7
- Black colour with white numbers DIN VDE 0293
- Green-Yellow earth core in outer layer
- Cores stranded in layers with optimal lay-length
- Halogen-free sheath compound TM7, to EN 50363-8
- Outer jacket colour grey (RAL 7001)
- LSOH = Low Smoke Zero Halogen-free

Tests:

- Flame test to IEC 60332-1-2
- No flame propagation according to IEC 60332-3-24(flame spread on Vertical cable or wire bundle)
- Halogen free according to IEC 60754-1
- Corrosive gas evolution to IEC 60754-2

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Application:

- Halogen-free cables for airports railway station, plant engineering and Industrial machinery, in EMC sensitive instruments

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 19 002C 00X5	2 x 0.5	4.8	8.7	34
02 19 003G 00X5	3G 0.5	5.1	13.0	41
02 19 003C 00X5	3 x 0.5	5.1	13.0	41
02 19 004G 00X5	4G 0.5	5.6	17.4	50
02 19 004C 00X5	4 x 0.5	5.6	17.4	50
02 19 005G 00X5	5G 0.5	6.0	21.7	60
02 19 007G 00X5	7G 0.5	6.7	30.4	78
02 19 012G 00X5	12G 0.5	8.9	52.2	136
02 19 002C 0X75	2 x 0.75	5.3	13.0	43
02 19 003G 0X75	3G 0.75	5.6	19.6	53
02 19 003C 0X75	3 x 0.75	5.6	19.6	53
02 19 004G 0X75	4G 0.75	6.1	26.1	65
02 19 004C 0X75	4 x 0.75	6.1	26.1	65
02 19 005G 0X75	5G 0.75	6.9	32.6	83
02 19 005C 0X75	5 x 0.75	6.9	32.6	83
02 19 007G 0X75	7G 0.75	7.6	45.6	105
02 19 007C 0X75	7 x 0.75	7.6	45.6	105
02 19 009G 0X75	9G 0.75	9.8	58.7	160

JZ-H (HALOGEN FREE)

02 19 012G 0X75	12G 0.75	10.1	78.2	185
02 19 018G 0X75	18G 0.75	11.9	117.3	264
02 19 025G 0X75	25G 0.75	14.6	163.0	385
02 19 002C 0001	2 x 1	5.6	17.4	51
02 19 003G 0001	3G 1	6.0	26.1	64
02 19 003C 0001	3 x 1	6.0	26.1	64
02 19 004G 0001	4G 1	6.8	34.8	84
02 19 004C 0001	4 x 1	6.8	34.8	84
02 19 005G 0001	5G 1	7.5	43.5	101
02 19 007G 0001	7G 1	8.9	60.8	143
02 19 008G 0001	8G 1	9.7	69.5	169
02 19 012G 0001	12G 1	11.1	104.3	231
02 19 014G 0001	14G 1	11.7	121.7	262
02 19 018G 0001	18G 1	13.2	156.5	334
02 19 025G 0001	25G 1	16.2	217.3	488
02 19 041G 0001	41G 1	19.7	356.4	749

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 19 002C 01X5	2 x 1.5	6.3	25.5	67
02 19 003G 01X5	3G 1.5	6.7	38.2	84
02 19 003C 01X5	3 x 1.5	6.7	38.2	84
02 19 004G 01X5	4G 1.5	7.3	50.9	105
02 19 005G 01X5	5G 1.5	8.2	63.7	132
02 19 007G 01X5	7G 1.5	9.0	89.1	169
02 19 008G 01X5	8G 1.5	10.6	101.9	216
02 19 009G 01X5	9G 1.5	11.5	114.6	250
02 19 012G 01X5	12G 1.5	12.1	152.8	299
02 19 014G 01X5	14G 1.5	12.9	178.3	344
02 19 018G 01X5	18G 1.5	14.5	229.2	437
02 19 025G 01X5	25G 1.5	17.2	318.3	612
02 19 034G 01X5	34G 1.5	19.8	432.9	820

JZ-H (HALOGEN FREE)

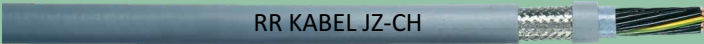
02 19 002C 02X5	2 x 2.5	7.6	42.4	103
02 19 003G 02X5	3G 2.5	8.3	63.7	134
02 19 004G 02X5	4G 2.5	9.1	84.9	168
02 19 005G 02X5	5G 2.5	10.2	106.1	210
02 19 007G 02X5	7G 2.5	11.2	148.5	271
02 19 012G 02X5	12G 2.5	14.8	254.6	469
02 19 004G 0004	4G 4	10.8	135.0	250
02 19 005G 0004	5G 4	12.1	168.7	312
02 19 007G 0004	7G 4	13.3	236.2	405
02 19 004G 0006	4G 6	13.0	202.4	367
02 19 005G 0006	5G 6	14.5	253.1	458
02 19 007G 0006	7G 6	16.0	354.3	596
02 19 004G 0010	4G 10	15.5	344.7	570
02 19 005G 0010	5G 10	17.1	430.8	703
02 19 004G 0016	4G 16	18.8	574.1	896
02 19 005G 0016	5G 16	21.0	717.7	1119
02 19 004G 0025	4G 25	23.4	893.1	1391
02 19 005G 0025	5G 25	25.8	1116.3	1717
02 19 004G 0035	4G 35	26.4	1257.6	1872

Note:- Dimensions and specifications may be changed without prior notice.

G = with green-yellow earth core.

X - Without green-yellow earth core

JZ- CH (HALOGEN FREE)



Technical data:

- Halogen-free cables for airports railway station, plant engineering and Industrial machinery
- **Temperature range:** flexing -15°C to +70°C, Fixed installation -30°C to +70°C
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage:** 4000 V
- **Minimum bending radius:** flexing approx 15 x cable ø, Fixed installation approx. 6 x cable ø

Cable construction

- Bare copper, fine wire conductors, to EN 60228 cl. 5,
- Core insulation of halogen-free compound TI7 to EN 50363-7
- Black colour with white numbers DIN VDE 0293
- Green-Yellow earth core in outer layer
- Cores stranded in layers with optimal lay-length
- Halogen free inner sheath in Grey
- Tinned copper braiding
- Halogen-free sheath compound TM7, to EN 50363-8
- Outer jacket colour grey (RAL 7001)
- LSOH = Low Smoke Zero Halogen-free

Tests:

- Flame test to IEC 60332-1-2
- No flame propagation according to IEC 60332-3-24 (flame spread on Vertical cable or wire bundle)
- Halogen free according to IEC 60754-1
- Corrosive gas evolution to IEC 60754-2

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 20 002C 00X5	2 x 0.5	7.0	22.1	72
02 20 003G 00X5	3G 0.5	7.3	28.4	82
02 20 003C 00X5	3 X 0.5	7.3	28.4	82
02 20 004G 00X5	4G 0.5	7.9	33.5	97
02 20 004C 00X5	4 X 0.5	7.9	33.5	97
02 20 005G 00X5	5G 0.5	8.4	39.9	111
02 20 007G 00X5	7G 0.5	8.9	49.4	129
02 20 012G 00X5	12G 0.5	11.3	78.0	208
02 20 002C 0X75	2 x 0.75	7.6	28.2	86
02 20 003G 0X75	3G 0.75	7.9	36.1	99
02 20 003C 0X75	3 X 0.75	7.9	36.1	99
02 20 004G 0X75	4G 0.75	8.4	43.9	114
02 20 004C 0X75	4 X 0.75	8.4	43.9	114
02 20 005G 0X75	5G 0.75	8.9	50.5	130
02 20 005C 0X75	5 X 0.75	8.9	50.5	130
02 20 007G 0X75	7G 0.75	9.8	66.4	163
02 20 007C 0X75	7 X 0.75	9.8	66.4	163
02 20 012G 0X75	12G 0.75	12.3	105.4	258
02 20 018G 0X75	18G 0.75	14.5	167.0	372
02 20 025G 0X75	25G 0.75	16.6	223.0	493

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02 20 002C 0001	2 x 1	7.9	33.0	96
02 20 003G 0001	3G 1	8.2	43.7	111
02 20 003C 0001	3 X 1	8.2	43.7	111
02 20 004G 0001	4G 1	8.7	52.6	127
02 20 004C 0001	4 X 1	8.7	52.6	127
02 20 005G 0001	5G 1	9.5	63.6	153
02 20 007G 0001	7G 1	10.5	82.9	192
02 20 012G 0001	12G 1	13.3	151.9	322
02 20 018G 0001	18G 1	15.5	211.0	444
02 20 025G 0001	25G 1	17.7	283.3	586
02 20 041G 0001	41G 1	22.0	456.5	923
02 20 002C 01X5	2 x 1.5	8.5	43.5	116
02 20 003G 01X5	3G 1.5	8.9	58.1	136
02 20 003C 01X5	3 X 1.5	8.9	58.1	136

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
02 20 004G 01X5	4G 1.5	9.6	71.9	163
02 20 005G 01X5	5G 1.5	10.6	102.6	209
02 20 007G 01X5	7G 1.5	11.3	129.4	247
02 20 012G 01X5	12G 1.5	14.8	206.9	416
02 20 014G 01X5	14G 1.5	0.0	232.9	185
02 20 018G 01X5	18G 1.5	17.2	292.1	575
02 20 025G 01X5	25G 1.5	20.1	392.5	783
02 20 003G 02X5	3G 2.5	10.4	102.5	204
02 20 004G 02X5	4G 2.5	11.4	125.7	248
02 20 005G 02X5	5G 2.5	12.6	152.2	302
02 20 007G 02X5	7G 1.5	13.9	200.4	382
02 20 012G 02X5	12G 2.5	17.6	318.2	613
02 20 004G 0004	4G 4	13.4	180.6	350
02 20 005G 0004	5G 4	14.7	221.6	426
02 20 007G 0004	7G 4	16.2	292.6	537

JZ- CH (HALOGEN FREE)

02 20 004G 0006	4G 6	15.8	261.2	497
02 20 005G 0006	5G 6	17.3	317.6	601
02 20 007G 0006	7G 6	18.8	426.2	754
02 20 004G 0010	4G 10	19.0	414.0	753
02 20 005G 0010	5G 10	21.2	506.2	932
02 20 004G 0016	4G 16	22.2	688.7	1128
02 20 005G 0016	5G 16	24.4	846.4	1377
02 20 004G 0025	4G 25	27.0	1032.9	1690
02 20 004G 0035	4G 35	30.7	1420.6	2257
02 20 004G 0050	4 G 50	36.5	2009.2	3205
02 20 004G 0070	4 G 70	41.6	2788.5	4319
02 20 004G 0095	4 G 95	47.8	3656.7	5691

Note:- Dimensions and specifications may be changed without prior notice.

G = with green-yellow earth core.
X = Without green-yellow earth core

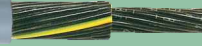
CHAPTER-III

SERVO & DRAG CHAIN



JZ-30400 P

RR KABEL 30400P CE



Technical data:

- **Temperature range:** flexing -5°C to +70°C, Fixed installation -40°C to +70°C
- **Insulation resistance:** <20 Mohm km
- **Nominal voltage:** U_0/U 300/500 V
- **Test voltage:** 4000 V
- **Minimum bending radius:** flexing approx 12.5 x cable $\varnothing$, Fixed installation approx. 4 x cable $\varnothing$

Cable construction:

- Bare copper, fine wire conductors, to EN 60228 cl. 5,
- Core insulation of special PVC T12 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Cores stranded in layers with optimal lay-length
- Special polyurethane outer sheath (PUR)
- Sheath color: Grey (RAL 7001)

Application:

Used in Machine Tools, Industrial Machinery & Measurement Control Oil and Lubricant Resistant

Properties:

High Oil resistance Abrasion and notch resistant Low Adhesive surface Resistant to hydrolysis and microbes

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 01 002C 00X5	2 x 0.5	4.8	8.7	30
03 01 003G 00X5	3G 0.5	5.1	13.0	37
03 01 003C 00X5	3 x 0.5	5.1	13.0	37
03 01 004G 00X5	4G 0.5	5.6	17.4	46
03 01 004C 00X5	4 x 0.5	5.6	17.4	46
03 01 005G 00X5	5G 0.5	6.0	21.7	55
03 01 005C 00X5	5 x 0.5	6.0	21.7	55
03 01 007G 00X5	7G 0.5	6.7	30.4	72
03 01 007C 00X5	7 x 0.5	6.7	30.4	72
03 01 010G 00X5	10G 0.5	8.8	43.5	115
03 01 012G 00X5	12G 0.5	8.9	52.2	126
03 01 018G 00X5	18G 0.5	10.5	78.2	180
03 01 025G 00X5	25G 0.5	12.9	108.6	263
03 01 034G 00X5	34G 0.5	14.3	147.8	337
03 01 042G 00X5	42G 0.5	16.6	182.5	437
03 01 002C 0X75	2 x 0.75	5.3	13.0	39
03 01 003G 0X75	3G 0.75	5.6	19.6	48
03 01 003C 0X75	3 x 0.75	5.6	19.6	48
03 01 004G 0X75	4G 0.75	6.1	26.1	59
03 01 004C 0X75	4 x 0.75	6.1	26.1	59
03 01 005G 0X75	5G 0.75	6.9	32.6	76

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 01 012G 0001	12G 1	11.1	104.3	215
03 01 018G 0001	18G 1	13.2	156.5	311
03 01 025G 0001	25G 1	16.2	217.3	452
03 01 034G 0001	34G 1	18.1	295.5	587
03 01 041G 0001	41G 1	19.7	356.4	700
03 01 002C 01X5	2 x 1.5	6.3	25.5	61
03 01 003G 01X5	3G 1.5	6.7	38.2	78
03 01 003C 01X5	3 x 1.5	6.7	38.2	78
03 01 004G 01X5	4G 1.5	7.3	50.9	98
03 01 004C 01X5	4 x 1.5	7.3	50.9	98
03 01 005G 01X5	5G 1.5	8.2	63.7	123
03 01 005C 01X5	5 x 1.5	8.2	63.7	123
03 01 007G 01X5	7G 1.5	9.0	89.1	160
03 01 007C 01X5	7 x 1.5	9.0	89.1	160
03 01 012G 01X5	12G 1.5	12.1	152.8	280
03 01 018G 01X5	18G 1.5	14.5	229.2	412
03 01 025G 01X5	25G 1.5	17.2	318.3	576
03 01 034G 01X5	34G 1.5	19.6	432.9	766
03 01 041G 01X5	41G 1.5	21.3	522.0	915
03 01 002C 02X5	2 x 2.5	7.6	42.4	93

PART NUMBER	No. cores x cross- sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 01 005C 0X75	5 x 0.75	6.9	32.6	76
03 01 007G 0X75	7G 0.75	7.6	45.6	97
03 01 007C 0X75	7 x 0.75	7.6	45.6	97
03 01 010G 0X75	10G 0.75	10.0	65.2	156
03 01 012G 0X75	12G 0.75	10.1	78.2	171
03 01 018G 0X75	18G 0.75	11.9	117.3	247
03 01 025G 0X75	25G 0.75	14.6	163.0	357
03 01 034G 0X75	34G 0.75	15.7	221.6	446
03 01 041G 0X75	41G 0.75	17.4	267.3	543
03 01 002C 0001	2 x 1	5.6	17.4	46
03 01 003G 0001	3G 1	6.0	26.1	59
03 01 003C 0001	3 x 1	6.0	26.1	59
03 01 004G 0001	4G 1	6.8	34.8	77
03 01 004C 0001	4 x 1	6.8	34.8	77
03 01 005G 0001	5G 1	7.5	43.5	93
03 01 005C 0001	5 x 1	7.5	43.5	93
03 01 007G 0001	7G 1	8.9	60.8	132
03 01 010G 0001	10G 1	10.8	86.9	191

PART NUMBER	No. cores x cross- sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 01 003G 02X5	3G 2.5	8.3	63.7	124
03 01 004G 02X5	4G 2.5	9.1	84.9	157
03 01 005G 02X5	5G 2.5	10.2	106.1	196
03 01 007G 02X5	7G 2.5	11.2	148.5	256
03 01 012G 02X5	12G 2.5	14.8	254.6	443
03 01 004G 0004	4G 4	10.8	135.0	234
03 01 005G 0004	5G 4	12.1	168.7	292
03 01 007G 0004	7G 4	13.3	236.2	383
03 01 004G 0006	4G 6	13.0	202.4	345
03 01 005G 0006	5G 6	14.5	253.1	430
03 01 007G 0006	7G 6	16.0	354.3	566
03 01 004G 0010	4G 10	15.5	344.7	539
03 01 005G 0010	5G 10	17.1	430.8	666
03 01 007G 0010	7G 10	19.0	603.2	888
03 01 004G 0016	4G 16	18.8	574.1	852

PART NUMBER	No. cores x cross- sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 01 012G 0001	12G 1	11.1	104.3	215
03 01 018G 0001	18G 1	13.2	156.5	311
03 01 025G 0001	25G 1	16.2	217.3	452
03 01 034G 0001	34G 1	18.1	295.5	587
03 01 041G 0001	41G 1	19.7	356.4	700
03 01 002C 01X5	2 x 1.5	6.3	25.5	61
03 01 003G 01X5	3G 1.5	6.7	38.2	78
03 01 003C 01X5	3 x 1.5	6.7	38.2	78
03 01 004G 01X5	4G 1.5	7.3	50.9	98
03 01 004C 01X5	4 x 1.5	7.3	50.9	98
03 01 005G 01X5	5G 1.5	8.2	63.7	123
03 01 005C 01X5	5 x 1.5	8.2	63.7	123
03 01 007G 01X5	7G 1.5	9.0	89.1	160
03 01 007C 01X5	7 x 1.5	9.0	89.1	160
03 01 012G 01X5	12G 1.5	12.1	152.8	280
03 01 018G 01X5	18G 1.5	14.5	229.2	412
03 01 025G 01X5	25G 1.5	17.2	318.3	576
03 01 034G 01X5	34G 1.5	19.6	432.9	766

JZ-30400 P

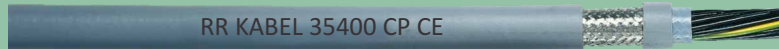
PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 01 041G 01X5	41G 1.5	21.3	522.0	915
03 01 002C 02X5	2 x 2.5	7.6	42.4	93
03 01 003G 02X5	3G 2.5	8.3	63.7	124
03 01 004G 02X5	4G 2.5	9.1	84.9	157
03 01 005G 02X5	5G 2.5	10.2	106.1	196
03 01 007G 02X5	7G 2.5	11.2	148.5	256
03 01 012G 02X5	12G 2.5	14.8	254.6	443
03 01 004G 0004	4G 4	10.8	135.0	234
03 01 005G 0004	5G 4	12.1	168.7	292
03 01 007G 0004	7G 4	13.3	236.2	383
03 01 004G 0006	4G 6	13.0	202.4	345
03 01 005G 0006	5G 6	14.5	253.1	430
03 01 007G 0006	7G 6	16.0	354.3	566
03 01 004G 0010	4G 10	15.5	344.7	539
03 01 005G 0010	5G 10	17.1	430.8	666
03 01 007G 0010	7G 10	19.0	603.2	888
03 01 004G 0016	4G 16	18.8	574.1	852

Note:- Dimensions and specifications may be changed without prior notice.

G = with green-yellow earth core.

X - Without green-yellow earth core

JZ-35400 CP



Technical Data:

- **Temperature range:** flexing -5°C to +70°C, Fixed installation -40°C to +70°C
- **Insulation resistance:** > 20 Mohm km
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage:** 4000 V
- **Minimum bending radius:** flexing approx 12.5 x cable ø, Fixed installation approx. 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to EN 60228 cl. 5,
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Cores stranded in layers with optimal lay-length
- Special polyurethane outer sheath (PUR)
- Sheath color: Grey (RAL 7001)

Application:

Machine tools, industrial machinery, Measurement control, and electrical applications Outdoor use is possible within the indicated temperature range Very suitable for oily wet areas withing machinery and production shop floor that are subject to normal mechanical stress Resistant to contact with mineral oil-based lubricants, diluted acids, aqueous alkaline solutions and other chemical media

Application:

These cables are used in Machinery, CNC Machines, Computer Systems etc and offers higher protection against Interference.

The cables is also suitable for limited mechanical stresses and out door application.

EMC= Electromagnetic compatibility To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product conforms with the EC Low-Voltage Directive 2006/95/EC

Properties:

- High Oil resistance
- Abrasion and notch resistant
- Low Adhesive surface
- Resistant to hydrolysis and microbes

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 02 002C 0X75	2 x 0.75	7.4	30.3	80
03 02 003G 0X75	3G 0.75	7.9	38.5	95
03 02 003C 0X75	3 x 0.75	7.9	38.5	95
03 02 004G 0X75	4G 0.75	8.4	46.7	111
03 02 004C 0X75	4 x 0.75	8.4	46.7	111
03 02 005G 0X75	5G 0.75	8.9	53.6	126
03 02 005C 0X75	5 x 0.75	8.9	53.6	126
03 02 007G 0X75	7G 0.75	9.7	70.4	156
03 02 007C 0X75	7 x 0.75	9.7	70.4	156
03 02 012G 0X75	12G 0.75	12.3	111.2	252
03 02 018G 0X75	18G 0.75	14.5	176.6	366
03 02 025G 0X75	25G 0.75	16.6	235.6	487
03 02 034G 0X75	34G 0.75	18.9	306.9	635
03 02 041G 0X75	41G 0.75	20.6	379.7	765

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PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 02 002C 0001	2 x 1	7.9	35.3	92
03 02 003G 0001	3G 1	8.2	46.5	107
03 02 003C 0001	3 x 1	8.2	46.5	107
03 02 004G 0001	4G 1	8.7	55.8	124
03 02 004C 0001	4 x 1	8.7	55.8	124
03 02 005G 0001	5G 1	9.5	67.4	149
03 02 007G 0001	7G 1	10.2	87.5	182
03 02 012G 0001	12G 1	13.3	160.8	318
03 02 018G 0001	18G 1	15.5	222.7	437
03 02 025G 0001	25G 1	17.5	298.6	574
03 02 034G 0001	34G 1	20.2	389.4	760
03 02 041G 0001	41G 1	22.0	480.8	915
03 02 002C 01X5	2 x 1.5	8.5	46.3	112
03 02 003G 01X5	3G 1.5	8.9	61.6	133

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 02 003C 01X5	3 x 1.5	8.9	61.6	133
03 02 004G 01X5	4G 1.5	9.6	76.0	159
03 02 004C 01X5	4 x 1.5	9.6	76.0	159
03 02 005G 01X5	5G 1.5	10.3	109.1	200
03 02 005C 01X5	5 x 1.5	10.3	109.1	200
03 02 007G 01X5	7G 1.5	11.3	137.0	246
03 02 007C 01X5	7 x 1.5	11.3	137.0	246
03 02 012G 01X5	12G 1.5	14.8	218.4	411
03 02 018G 01X5	18G 1.5	17.2	307.5	569
03 02 025G 01X5	25G 1.5	20.1	412.7	774
03 02 034G 01X5	34G 1.5	22.8	547.2	1014
03 02 041G 01X5	41G 1.5	24.7	673.1	1216

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PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 02 003G 02X5	3G 2.5	10.3	109.0	200
03 02 004G 02X5	4G 2.5	11.3	133.2	243
03 02 005G 02X5	5G 2.5	12.6	161.1	299
03 02 007G 02X5	7G 1.5	13.9	211.6	378
03 02 012G 02X5	12G 2.5	17.6	334.8	608
03 02 004G 0004	4G 4	13.4	190.6	345
03 02 005G 0004	5G 4	14.7	233.6	420
03 02 004G 0006	4G 6	15.8	275.2	493
03 02 005G 0006	5G 6	17.3	334.1	596
03 02 004G 0010	4G 10	19.0	434.7	745
03 02 004G 0016	4G 16	22.2	723.2	1130

Note:- Dimensions and specifications may be changed without prior notice.
G = with green-yellow earth core.
X = without Green-Yellow earth core (OZ)

JZ- 40415 CP



Technical data:

- PVC Control cables, core in accordance with VDE 0812/0281 Outer sheath in accordance with VDE 0250/0282
- **Temperature range:** flexing -5°C to +70°C, Fixed installation -40°C to +70°C
- **Nominal voltage:** U₀/U 300/500 V
- **Insulation resistance:** min. 20 MOhm x km
- **Test voltage:** Core/core: 4000V Core/screen: 2000V
- **Minimum bending radius:** Flexing 20 x cable Ø, Fixed installation: 6 x cable Ø

Cable construction:

- Bare copper, fine wire conductors, bunch stranded DIN VDE 0295 cl. 5,
- Core insulation of PVC TI2, EN 50363-3
- Black Core with continuous white numbering to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Foil separator
- Tinned copper, braided screen, approx 85% coverage
- Special polyurethane outer sheath (PUR)
- Sheath color: Grey (RAL 7001)

Properties:

Extensively oil resistant Abrasion and notch resistant Low Adhesive surface Resistant to hydrolysis and microbes EMC-compliant Space and weight saving due to thin cable diameters

Application:

These cables are used in Machinery, CNC Machines, Computer Systems etc and offers higher protection against Interference. The cables are also suitable for limited mechanical stresses and outdoor application.

EMC= Electromagnetic compatibility

CE= The product conforms with the EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 03 002C 00X5	2 x 0.5	5.8	19.3	45
03 03 003G 00X5	3G 0.5	6.1	25.5	56
03 03 003C 00X5	3 x 0.5	6.1	25.5	56
03 03 004G 00X5	4G 0.5	6.5	30.1	64
03 03 004C 00X5	4 x 0.5	6.5	30.1	64
03 03 005G 00X5	5G 0.5	7.0	35.8	75
03 03 005C 00X5	5 x 0.5	7.0	35.8	75
03 03 007G 00X5	7G 0.5	7.5	46.7	92
03 03 007C 00X5	7 x 0.5	7.5	46.7	92
03 03 012G 00X5	12G 0.5	9.9	74.2	152
03 03 012C 00X5	12 x 0.5	9.9	74.2	152
03 03 018G 00X5	18G 0.5	11.5	104.3	210
03 03 018C 00X5	18 x 0.5	11.5	104.3	210
03 03 025G 00X5	25G 0.5	13.4	140.0	278
03 03 025C 00X5	25 x 0.5	13.4	140.0	278

JZ- 40415 CP

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 03 002C 0X75	2 x 0.75	6.2	25.7	54
03 03 003G 0X75	3G 0.75	6.5	32.3	65
03 03 003C 0X75	3 x 0.75	6.5	32.3	65
03 03 004G 0X75	4G 0.75	7.0	40.4	78
03 03 004C 0X75	4 x 0.75	7.0	40.4	78
03 03 005G 0X75	5G 0.75	7.7	48.9	95
03 03 005C 0X75	5 x 0.75	7.7	48.9	95
03 03 007G 0X75	7G 0.75	8.3	64.5	119
03 03 007C 0X75	7 x 0.75	8.3	64.5	119
03 03 012G 0X75	12G 0.75	10.9	103.2	194
03 03 018G 0X75	18G 0.75	12.7	147.4	271
03 03 025G 0X75	25G 0.75	14.8	219.5	372
03 03 025C 0X75	25 x 0.75	14.8	219.5	372
03 03 002C 0001	2 x 1	6.5	30.5	61
03 03 003G 0001	3G 1	6.8	40.3	75
03 03 003C 0001	3 x 1	6.8	40.3	75
03 03 004G 0001	4G 1	7.3	51.0	91
03 03 004C 0001	4 x 1	7.3	51.0	91
03 03 005G 0001	5G 1	8.1	60.7	110
03 03 005C 0001	5 x 1	8.1	60.7	110
03 03 007G 0001	7G 1	8.8	80.5	140
03 03 007C 0001	7 x 1	8.8	80.5	140
03 03 012G 0001	12G 1	11.5	131.2	229
03 03 018G 0001	18G 1	13.9	188.5	337

JZ- 40415 CP

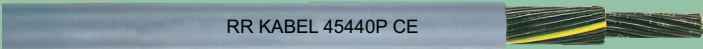
PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 03 025G 0001	25G 1	15.9	277.9	452
03 03 002C 01X5	2 x 1.5	7.1	40.8	75
03 03 003G 01X5	3G 1.5	7.5	53.8	95
03 03 003C 01X5	3 x 1.5	7.5	53.8	95
03 03 004G 01X5	4G 1.5	8.2	69.0	119
03 03 004C 01X5	4 x 1.5	8.2	69.0	119
03 03 005G 01X5	5G 1.5	8.9	84.4	142
03 03 005C 01X5	5 x 1.5	8.9	84.4	142
03 03 007G 01X5	7G 1.5	9.9	112.9	187
03 03 007C 01X5	7 x 1.5	9.9	112.9	187
03 03 012G 01X5	12G 1.5	13.0	183.5	306
03 03 018G 01X5	18G 1.5	15.6	288.5	463
03 03 025G 01X5	25G 1.5	17.9	395.0	614
03 03 034G 01X5	34G 1.5	20.8	511.9	811
03 03 003G 02X5	3G 2.5	8.9	84.4	140
03 03 004G 02X5	4G 2.5	9.9	107.5	179
03 03 005G 02X5	5G 2.5	11.0	130.8	219
03 03 007G 02X5	7G 2.5	11.9	176.5	281
03 03 012G 02X5	12G 2.5	16.0	314.8	491
03 03 018G 02X5	18G 2.5	19.0	454.1	709
03 03 025G 02X5	25G 2.5	22.2	617.0	954
03 03 004G 0004	4G 4	11.6	160.8	258
03 03 007G 0004	7G 4	14.4	269.0	425
03 03 004G 0006	4G 6	14.2	233.7	382
03 03 007G 0006	7G 6	17.0	415.7	619
03 03 004G 0010	4G 10	17.2	402.9	608
03 03 005G 0010	5G 10	19.5	499.3	772
03 03 004G 0016	4G 16	20.2	647.6	909
03 03 005G 0016	5G 16	22.6	799.6	1132
03 03 004G 0025	4G 25	25.1	986.2	1396
03 03 005G 0025	5G 25	28.0	1220.9	1737
03 03 004G 0035	4G 35	28.0	1369.0	1838

Note:-

G = with green-yellow earth core.

X = without Green-Yellow earth core (OZ) To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

JZ- 45440 P



Technical Data:

- **Temperature range:** flexing -5°C to +70°C, Fixed installation -40°C to +70°C
- **Insulation resistance:** > 20 MOhm km
- **Nominal voltage:** U_o/U 300/500 V
- **Test voltage:** 4000 V
- **Minimum bending radius:** flexing approx 12.5 x cable $\varnothing$, Fixed installation approx. 4 x cable $\varnothing$

Cable construction:

- Bare copper, fine wire conductors, to EN 60228 cl. 5,
- Core insulation of TPE
- Black core with continuous white numbering according to DIN VDE 0293
- Cores stranded in layers with optimal lay-length
- Special polyurethane outer sheath (PUR)
- Sheath color: Grey (RAL 7001)

Properties:

High Oil resistance Abrasion and notch resistant Low Adhesive surface Resistant to hydrolysis and microbes Flexible at low temperatures Halogen free and flame retardant to IEC 60332-1-2

Application:

These cables are suitable for Machine tools, industrial machinery, Measurement Control. Can be used in out door application and are resistant to Oil, Lubricants, Water etc.

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 04 002C 00X5	2 x 0.5	5.9	8.7	39
03 04 003G 00X5	3G 0.5	6.2	13.0	45
03 04 004G 00X5	4G 0.5	6.9	17.4	57
03 04 005G 00X5	5G 0.5	7.4	21.7	67
03 04 007G 00X5	7G 0.5	9.1	30.4	100
03 04 012G 00X5	12G 0.5	11.3	52.2	158
03 04 018G 00X5	18G 0.5	13.2	78.2	220
03 04 025G 00X5	25G 0.5	15.0	108.6	290
03 04 002C 0X75	2 x 0.75	6.4	13.0	48
03 04 003G 0X75	3G 0.75	6.8	19.6	58
03 04 004G 0X75	4G 0.75	7.4	26.1	71
03 04 005G 0X75	5G 0.75	8.6	32.6	94
03 04 007G 0X75	7G 0.75	10.0	45.6	128
03 04 012G 0X75	12G 0.75	12.4	78.2	203
03 04 018G 0X75	18G 0.75	14.4	117.3	283
03 04 025G 0X75	25G 0.75	17.2	163.0	401
03 04 002C 0001	2 x 1	6.8	17.4	57
03 04 003G 0001	3G 1	7.2	26.1	69
03 04 004G 0001	4G 1	8.2	34.8	90
03 04 005G 0001	5G 1	9.0	43.5	110
03 04 007G 0001	7G 1	11.1	60.8	163

JZ- 45440 P

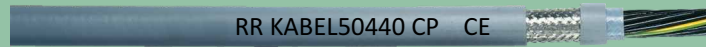
PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 04 012G 0001	12G 1	13.2	104.3	244
03 04 018G 0001	18G 1	15.4	156.5	344
03 04 025G 0001	25G 1	19.0	217.3	507
03 04 034G 0001	34G 1	21.8	295.5	675
03 04 041G 0001	41G 1	23.4	356.4	791
03 04 002C 01X5	2 x 1.5	7.4	25.5	71
03 04 003G 01X5	3G 1.5	8.3	38.2	94
03 04 004G 01X5	4G 1.5	9.0	50.9	116
03 04 005G 01X5	5G 1.5	9.8	63.7	140
03 04 007G 01X5	7G 1.5	12.2	89.1	209
03 04 012G 01X5	12G 1.5	14.5	152.8	317
03 04 018G 01X5	18G 1.5	17.6	229.2	471
03 04 025G 01X5	25G 1.5	20.7	318.3	653
03 04 041G 01X5	41G 1.5	26.3	522.0	1060
03 04 003G 02X5	3G 2.5	9.7	63.7	139
03 04 004G 02X5	4G 2.5	11.0	84.9	181
03 04 005G 02X5	5G 2.5	12.1	106.1	221
03 04 007G 02X5	7G 2.5	14.2	148.5	307
03 04 012G 02X5	12G 2.5	17.8	254.6	500

Note:- Dimensions and specifications may be changed without prior notice.

G= with green-yellow earth core.

X= Without green-yellow earth core

JZ-50440 CP



Technical Data:

- Control cables based on DIN VDE 0281 and 0282
- **Temperature range:** flexing -40°C to +90°C, Fixed installation -50°C to +90°C
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage:** 3000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** flexing 15 x cable ø, Fixed installation 6 x cable ø

Cable construction:

- Bare copper, fine wire conductors, bunch stranded DIN VDE 0295 cl. 5,
- Core insulation of TPE
- Black Core with continuous white numbering to DIN VDE 0293
- Green-Yellow earth core in outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- TPE inner sheathed
- Tinned copper braided screen
- Special polyurethane outer sheath (PUR)
- Sheath color: Grey (RAL 7001)

Properties:

High Oil resistance Abrasion and notch resistant Low Adhesive surface Resistant to hydrolysis and microbes Halogen free and flame retardant to IEC 60332-1-2

Application:

These cables are used in Machinery, CNC Machines, Computer Systems etc and offers higher protection against Interference. The cables are also suitable for limited mechanical stresses and outdoor application.

EMC= Electromagnetic compatibility To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product conforms with the EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 05 003G 00X5	3G 0.5	8.3	31.1	83
03 05 004G 00X5	4G 0.5	8.8	37.1	95
03 05 005G 00X5	5G 0.5	9.7	43.3	114
03 05 007G 00X5	7G 0.5	11.2	53.8	150
03 05 012G 00X5	12G 0.5	13.7	83.1	226
03 05 018G 00X5	18G 0.5	15.7	114.4	301
03 05 025G 00X5	25G 0.5	18.5	176.0	430
03 05 002C 0X75	2 x 0.75	8.4	31.0	84
03 05 003G 0X75	3G 0.75	8.7	38.8	95
03 05 004G 0X75	4G 0.75	9.5	47.0	114
03 05 005G 0X75	5G 0.75	10.2	55.4	133
03 05 007G 0X75	7G 0.75	11.9	71.2	179
03 05 012G 0X75	12G 0.75	14.5	111.8	269
03 05 025G 0X75	25G 0.75	20.3	236.3	542
03 05 002C 0001	2 x 1	8.7	36.2	93
03 05 003G 0001	3G 1	9.3	46.3	111
03 05 004G 0001	4G 1	9.9	58.3	131
03 05 005G 0001	5G 1	10.8	67.6	154

JZ-50440 CP

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Nominal Cable Diameter mm
03 05 007G 0001	7G 1	12.8	88.2	213
03 05 012G 0001	12G 1	15.4	161.2	332
03 05 018G 0001	18G 1	17.7	223.2	448
03 05 025G 0001	25G 1	21.5	295.9	637
03 05 034G 0001	34G 1	23.8	386.0	799
03 05 002C 01X5	2 x 1.5	9.5	46.8	114
03 05 003G 01X5	3G 1.5	9.9	60.8	132
03 05 004G 01X5	4G 1.5	10.8	76.3	161
03 05 005G 01X5	5G 1.5	11.32	91.0	182
03 05 007G 01X5	7G 1.5	13.92	119.5	265
03 05 012G 01X5	12G 1.5	16.8	216.1	416
03 05 018G 01X5	18G 1.5	20	302.9	591
03 05 025G 01X5	25G 1.5	23.5	408.1	808
03 05 041G 01X5	41G 1.5	28.72	635.4	1229
03 05 003G 02X5	3G 2.5	11.12	90.9	178
03 05 004G 02X5	4G 2.5	12.32	115.1	222
03 05 005G 02X5	5G 2.5	14	159.9	296
03 05 007G 02X5	7G 1.5	16.4	208.5	402
03 05 012G 02X5	12G 2.5	21	329.4	648

Note:- Dimensions and specifications may be changed without prior notice.

G= with green-yellow earth core.

X= Without green-yellow earth core

SERVO 55700



Combined power and control cable for motors with variable frequency drives, PVC outer sheath

Technical Data:

- **Core identification:** Supply cores: black with white numbers 1-3 according to VDE 0293 and GN-YE protective conductor;
- **Control cores:** Black with white numbers 5-8 0.34 sq mm - WH/BR/GN/YE
- **Based on:** Core VDE 0812/0250/0281 Outer sheath in accordance with VDE 0281/0250
- **Insulation resistance:** > 20 M Ohm x km Conductor stranding Fine wire according to EN 60228, cl. 5
- **Minimum bending radius:** flexing 20 x cable ϕ , Fixed installation 6 x cable ϕ
- **Nominal voltage:** Supply cores: 600/1000 V, Control core pairs: 250 V/AC
- **Test voltage:** Supply cores: C/C; C/S: 4000 V, Control cores: C/C: 1500 V, C/S: 750 V
- **Temperature range:** flexing -5°C to +70°C, Fixed installation -30°C to +70°C

Application:

Connecting cable between frequency convertor and motor Connecting cable between servo controller and motor Plant engineering

Benefits: One common cable for multiple circuits

Design: Fine-wire strand made of bare copper wires Core insulation: PVC control pairs 0.34 sq mm, color coded from 0.5 sq mm black with consecutive imprinted numbering control pair with laminated aluminium film and tinned copper braiding The model with one control pair does not have laminated aluminium foil PVC outer sheath, grey (RAL 7001)

PART NUMBER	Number of cores and sq mm per conductor	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 06 4G2P M075	4 G 0.75 + 2 x (2 x 0.34)	9.5	59.9	124
03 06 4G2P M105	4 G 1.5 + 2 x (2 x 0.75)	12.1	103.0	195
03 06 4G2P M205	4 G 2.5 + (2 x 2 x 0.75)	13.9	127.6	258
03 06 4G4C M004	4 G 4 + (2 x 0.75 + 2 x 1)	15.8	182.8	351
03 06 4G4C M006	4 G 6 + (2 x 0.75 + 2 x 1)	16.7	250.3	435
03 06 4G4C M016	4 G 16 + (2 x 2 x 1)	23.5	626.3	1052
03 06 4G2C M105	4 G 1.5 +(2 x 0.75)	11.7	76.9	174
03 06 5G2C M105	5 G 1.5 +(2 x 0.75)	12.7	89.7	203
03 06 7G2C M105	7 G 1.5 +(2 x 0.75)	12.4	115.1	203
03 06 4G2C M205	4 G 2.5 +(2 x 0.75)	13.1	110.9	239
03 06 7G2C M205	7 G 2.5 +(2 x 0.75)	15.2	174.6	335

Note:- Dimensions and specifications may be changed without prior notice.

SERVO 60700 CY

RR KABEL SERVO 60700CY CE

Combined power and control cable for motors with variable frequency drives, screened PVC outer sheath

Technical Data:

- **Core identification:** Supply cores: black with white numbers 1-3 according to VDE 0293 and GN-YE protective conductor;
- **Control cores:** Black with white numbers 5-8 0.34 sq mm - WH/BR/GN/YE
- **Based on:** Core VDE 0812/0250/0281 Outer sheath in accordance with VDE 0281/0250
- **Insulation resistance:** > 20 M Ohm x km Conductor stranding Fine wire according to EN 60228, cl. 5
- **Minimum bending radius:** flexing 20 x cable $\varnothing$, Fixed installation 6 x cable $\varnothing$
- **Nominal voltage:** Supply cores: 600/1000 V, Control core pairs: 250 V/AC
- **Test voltage:** Supply cores: C/C; C/S: 4000 V, Control cores: C/C: 1500 V, C/S: 750 V
- **Temperature range:** flexing -5°C to +70°C, Fixed installation -30°C to +70°C

Benefits: One common cable for multiple circuits

Product features: Fixed installation Occasional flexing In dry, damp or wet interiors with normal mechanical stress conditions Only for outdoor use within the indicated operating temperature range, with UV protection Flame retardant according to IEC 60332-1-2

Application:

Connecting cable between frequency convertor and motor Connecting cable between servo controller and motor Plant engineering

Design: Fine-wire strand made of bare copper wires Core insulation: PVC control pairs 0.34 sq mm, color coded from 0.5 sq mm black with consecutive imprinted numbering control pair with laminated aluminium film and tinned copper braiding The model with one control pair does not have laminated aluminium foil Tinned copper braiding PVC outer sheath, grey (RAL 7001)

PART NUMBER	Number of cores and sq mm per	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 07 4G2P M075	4 G 0.75 + 2 x (2 x 0.34)	10.5	86.2	173
03 07 4G2P M105	4 G 1.5 + 2 x (2 x 0.75)	12.7	136.4	246
03 07 4G2P M205	4 G 2.5 + (2 x 2 x 0.75)	14.9	164.1	328
03 07 4G4C M004	4 G 4 + (2 x 0.75 + 2 x 1)	16.6	223.4	421
03 07 4G4C M006	4 G 6 + (2 x 0.75 + 2 x 1)	17.7	323.5	548
03 07 4G4C M010	4 G 10 + (2 x 0.75 + 2 x 1)	21.6	473.2	839
03 07 4G2P M016	4 G 16 + (2 x 2 x 1)	24.5	712.3	1192
03 07 4G2P M025	4 G 25 + (2 x 2 x 1.5)	30.1	1078.4	1809

Note:- Dimensions and specifications may be changed without prior notice.

2YSLCY JB SERVO



Technical data:

- Special motor power supply cable for frequency converters adapted to DIN VDE 0250
- **Temperature range:** flexing -5°C to +70°C, Fixed installation -20°C to +70°C
- **Nominal voltage:** U₀/U 600/1000 V
- **Test voltage:** 4000 V
- **Insulation resistance:** min. 200 MOhm x km
- **Minimum bending radius:** flexing 15 x cable ø, Fixed installation 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, according to EN 60228 cl. 5,
- PE (polyethylene) Core insulation
- Core colours: black, brown, grey, green-yellow
- Cores stranded in concentric layers
- 1. screening with special aluminum foil
- 2. screening with copper braiding, tinned copper
- Transparent special PVC outer sheath

Properties:

- Flame retardant according to IEC 60332-1-2
- Low mutual capacitance
- Features PE-insulation secures a lower dielectric loss, double potential strength, high longevity and low screen-interference currents
- Installation in hazardous areas • Meets EMC requirements • Due to the optimal screening an interference-free operation of frequency converters is obtained

Application:

- Connecting cable between frequency convertor and motor. This 2YSLCY-JB motor power supply cable is used for the frequency converters and assures electromagnetic compatibility in plants and buildings Handling equipment, drives, they are particularly suitable for use with industrial pumps, ventilators, conveyor belts and air-conditioning installations and similar applications.

EMC= Electromagnetic compatibility

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 08 004C 01X5	4 x 1.5	11.4	72.9	167
03 08 004C 02X5	4 x 2.5	12.4	110.0	215
03 08 004C 0004	4 x 4.0	15.6	193.3	363
03 08 004C 0006	4 x 6.0	17.0	269.0	462
03 08 004C 0010	4 x 10.0	19.6	435.0	660
03 08 004C 0016	4 x 16.0	22.1	698.3	955
03 08 004C 0025	4 x 25.0	26.3	1045.7	1390
03 08 004C 0035	4 x 35.0	29.5	1431.6	1842
03 08 004C 0050	4 x 50.0	35.8	2010.3	2656

2YSLCY JB SERVO

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 08 004C 0070	4 x 70.0	40.3	2784.5	3579
03 08 004C 0095	4 x 95.0	46.5	3146.1	4371
03 08 004C 0120	4 x 120.0	53.2	4687.6	6190
03 08 004C 0150	4 x 150.0	57.3	5643.8	7315
03 08 004C 0185	4 x 185.0	62.3	6959.5	8853
03 08 3C3G M105	3 x 1.5 + 3 G 0.25	11.4	65.1	158
03 08 3C3G M205	3 x 2.5 + 3 G 0.5	12.2	99.4	202
03 08 3C3G M004	3 x 4 + 3 G 0.75	14.4	174.0	308
03 08 3C3G M006	3 x 6 + 3 G 1	15.7	237.6	391
03 08 3C3G M010	3 x 10 + 3 G 1.5	18.0	375.2	554
03 08 3C3G M016	3 x 16 + 3 G 2.5	20.2	603.9	809
03 08 3C3G M025	3 x 25 + 3 G 4	23.8	906.3	1174
03 08 3C3G M035	3 x 35 + 3 G 6	26.9	1250.8	1581
03 08 3C3G M050	3 x 50 + 3 G 10	32.6	1798.9	2317
03 08 3C3G M070	3 x 70 + 3 G 10	36.4	2380.3	2988
03 08 3C3G M095	3 x 95 + 3 G 16	42.0	2825.8	3730
03 08 3C3G M120	3 x 120 + 3 G 16	47.8	3991.9	5072
03 08 3C3G M150	3 x 150 + 3 G 25	51.6	4946.4	6193
03 08 3C3G M185	3 x 185 + 3 G 35	56.5	6217.8	7691

Note:- Dimensions and specifications may be changed without prior notice.

* **G=** With green-yellow earth core.

X= Without green-yellow earth core.

The Screen Must be connected at both ends and ensure large-area contact over the entire cable circumference for compliance with the functional interference requirements to EN 55011

SERVO FD 70750 P

Technical Data:

- **Temperature range:** flexing -5°C to +70°C, Fixed installation -20°C to +70°C
- **Nominal voltage:** U_0/U 600/1000 V
- **Test voltage:** 4000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** flexing 12 x cable $\varnothing$, fixed installation 4 x cable $\varnothing$

Cable construction:

- Bare copper, fine wire conductors, according to EN 60228 cl. 6,
- PVC Core insulation
- Control core pairs: screened with laminated film and a layer of tinned-copper wires
- Cores and pairs are twisted together
- Non woven wrapping
- Outer sheath: Extruded PUR compound, Grey (RAL 7001)

Properties:

- Flame retardant according to IEC 60332-1-2 Low mutual capacitance
- Features PE-insulation secures a lower dielectric loss, double potential strength, high longevity and low screen-interference currents
- Installation in hazardous areas
- Meets EMC requirements
- Due to the optimal screening an interference-free operation of frequency converters is obtained

Application:

connecting between the frequency convertor and the motor for power circuits in machine cabling In dry damp or wet interiors with normal mechanical stress conditions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 09 4G2P M075	4 G 0.75 + 2 X (2 X 0.34)	13.9	67.4	168
03 09 4G2P M105	4 G 1.5 + 2 X (2 X 0.75)	15.9	108.9	240
03 09 4G2P M205	4 G 2.5 + 2 X (2 X 0.75)	16.7	142.9	290
03 09 4G4C M004	4 G 4 + (2 X 0.75) + (2 X 1)	19.0	197.9	374
03 09 4G4C M006	4 G 6 + (2 X 0.75) + (2 X 1)	19.6	265.3	459
03 09 4G4C M010	4 G 10 + (2 X 0.75) + (2 X 1)	21.2	407.6	663

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

SERVO FD 75781-CY



RR KABEL SERVO FD 75781-CY

Technical Data:

- **Temperature range:** flexing -5°C to +70°C, Fixed installation -20°C to +70°C
- **Nominal voltage:** U₀/U 600/1000 V
- **Test voltage:** 4000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** flexing 7.5 x cable ø, Fixed installation 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, according to EN 60228 cl. 6,
- PP(Polypropylene) Core insulation
- Cores are twisted together with shorter lay length
- Non woven wrapping
- Tinned copper braiding
- Outer sheath: PVC Orange (RAL 2003)

Properties:

- Low capacitance design allows a longer cable connection between the frequency convertor and the motor
- Flame retardant according to IEC 60332-1-2
- Features PP-insulation secures a lower dielectric loss, double potential strength, high longevity and low screen-interference currents
- Meets EMC requirements
- Due to the optimal screening an interference-free operation of frequency converters is obtained
- Oil resistant Low adhesive surface

Application:

connecting between the frequency convertor and the motor for power circuits in machine cabling In dry damp or wet interiors with normal mechanical stress conditions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 10 004G 01X5	4 G 1.5	9.8	74.3	130
03 10 004G 02X5	4 G 2.5	11.9	113.8	205
03 10 004G 0004	4 G 4	13.5	169.7	286
03 10 004G 0010	4 G 10	19.7	428.0	641
03 10 004G 0016	4 G 16	23.9	661.4	931
03 10 004G 0035	4 G 35	33.3	1386.2	1808
03 10 004G 0050	4 G 50	38.3	1937.2	2476

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

SERVO FD 80785 P

RR KABEL 80785P CE

Technical Data:

- **Temperature range:** flexing -40°C to +70°C, Fixed installation -50°C to +70°C
- **Nominal voltage:** U₀/U 600/1000 V
- **Test voltage:** 4000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** flexing 5 x cable ø, Fixed installation 3 x cable ø

Cable construction

- Bare copper, fine wire conductors, according to EN 60228 cl. 6,
- TPE Core insulation
- Black colored with white numbers acc. To VDE 0293
- Cores are twisted together with shorter lay length
- Non woven wrapping
- Outer sheath: PUR grey (RAL 7001)

Properties

- Low capacitance design allows a longer cable connection between the frequency convertor and the motor
- Flame retardant according to IEC 60332-1-2
- Halogen free • Oil resistant • Low adhesive surface

Application: Used in machine cabling, Electrical Equipments, Automation Engineering

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 11 004G 01X5	4 G 1.5	10	51.2	132
03 11 004G 02X5	4 G 2.5	11.9	85.8	189
03 11 004G 0004	4 G 4	13.7	138.3	268
03 11 004G 0006	4 G 6	15.1	204.3	374
03 11 004G 0010	4 G 10	19.6	358.5	609
03 11 004G 0016	4 G 16	22.8	580.2	896
03 11 005G 01X5	5 G 1.5	11.2	64.0	161
03 11 005G 02X5	5 G 2.5	13.3	107.2	233
03 11 005G 0004	5 G 4	15.2	172.9	330
03 11 005G 0006	5 G 6	16.8	255.3	461
03 11 005G 0016	5 G 16	25.5	725.2	1106
03 11 005G 0025	5 G 25	30.8	1130.0	1699

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

FD 85810



RR KABEL FD 85810

Technical Data:

- control cables, PVC insulated and sheathed
- Requirement adapted to DIN VDE 0245, 281
- **Temperature range** flexing 0°C to +70°C, Fixed installation -20°C to +70°C •
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 7.5 x cable ø, Fixed installation 4 x cable ø

Cable construction

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with short lay-length
- Cores stranded in layers with short lay-length
- Non-woven wrapping
- Outer sheath of special PVC, TM2 to DIN/BS EN 50363-4.1
- Colour grey (RAL 7001)

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2
- For use in damp or wet interiors

Application:

For use in power chains or moving machine parts in Automation Engineering.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 12 002C 00X5	2 x 0.5	5.3	8.7	39
03 12 003G 00X5	3G 0.5	5.7	13.0	48
03 12 004G 00X5	4G 0.5	6.3	17.4	60
03 12 005G 00X5	5G 0.5	6.8	21.7	71
03 12 007G 00X5	7G 0.5	8.0	30.4	99
03 12 012G 00X5	12G 0.5	9.5	52.1	147
03 12 018G 00X5	18G 0.5	11.4	78.1	214
03 12 025G 00X5	25G 0.5	13.7	108.5	306
03 12 030G 00X5	30G 0.5	14.3	130.2	344
03 12 034G 00X5	34G 0.5	15.6	147.5	403
03 12 050G 00X5	50G 0.5	18.5	216.9	574
03 12 002C 0X75	2 x 0.75	5.7	13.0	48
03 12 003G 0X75	3G 0.75	6.2	19.5	60
03 12 004G 0X75	4G 0.75	6.8	26.0	75
03 12 005G 0X75	5G 0.75	7.4	32.5	90

FD 85810

PART NUMBER	No. cores x cross-sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 12 007G 0X75	7G 0.75	8.9	45.6	129
03 12 012G 0X75	12G 0.75	10.6	78.1	194
03 12 016G 0X75	16G 0.75	12.0	104.1	253
03 12 018G 0X75	18G 0.75	12.7	117.2	283
03 12 025G 0X75	25G 0.75	15.2	162.7	402
03 12 002C 0001	2 x 1	6.1	17.4	57
03 12 003G 0001	3G 1	6.6	26.0	72
03 12 004G 0001	4G 1	7.3	34.7	90
03 12 005G 0001	5G 1	8.0	43.4	110
03 12 007G 0001	7G 1	9.6	60.7	157
03 12 012G 0001	12G 1	11.4	104.1	237
03 12 014G 0001	14G 1	12.3	121.5	276
03 12 016G 0001	16G 1	13.0	138.8	311
03 12 018G 0001	18G 1	13.9	156.2	353
03 12 025G 0001	25G 1	16.4	216.9	491
03 12 026G 0001	26G 1	16.4	225.6	498
03 12 034G 0001	34G 1	18.9	295.1	658

PART NUMBER	No. of cores x cross-sec	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 12 041G 0001	41G 1	20.6	355.8	786
03 12 050G 0001	50G 1	22.3	433.9	936
03 12 065G 0001	65G 1	25.4	564.1	1215
03 12 002C 01X5	2 x 1.5	6.8	26.0	75
03 12 003G 01X5	3G 1.5	7.4	39.1	96
03 12 004G 01X5	4G 1.5	8.1	52.1	119
03 12 005G 01X5	5G 1.5	9.1	65.1	150
03 12 007G 01X5	7G 1.5	9.9	91.1	189
03 12 012G 01X5	12G 1.5	12.9	156.2	322
03 12 018G 01X5	18G 1.5	15.0	234.3	456
03 12 025G 01X5	25G 1.5	17.6	325.4	630
03 12 026G 01X5	26G 1.5	17.8	338.4	649
03 12 034G 01X5	34G 1.5	20.2	442.6	841
03 12 041G 01X5	41G 1.5	22.0	533.7	1006

FD 85810

PART NUMBER	No. of cores x cross-sec	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 12 042G 01X5	42G 1.5	22.0	546.7	1017
03 12 050G 01X5	50G 1.5	24.0	650.8	1210
03 12 003G 02X5	3G 2.5	9.0	65.1	148
03 12 004G 02X5	4G 2.5	10.0	86.8	188
03 12 005G 02X5	5G 2.5	11.2	108.5	235
03 12 007G 02X5	7G 2.5	12.5	151.9	307
03 12 012G 02X5	12G 2.5	16.0	260.3	513
03 12 014G 02X5	14G 2.5	17.2	303.7	595
03 12 003G 0004	3G 4	10.6	104.1	217
03 12 004G 0004	4G 4	11.7	138.8	274
03 12 005G 0004	5G 4	13.1	173.6	343
03 12 004G 0006	4G 6	13.9	208.6	398
03 12 005G 0006	5G 6	15.5	260.8	496
03 12 004G 0010	4G 10	17.6	358.5	658
03 12 005G 0010	5G 10	19.6	448.2	819
03 12 004G 0016	4G 16	21.0	565.0	983
03 12 005G 0016	5G 16	23.6	706.2	1236

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

X= Without green-yellow earth core

FD 90810 CY



Technical Data:

- control cables, PVC insulated, screened and sheathed
- Requirement adapted to DIN VDE 0245, 281
- **Temperature range** flexing 0°C to +70°C, Fixed installation -20°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** fixed installation 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with short lay-length
- Non-woven wrapping
- PVC inner sheath, grey
- Tinned copper braiding
- Outer sheath of special PVC, TM2 to DIN/BS EN 50363-4.1
- Colour grey (RAL 7001)

Properties

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2
- For use in damp or wet interiors

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 13 002C 00X5	2 x 0.5	7.2	24.5	76
03 13 003G 00X5	3G 0.5	7.5	30.2	86
03 13 004G 00X5	4G 0.5	8.1	36.3	102
03 13 005G 00X5	5G 0.5	8.6	42.4	116
03 13 007G 00X5	7G 0.5	9.1	54.3	136
03 13 012G 00X5	12G 0.5	11.5	84.2	216
03 13 018G 00X5	18G 0.5	13.5	117.5	301
03 13 025G 00X5	25G 0.5	15.12	156.9	386
03 13 030G 00X5	30G 0.5	16.02	185.1	442
03 13 002C 0X75	2 x 0.75	7.6	30.6	88
03 13 003G 0X75	3G 0.75	8.1	39.5	104
03 13 004G 0X75	4G 0.75	8.6	47.2	120
03 13 005G 0X75	5G 0.75	9.1	56.6	138
03 13 007G 0X75	7G 0.75	9.9	71.7	167
03 13 012G 0X75	12G 0.75	12.5	117.1	271
03 13 018G 0X75	18G 0.75	14.42	166.1	371

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03 13 025G 0X75	25G 0.75	16.52	221.4	491
03 13 030G 0X75	30G 0.75	18	288.2	595
03 13 002C 0001	2 x 1	8.1	37.3	102
03 13 003G 0001	3G 1	8.4	47.3	116
03 13 004G 0001	4G 1	8.9	58.8	136
03 13 005G 0001	5G 1	9.7	69.4	161
03 13 012G 0001	12G 1	13.22	145.7	316
03 13 018G 0001	18G 1	15.42	210.4	442

PART NUMBER	No. cores x cross-sec. mm ²	Nomina l Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 13 025G 0001	25G 1	17.4	286.0	580
03 13 026G 0001	26G 1	17.4	295.7	588
03 13 034G 0001	34G 1	20.2	392.5	788
03 13 041G 0001	41G 1	22	466.3	927
03 13 050G 0001	50G 1	23.7	554.0	1093
03 13 002C 01X5	2 x 1.5	8.9	48.2	126
03 13 003G 01X5	3G 1.5	9.3	64.0	148
03 13 004G 01X5	4G 1.5	10.0	82.3	180
03 13 005G 01X5	5G 1.5	10.5	96.8	202
03 13 007G 01X5	7G 1.5	11.5	128.8	254
03 13 012G 01X5	12G 1.5	15.2	216.8	439
03 13 016G 01X5	16G 1.5	16.7	295.2	555
03 13 018G 01X5	18G 1.5	17.7	317.5	617
03 13 025G 01X5	25G 1.5	20.7	426.7	840
03 13 034G 01X5	34G 1.5	23.5	563.9	1095
03 13 003G 02X5	3G 2.5	10.3	100.7	200
03 13 004G 02X5	4G 2.5	11.3	129.4	249
03 13 005G 02X5	5G 2.5	12.6	158.5	309
03 13 007G 02X5	7G 2.5	13.9	211.5	392
03 13 004G 0004	4G 4	13.4	192.3	361
03 13 005G 0004	5G 4	14.7	236.4	439
03 13 004G 0006	4G 6	15.8	254.9	492
03 13 004G 0010	4G 10	19.3	414.4	763
03 13 004G 0016	4G 16	22.0	635.7	1076

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

X= Without green-yellow earth core

FD 95810 P

RR KABEL FD 95810 P



Technical Data:

- control cables, PVC insulated and sheathed
- Requirement adapted to DIN VDE 0245, 281
- **Temperature range** flexing -5°C to +70°C, Fixed installation -20°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 7.5 x cable ø, Fixed installation 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer(3 cores and above)
- Cores stranded in layers with short lay-length
- Non-woven wrapping
- Outer sheath of PUR
- Colour grey (RAL 7001)

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2 • Oil resistant

Application:

For use in power chains or moving machine parts in Automation Engineering. Assembly Lines Production Lines and Plant Engineering.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 14 002C 00X5	2 x 0.5	5.3	9.7	35
03 14 003G 00X5	3G 0.5	5.7	13.0	43
03 14 004G 00X5	4G 0.5	6.3	17.4	54
03 14 005G 00X5	5G 0.5	6.8	21.7	64
03 14 007G 00X5	7G 0.5	8.0	30.4	89
03 14 012G 00X5	12G 0.5	9.5	52.1	135
03 14 018G 00X5	18G 0.5	11.4	78.1	198
03 14 002C 0X75	2 x 0.75	5.7	13.0	43
03 14 003G 0X75	3G 0.75	6.2	19.5	55
03 14 004G 0X75	4G 0.75	6.8	26.0	68
03 14 005G 0X75	5G 0.75	7.4	32.5	82
03 14 007G 0X75	7G 0.75	8.9	45.6	118
03 14 012G 0X75	12G 0.75	10.6	78.1	180
03 14 018G 0X75	18G 0.75	12.7	117.2	264
03 14 025G 0X75	25G 0.75	15.2	162.7	373

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03 14 002C 0001	2 x 1	6.1	17.4	51
03 14 003G 0001	3G 1	6.6	26.0	65
03 14 004G 0001	4G 1	7.3	34.7	83
03 14 005G 0001	5G 1	8.0	43.4	101
03 14 007G 0001	7G 1	9.6	60.7	144
03 14 012G 0001	12G 1	11.4	104.1	220
03 14 018G 0001	18G 1	13.9	156.2	329
03 14 025G 0001	25G 1	16.4	216.9	457
03 14 034G 0001	34G 1	18.9	295.1	614
03 14 041G 0001	41G 1	20.6	355.8	735
03 14 050G 0001	50G 1	22.3	433.9	877
03 14 065G 0001	65G 1	25.4	564.1	1139

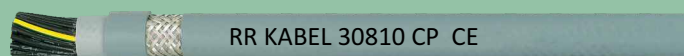
PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 14 002C 01X5	2 x 1.5	7.0	26.0	70
03 14 003G 01X5	3G 1.5	7.6	39.1	90
03 14 004G 01X5	4G 1.5	8.3	52.1	114
03 14 005G 01X5	5G 1.5	9.3	65.1	143
03 14 007G 01X5	7G 1.5	10.2	91.1	182
03 14 012G 01X5	12G 1.5	13.3	156.2	312
03 14 016G 01X5	16 G 1.5	14.6	208.3	395
03 14 018G 01X5	18G 1.5	15.4	234.3	444
03 14 025G 01X5	25G 1.5	18.1	325.4	614
03 14 034G 01X5	34G 1.5	20.8	442.6	822
03 14 042G 01X5	42G 1.5	22.6	546.7	997
03 14 050G 01X5	50G 1.5	24.7	650.8	1186
03 14 003G 02X5	3G 2.5	9.0	65.1	136
03 14 004G 02X5	4G 2.5	10.0	86.8	174
03 14 005G 02X5	5G 2.5	11.2	108.5	218
03 14 007G 02X5	7G 2.5	12.5	151.9	287

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03 14 012G 02X5	12G 2.5	16.0	260.3	482
03 14 014G 02X5	14G 2.5	17.2	303.7	559
03 14 004G 0004	4G 4	11.7	138.8	255
03 14 005G 0004	5G 4	13.1	173.6	320
03 14 001G 0006	1 G 6	6.4	52.2	87
03 14 004G 0006	4G 6	13.9	208.6	372
03 14 001G 0010	1 G 10	7.7	89.6	139
03 14 004G 0010	4G 10	17.6	358.5	616
03 14 005G 0010	5G 10	19.6	448.2	767
03 14 001G 0016	1 G 16	9.2	141.2	209
03 14 004G 0016	4G 16	21.0	565.0	925

Note:- Dimensions and specifications may be changed without prior notice.
G= With green-yellow earth core.
X= Without green-yellow earth core

FD 30810 CP



Technical data

- Control cables screened and sheathed
- Requirement adapted to DIN VDE 0245, 281
- **Temperature range:** flexing 0°C to +70°C, Fixed installation -20°C to +80°C
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage:** 4000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Minimum bending radius:** Flexible use 7.5 x cable ø, Fixed installation 4 x cable ø

Cable construction

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
- Core insulation of special PVC TI2 EN 50363-3
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with short lay-length
- Non-woven wrapping
- PVC inner sheath, grey
- Tinned copper braiding
- Outer sheath of PUR
- Colour grey (RAL 7001)

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2 • For use in damp or wet interiors

Application:

For use in power chains or moving machine parts in Automation Engineering. Assembly Lines Production Lines and Plant Engineering.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 15 002C 00X5	2 x 0.5	7.2	24.5	72
03 15 003G 00X5	3G 0.5	7.5	30.2	81
03 15 004G 00X5	4G 0.5	8.1	36.3	96
03 15 005G 00X5	5G 0.5	8.6	42.4	110
03 15 007G 00X5	7G 0.5	9.1	54.3	130
03 15 012G 00X5	12G 0.5	11.5	84.2	207
03 15 002C 0X75	2 x 0.75	7.6	30.6	83
03 15 003G 0X75	3G 0.75	8.1	39.5	99
03 15 004G 0X75	4G 0.75	8.6	47.2	114
03 15 005G 0X75	5G 0.75	9.1	56.6	132
03 15 007G 0X75	7G 0.75	9.9	71.7	160

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03 15 012G 0X75	12G 0.75	12.5	117.1	261
03 15 016G 0X75	16 G 0.75	13.8	149.1	325
03 15 018G 0X75	18G 0.75	14.4	166.1	358
03 15 025G 0X75	25G 0.75	16.5	221.4	475
03 15 002C 0001	2 x 1	8.1	37.3	97
03 15 003G 0001	3G 1	8.4	47.3	111
03 15 004G 0001	4G 1	8.9	58.8	130
03 15 005G 0001	5G 1	9.7	69.4	154
03 15 007G 0001	7G 1	10.4	92.1	189
03 15 012G 0001	12G 1	13.2	145.7	305

PART NUMBER	No. cores x cross- sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 15 018G 0001	18G 1	15.4	210.4	426
03 15 025G 0001	25G 1	17.4	286.0	563
03 15 002C 01X5	2 x 1.5	8.9	48.2	120
03 15 003G 01X5	3G 1.5	9.3	64.0	142
03 15 004G 01X5	4G 1.5	10.0	82.3	172
03 15 005G 01X5	5G 1.5	10.5	96.8	196
03 15 007G 01X5	7G 1.5	11.5	128.8	247
03 15 012G 01X5	12G 1.5	15.2	216.8	424
03 15 018G 01X5	18G 1.5	17.7	317.5	598
03 15 025G 01X5	25G 1.5	20.7	426.7	814
03 15 003G 02X5	3G 2.5	10.3	100.7	194
03 15 004G 02X5	4G 2.5	11.3	129.4	241
03 15 005G 02X5	5G 2.5	12.6	158.5	298
03 15 007G 02X5	7G 2.5	13.9	211.5	380
03 15 012G 02X5	12 G 2.5	17.5	341.9	609
03 15 014G 02X5	14 G 2.5	18.2	394.5	684
03 15 004G 0004	4G 4	13.4	192.3	347
03 15 004G 0006	4G 6	15.8	254.9	477
03 15 004G 0010	4G 10	19.3	414.4	737
03 15 004G 0016	4G 16	22.0	635.7	1049

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

X= Without green-yellow earth core

FD 05855 P



RR KABEL FD 05855 P

Technical data:

- control cables, type insulated and sheathed
- Requirement adapted to DIN VDE 0250/0281/0282
- **Temperature range:** flexing -40°C to +80°C, Fixed installation -50°C to +80°C
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 5 x cable ø, Fixed installation 3 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
- Core insulation of TPE
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with short lay-length
- Non-woven wrapping
- Outer sheath of PUR
- Colour grey (RAL 7001)

Properties:

- PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2 • For use in damp or wet interiors

Application:

For use in power chains or moving machine parts in Automation Engineering. Assembly Lines Production Lines and Plant Engineering.

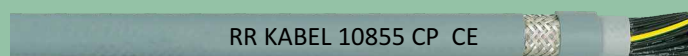
PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 16 002C 00X5	2 x 0.5	5.1	9.7	33
03 16 003G 00X5	3G 0.5	5.5	13.0	39
03 16 004G 00X5	4G 0.5	6.0	17.4	49
03 16 005G 00X5	5G 0.5	6.6	21.7	59
03 16 006G 00X5	6 G 0.5	7.1	26.0	70
03 16 007G 00X5	7G 0.5	7.7	30.4	82
03 16 012G 00X5	12G 0.5	9.1	52.1	122
03 16 018G 00X5	18G 0.5	10.9	78.1	179
03 16 020G 00X5	20 G 0.5	11.5	86.8	199
03 16 025G 00X5	25 G 0.5	13.4	108.5	262
03 16 030G 00X5	30 G 0.5	13.6	130.2	286
03 16 036G 00X5	36 G 0.5	14.7	156.2	338
03 16 002C 0X75	2 x 0.75	5.6	13.0	40
03 16 003G 0X75	3G 0.75	6.0	19.5	51
03 16 004G 0X75	4G 0.75	6.7	26.0	64
03 16 005G 0X75	5G 0.75	7.3	32.5	78
03 16 007G 0X75	7G 0.75	8.8	45.6	112
03 16 012G 0X75	12G 0.75	10.3	78.1	167

03 16 018G 0X75	18G 0.75	12.4	117.2	245
03 16 020G 0X75	20 G 0.75	13.3	130.2	278
03 16 025G 0X75	25G 0.75	15.5	162.7	366
03 16 036G 0X75	36 G 0.75	16.9	234.3	471
03 16 002C 0001	2 x 1	6.0	17.4	49
03 16 003G 0001	3G 1	6.5	26.0	62
03 16 004G 0001	4G 1	7.2	34.7	79
03 16 005G 0001	5G 1	7.8	43.4	95

PART NUMBER	No. cores x cross- sec. mm²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 16 007G 0001	7G 1	9.5	60.7	137
03 16 012G 0001	12G 1	11.2	104.1	208
03 16 018G 0001	18G 1	13.7	156.2	311
03 16 020G 0001	20 G 1	14.4	173.6	345
03 16 025G 0001	25G 1	16.8	216.9	452
03 16 030G 0001	30 G 1	17.0	260.3	497
03 16 036G 0001	36 G 1	18.6	312.4	595
03 16 002C 01X5	2 x 1.5	6.7	26.0	64
03 16 003G 01X5	3G 1.5	7.3	39.1	84
03 16 004G 01X5	4G 1.5	8.0	52.1	105
03 16 005G 01X5	5G 1.5	9.0	65.1	132
03 16 007G 01X5	7G 1.5	10.7	91.1	186
03 16 012G 01X5	12G 1.5	12.7	156.2	287
03 16 018G 01X5	18G 1.5	15.2	234.3	420
03 16 025G 01X5	25G 1.5	18.8	325.4	614
03 16 030G 01X5	30 G 1.5	18.8	390.5	671
03 16 036G 01X5	36 G 1.5	20.6	468.6	805
03 16 041G 01X5	41 G 1.5	22.4	533.7	934
03 16 003G 02X5	3G 2.5	8.9	65.1	131
03 16 004G 02X5	4G 2.5	9.9	86.8	167
03 16 005G 02X5	5G 2.5	11.0	108.5	207
03 16 007G 02X5	7G 2.5	13.4	151.9	300
03 16 012G 02X5	12G 2.5	15.8	260.3	460
03 16 018G 02X5	18 G 2.5	18.9	390.5	674
03 16 025G 02X5	25 G 2.5	23.5	542.4	989

Note:- Dimensions and specifications may be changed without prior notice.
G= With green-yellow earth core.
X= Without green-yellow earth core

FD 10855 CP



RR KABEL 10855 CP CE

Technical data:

- Control cables screened and sheathed
- Requirement adapted to DIN VDE 0245, 281
- **Temperature range** flexing -40°C to +80°C, Fixed installation -50°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** Flexible use 7.5 x cable ø, Fixed installation 4 x cable ø

Cable construction:

- Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
- Core insulation of special TPE
- Black core with continuous white numbering according to DIN VDE 0293
- Green-Yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with short lay-length
- Non-woven wrapping
- TPE inner sheath, grey
- Tinned copper braiding
- Outer sheath of PUR
- Colour grey (RAL 7001)

Properties

* PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2 * For use in damp or wet interiors

Application: For use in power chains or moving machine parts in Automation Engineering. Assembly Lines Production Lines and Plant Engineering.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 17 002C 00X5	2 x 0.5	6.7	25.5	58
03 17 003G 00X5	3G 0.5	7.1	30.6	67
03 17 005G 00X5	5G 0.5	8.2	42.3	90
03 17 006G 00X5	6 G 0.5	8.7	49.2	103
03 17 007G 00X5	7G 0.5	9.5	53.7	120
03 17 012G 00X5	12G 0.5	10.9	84.2	168
03 17 018G 00X5	18G 0.5	12.9	210.4	313
03 17 020G 00X5	20 G 0.5	13.5	128.1	259
03 17 025G 00X5	25G 0.5	15.0	156.9	319
03 17 030G 00X5	30 G 0.5	15.8	181.7	362
03 17 036G 00X5	36 G 0.5	16.9	214.5	420
03 17 002C 0X75	2 x 0.75	7.2	30.6	67
03 17 003G 0X75	3G 0.75	7.6	39.5	80
03 17 004G 0X75	4G 0.75	8.3	47.2	96
03 17 005G 0X75	5G 0.75	8.9	56.6	113
03 17 007G 0X75	7G 0.75	10.6	71.7	155

FD 10855 CP

03 17 012G 0X75	12G 0.75	12.1	117.1	220
03 17 018G 0X75	18G 0.75	14.6	166.1	319
03 17 025G 0X75	25G 0.75	17.7	221.4	452
03 17 036G 0X75	36G 0.75	19.4	306.5	576
03 17 002C 0001	2 x 1	7.6	37.3	78
03 17 003G 0001	3G 1	8.1	47.3	94
03 17 004G 0001	4G 1	8.8	58.8	114

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
03 17 005G 0001	5G 1	9.6	69.4	135
03 17 007G 0001	7G 1	11.3	92.1	185
03 17 012G 0001	12G 1	13.2	145.7	269
03 17 018G 0001	18G 1	15.9	210.4	392
03 17 025G 0001	25G 1	19.5	286.0	568
03 17 030G 0001	30 G 1	19.6	335.1	612
03 17 036G 0001	36 G 1	21.2	397.8	722
03 17 002C 01X5	2 x 1.5	8.9	48.2	106
03 17 003G 01X5	3G 1.5	9.3	64.0	126
03 17 004G 01X5	4G 1.5	10.0	82.0	153
03 17 005G 01X5	5G 1.5	10.5	96.8	172
03 17 007G 01X5	7G 1.5	11.5	128.8	219
03 17 012G 01X5	12G 1.5	15.2	223.8	385
03 17 018G 01X5	18G 1.5	17.7	317.5	535
03 17 025G 01X5	25G 1.5	20.3	426.7	709
03 17 036G 01X5	36 G 1.5	22.7	593.0	938
03 17 003G 02X5	3G 2.5	10.7	96.6	178
03 17 004G 02X5	4G 2.5	11.7	123.6	220
03 17 005G 02X5	5G 2.5	12.8	151.0	266
03 17 007G 02X5	7G 2.5	14.0	211.5	344
03 17 012G 02X5	12 G 2.5	17.5	346.5	553
03 17 018G 02X5	18G 2.5	20.2	499.1	771
03 17 025G 02X5	25G 2.5	23.6	675.3	1044

Note:- Dimensions and specifications may be changed without prior notice.

G= With green-yellow earth core.

X= Without green-yellow earth core

CHAPTER-IV

DATA CABLES



LiYY

RR KABEL LIYY



Technical data

- Special PVC data cables,
- **Temperature range:** flexing -5°C to +70°C, fixed installation -30°C to +80°C
- **Nominal voltage:** 0.14 mm² = 350 V, >= 0.25 mm² = 500 V
- **Test voltage:** Up to 0.25 mm² 1200 V, form 0.34 mm² 2000 V
- **Breakdown voltage:** Up to 0.25 mm² 2400 V, form 0.34 mm² 4000 V
- **Insulation resistance:** min. 20 MOhm x km
- **Capacitance** (approx. -Value) 120 nF/km
- **Inductance** approx. 0.65 mH/km
- **Minimum bending radius:** for flexible use 10 x cable ø

Cable construction

- Bare copper, fine wire conductors, bunch stranded DIN VDE 0295 cl. 5, EN 60228 cl. 5
- Special PVC core insulation TI2, to EN 50363-3
- Conductor make-up for
0.14 mm² = 8 x 0.15 mm
0.25 mm² = 14 x 0.15 mm
0.34 mm² = 7 x 0.25 mm
- Colour coded to DIN 47100, but without colour repetition
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath TM2, to EN 50363-4.1
- Colour Grey RAL 7035

Properties:

- PVC self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1 / IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Application:

These cables are used for flexible use with free movement without tensile stress of forced movements in dry, moist and wet rooms but not suitable for open air, wherever the construction requirements call for a minimum outer diameter.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 01 002C 0X14	2 x 0.14	3.2	2.8	14
04 01 003C 0X14	3 x 0.14	3.2	4.1	15
04 01 004C 0X14	4 x 0.14	3.5	5.5	19
04 01 005C 0X14	5 x 0.14	4.0	6.9	24
04 01 007C 0X14	7 x 0.14	4.3	9.7	29
04 01 008C 0X14	8 x 0.14	4.6	11.1	34
04 01 010C 0X14	10 x 0.14	5.3	13.8	44
04 01 012C 0X14	12 x 0.14	5.6	16.6	50
04 01 014C 0X14	14 x 0.14	5.9	19.4	56
04 01 016C 0X14	16 x 0.14	6.2	22.1	63
04 01 020C 0X14	20 x 0.14	6.5	27.7	72
04 01 025C 0X14	25 x 0.14	7.6	34.6	95
04 01 036C 0X14	36 x 0.14	8.7	49.8	129
04 01 037C 0X14	37 x 0.14	8.9	51.2	134
04 01 040C 0X14	40 x 0.14	9.5	55.3	150
04 01 050C 0X14	50 x 0.14	10.4	69.2	182
04 01 056C 0X14	56 x 0.14	11.0	77.5	204
04 01 002C 0X25	2 x 0.25	3.8	4.8	21
04 01 003C 0X25	3 x 0.25	3.9	7.3	23
04 01 004C 0X25	4 x 0.25	4.3	9.7	29
04 01 005C 0X25	5 x 0.25	4.8	12.1	37
04 01 007C 0X25	7 x 0.25	5.2	16.9	45
04 01 008C 0X25	8 x 0.25	5.7	19.4	53

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04 01 010C 0X25	10 x 0.25	6.4	24.2	67
04 01 012C 0X25	12 x 0.25	6.7	29.0	76
04 01 014C 0X25	14 x 0.25	7.1	33.9	86
04 01 016C 0X25	16 x 0.25	7.5	38.7	97
04 01 018C 0X25	18 x 0.25	7.9	43.6	108
04 01 020C 0X25	20 x 0.25	9.1	48.4	136
04 01 025C 0X25	25 x 0.25	9.9	60.5	163
04 01 030C 0X25	30 x 0.25	10.3	72.6	183
04 01 032C 0X25	32 x 0.25	10.5	77.5	191
04 01 036C 0X25	36 x 0.25	11.1	87.1	214
04 01 037C 0X25	37 x 0.25	11.3	89.6	222
04 01 040C 0X25	40 x 0.25	11.5	96.8	233
04 01 050C 0X25	50 x 0.25	13.6	121.0	314
04 01 002C 0X34	2 x 0.34	4.2	6.7	26
04 01 003C 0X34	3 x 0.34	4.4	10.1	31
04 01 004C 0X34	4 x 0.34	4.9	13.4	39
04 01 005C 0X34	5 x 0.34	5.3	16.8	46
04 01 007C 0X34	7 x 0.34	5.9	23.5	60
04 01 008C 0X34	8 x 0.34	6.3	26.9	68

Note:- Dimensions and specifications may be changed without prior notice.

LiYY

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 01 010C 0X34	10 x 0.34	7.2	33.6	88
04 01 012C 0X34	12 x 0.34	7.6	40.3	100
04 01 014C 0X34	14 x 0.34	8.0	47.1	113
04 01 016C 0X34	16 x 0.34	8.4	53.8	126
04 01 018C 0X34	18 x 0.34	8.9	60.5	142
04 01 020C 0X34	20 x 0.34	9.8	67.2	167
04 01 021C 0X34	21 x 0.34	9.8	70.6	169
04 01 025C 0X34	25 x 0.34	11.2	84.1	214
04 01 030C 0X34	30 x 0.34	11.6	100.9	239
04 01 036C 0X34	36 x 0.34	12.6	121.0	284
04 01 040C 0X34	40 x 0.34	13.5	134.5	322
04 01 050C 0X34	50 x 0.34	15.3	168.1	410
04 01 002C 00X5	2 x 0.5	4.8	8.7	34
04 01 003C 00X5	3 x 0.5	5.1	13.0	41
04 01 004C 00X5	4 x 0.5	5.7	17.4	52
04 01 005C 00X5	5 x 0.5	6.2	21.7	62
04 01 006C 00X5	6 x 0.5	6.7	26.1	73
04 01 007C 00X5	7 x 0.5	6.9	30.4	80
04 01 008C 00X5	8 x 0.5	8.0	34.8	102
04 01 010C 00X5	10 x 0.5	8.8	43.5	125
04 01 012C 00X5	12 x 0.5	9.1	52.2	139
04 01 014C 00X5	14 x 0.5	10.0	60.8	166
04 01 016C 00X5	16 x 0.5	10.2	69.5	178
04 01 020C 00X5	20 x 0.5	11.4	86.9	222
04 01 025C 00X5	25 x 0.5	12.3	108.6	265
04 01 030C 00X5	30 x 0.5	13.2	130.4	309
04 01 040C 00X5	40 x 0.5	15.8	173.8	432
04 01 002C 0X75	2 x 0.75	5.2	13.0	42
04 01 003C 0X75	3 x 0.75	5.5	19.6	51
04 01 004C 0X75	4 x 0.75	6.2	26.1	66
04 01 005C 0X75	5 x 0.75	6.8	32.6	80
04 01 007C 0X75	7 x 0.75	7.5	45.6	103
04 01 008C 0X75	8 x 0.75	8.7	52.2	131
04 01 010C 0X75	10 x 0.75	9.4	65.2	156
04 01 012C 0X75	12 x 0.75	9.9	78.2	178
04 01 016C 0X75	16 x 0.75	11.2	104.3	232
04 01 020C 0X75	20 x 0.75	12.4	130.4	286
04 01 025C 0X75	25 x 0.75	14.0	163.0	362
04 01 002C 0001	2 x 1	5.5	19.2	56
04 01 003C 0001	3 x 1	6.0	29.0	71
04 01 005C 0001	5 x 1	7.3	43.5	98.0
04 01 002C 01X5	2 x 1.5	6.5	25.5	70
04 01 003C 01X5	3 x 1.5	6.9	38.2	87
04 01 004C 01X5	4 x 1.5	7.8	50.9	113

Note:- Dimensions and specifications may be changed without prior notice.

LiYY (TP)



RR KABEL LiYY (TP)

Data transmission cable with colour code acc. to DIN 47100 and twisted pairs Twisted pair(TP) decouples the cable circuits

Technical data:

- Special PVC data cables,
- **Core identification code:** DIN 47100
- **Mutual capacitance:** Approx. 120nF/km
- **Peak operating voltage:** (not for power applications) at 0.14 mm²:350V, at ≥ 0.25 mm²:500V
- **Inductivity:** approx. 0.65 mH/km
- **Based on:** VDE 0812
- **Insulation resistance:** >20 GOhm x cm
- **Conductor stranding:** Fine copper wire strands
- **Minimum bending radius:** For flexible use: 10 x outer diameter
- **Test voltage:** At 0.14 mm²: 1200V, > 0.14 mm²:1500V
- **Temperature range:** Fixed insulation: - 40°C to + 70°C, Occasional flexing: -5°C to + 70°C
- **Cable construction:**
 - Bare copper, fine wire conductors, to DIN/BS EN 60228 cl.6
 - Core insulation of special PVC T12 EN 50363-3
 - Core colors to DIN 47100 without repetition
 - Non-woven wrapping
 - Outer sheath of special PVC, TM2 to EN 50363-4.1
 - Colour grey (RAL 7035)

Properties:

Twisted in pairs to reduce decoupling. Hence, additional screening is often not required.

* PVC self-extinguishing and flame retardant according to EN 50265-2-1 / IEC 60332-1-2

Application:

Electronic devices tend to leave little room for installing cables, meaning short travel distances and small bending radii are required.

CE= The product conforms to EC Low-Voltage Directive 2006/95/EC

PART NUMBER	Number of pairs and conductor cross section (mm²)	Nominal Cable diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 07 002P 0X14	2 x2 x 0.14	4.8	5.5	22.3
04 07 003P 0X14	3 x2 x 0.14	4.9	8.3	32.7
04 07 004P 0X14	4 x2 x 0.14	5.5	11.1	39.5
04 07 005P 0X14	5 x2 x 0.14	5.7	13.8	47.0
04 07 006P 0X14	6 x2 x 0.14	6.2	16.6	53.5
04 07 010P 0X14	10 x2 x 0.14	8.0	27.7	79.6
04 07 012P 0X14	12 x2 x 0.14	8.2	33.2	92.3
04 07 016P 0X14	16 x2 x 0.14	9.1	44.3	127.1
04 07 002P 0X25	2 x 2 x 0.25	6.1	9.7	28.7
04 07 003P 0X25	3 x 2 x 0.25	6.2	14.5	41.4
04 07 004P 0X25	4 x 2 x 0.25	6.9	19.4	52.8
04 07 006P 0X25	6 x 2 x 0.25	7.8	29.0	72.2
04 07 008P 0X25	8 x 2 x 0.25	9.2	38.7	92.0
04 07 010P 0X25	10 x 2 x 0.25	10.3	48.4	113.7
04 07 002P 00X5	2 x 2 x 0.5	7.9	17.8	43.1
04 07 003P 00X5	3 x 2 x 0.5	8.0	26.6	64.4
04 07 004P 00X5	4 x 2 x 0.5	8.7	35.5	81.5
04 07 008P 00X5	8 x 2 x 0.5	12.2	71.0	155.0
04 07 010P 00X5	10 x 2 x 0.5	13.2	88.8	185.3

Note:- Dimensions and specifications may be changed without prior notice.

LIYCY



Technical data

- PVC data screened cables,
- **Temperature range:** flexing -5°C to +70°C, Fixed installation -20°C to +80°C
- Nominal voltage (Not for power application) 0.14 mm² = 350 V, >= 0.25 mm² = 500 V
- **Test voltage** : 0.14 mm²: 1200 V, > 0.14 mm²: 1500 V
- **Insulation resistance** : min. 20 MOhm x km
- **Capacitance** (approx. -Value) Core/Core = 120 nF/km, Core/Screen = 160 nF/km
- **Inductance** approx. 0.65 mH/km
- **Minimum bending radius:** flexing 15 x cable Ø, Fixed installation 6 x cable Ø

Cable Construction

- Bare copper, fine wire conductors
- Special PVC core insulation TI2, to EN 50363-3
- Conductor make-up for 0.14 mm² = 8 x 0.15 mm, 0.25 mm² = 14 x 0.15 mm, 0.34 mm² = 7 x 0.25 mm
- Colour coded to DIN 47100, but without colour repetition Refer table 2-2
- Cores stranded in layers with optimal lay-length
- Core wrapping with foil
- Drain-wire, tinned
- Tinned, copper braided screen, approx 85% coverage
- Special PVC outer sheath TM2, to EN 50363-4.1
- Colour Grey (RAL 7035)

Properties

- Overall braid minimises electrical interference Flame retardant to IEC 60332-1-2 Smaller dimension screened cables are suitable for use in computer systems, instrumentation technology office equipment, balance, etc.

To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

Dimensions

PART NUMBER	Number of pairs and conductor cross section (mm ²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 07 002P 0X14	2 x2 x 0.14	4.8	5.5	22.3
04 07 003P 0X14	3 x2 x 0.14	4.9	8.3	32.7
04 07 004P 0X14	4 x2 x 0.14	5.5	11.1	39.5
04 07 005P 0X14	5 x2 x 0.14	5.7	13.8	47.0
04 07 006P 0X14	6 x2 x 0.14	6.2	16.6	53.5
04 07 010P 0X14	10 x2 x 0.14	8.0	27.7	79.6
04 07 012P 0X14	12 x2 x 0.14	8.2	33.2	92.3
04 07 016P 0X14	16 x2 x 0.14	9.1	44.3	127.1
04 07 002P 0X25	2 x 2 x 0.25	6.1	9.7	28.7
04 07 003P 0X25	3 x 2 x 0.25	6.2	14.5	41.4
04 07 004P 0X25	4 x 2 x 0.25	6.9	19.4	52.8
04 07 006P 0X25	6 x 2 x 0.25	7.8	29.0	72.2
04 07 008P 0X25	8 x 2 x 0.25	9.2	38.7	92.0
04 07 010P 0X25	10 x 2 x 0.25	10.3	48.4	113.7
04 07 002P 00X5	2 x 2 x 0.5	7.9	17.8	43.1
04 07 003P 00X5	3 x 2 x 0.5	8.0	26.6	64.4
04 07 004P 00X5	4 x 2 x 0.5	8.7	35.5	81.5
04 07 008P 00X5	8 x 2 x 0.5	12.2	71.0	155.0
04 07 010P 00X5	10 x 2 x 0.5	13.2	88.8	185.3

Note:- Dimensions and specifications may be changed without prior notice.

PART NUMBER	Number of cores and conductor cross section (mm²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 02 002C 0X14	2 x 0.14	4.1	10.2	15
04 02 003C 0X14	3 x 0.14	4.3	12.2	18
04 02 004C 0X14	4 x 0.14	4.6	14.6	21
04 02 005C 0X14	5 x 0.14	4.9	16.8	23
04 02 007C 0X14	7 x 0.14	5.2	20.8	28
04 02 008C 0X14	8 x 0.14	5.7	23.5	32
04 02 010C 0X14	10 x 0.14	6.3	28.4	38
04 02 012C 0X14	12 x 0.14	6.5	31.5	41
04 02 014C 0X14	14 x 0.14	6.8	35.2	45
04 02 015C 0X14	15 x 0.14	7.1	36.9	48
04 02 016C 0X14	16 x 0.14	7.1	39.0	50
04 02 018C 0X14	18 x 0.14	7.4	42.7	54
04 02 020C 0X14	20 x 0.14	7.8	46.8	59
04 02 021C 0X14	21 x 0.14	7.8	47.9	60
04 02 025C 0X14	25 x 0.14	8.6	56.0	69
04 02 028C 0X14	28 x 0.14	8.7	60.7	74
04 02 030C 0X14	30 x 0.14	9.2	64.3	79
04 02 032C 0X14	32 x 0.14	9.5	68.2	84
04 02 036C 0X14	36 x 0.14	9.8	74.9	91
04 02 040C 0X14	40 x 0.14	10.2	81.1	98
04 02 044C 0X14	44 x 0.14	10.9	89.0	108
04 02 050C 0X14	50 x 0.14	11.4	99.3	119
04 02 002C 0X25	2 x 0.25	4.4	13.1	19.0
04 02 003C 0X25	3 x 0.25	4.6	16.5	22.7
04 02 004C 0X25	4 x 0.25	5.0	19.8	26.6
04 02 005C 0X25	5 x 0.25	5.3	23.4	31.0
04 02 007C 0X25	7 x 0.25	5.7	29.4	37.6
04 02 008C 0X25	8 x 0.25	6.2	33.9	43.2
04 02 010C 0X25	10 x 0.25	6.9	40.3	51.0
04 02 012C 0X25	12 x 0.25	7.1	46.4	57.5
04 02 014C 0X25	14 x 0.25	7.5	52.1	63.8
04 02 015C 0X25	15 x 0.25	7.8	55.5	67.9
04 02 016C 0X25	16 x 0.25	7.8	57.9	70.3
04 02 018C 0X25	18 x 0.25	8.2	64.5	77.6
04 02 020C 0X25	20 x 0.25	8.8	70.2	85.2
04 02 021C 0X25	21 x 0.25	8.8	72.7	87.6
04 02 025C 0X25	25 x 0.25	9.7	85.4	102.2
04 02 028C 0X25	28 x 0.25	10.2	93.5	111.2
04 02 030C 0X25	30 x 0.25	10.2	98.4	116.1
04 02 032C 0X25	32 x 0.25	10.5	104.7	123.2
04 02 036C 0X25	36 x 0.25	10.9	115.7	134.9
04 02 040C 0X25	40 x 0.25	11.3	126.8	146.9
04 02 050C 0X25	50 x 0.25	12.9	154.6	179.0
04 02 061C 0X25	61 x 0.25	13.6	184.0	209.9
04 02 002C 0X34	2 x 0.34	4.9	16.9	24
04 02 003C 0X34	3 x 0.34	5.1	20.4	28
04 02 004C 0X34	4 x 0.34	5.6	25.0	33
04 02 005C 0X34	5 x 0.34	6	29.2	38
04 02 007C 0X34	7 x 0.34	6.6	37.6	47
04 02 008C 0X34	8 x 0.34	7.6	43.0	54
04 02 010C 0X34	10 x 0.34	8.0	51.9	64
04 02 012C 0X34	12 x 0.34	8.4	59.0	72
04 02 014C 0X34	14 x 0.34	8.9	67.0	81
04 02 015C 0X34	15 x 0.34	9.2	72.1	86
04 02 016C 0X34	16 x 0.34	9.4	75.1	89
04 02 018C 0X34	18 x 0.34	9.9	83.3	98
04 02 020C 0X34	20 x 0.34	10.7	91.3	107
04 02 021C 0X34	21 x 0.34	10.8	94.9	111
04 02 025C 0X34	25 x 0.34	11.6	111.4	131
04 02 028C 0X34	28 x 0.34	12.0	123.0	143
04 02 030C 0X34	30 x 0.34	12.3	129.7	150
04 02 032C 0X34	32 x 0.34	12.9	137.9	159
04 02 036C 0X34	36 x 0.34	13.4	153.2	176
04 02 040C 0X34	40 x 0.34	14.4	167.5	191
04 02 050C 0X34	50 x 0.34	15.9	205.6	232

Note:- Dimensions and specifications may be changed without prior notice.

LIYCY

PART NUMBER	Number of cores and conductor cross section (mm²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 02 002C 00X5	2 x 0.5	5.4	19.1	27
04 02 003C 00X5	3 x 0.5	5.8	24.6	33
04 02 004C 00X5	4 x 0.5	6.4	30.2	40
04 02 005C 00X5	5 x 0.5	6.8	35.8	46
04 02 006C 00X5	6 x 0.5	7.4	42.1	53
04 02 007C 00X5	7 x 0.5	7.6	46.5	58
04 02 008C 00X5	8 x 0.5	8.3	52.5	65
04 02 010C 00X5	10 x 0.5	9.4	64.7	81
04 02 012C 00X5	12 x 0.5	9.7	73.8	90
04 02 014C 00X5	14 x 0.5	10.4	83.5	101
04 02 016C 00X5	16 x 0.5	11.1	93.7	112
04 02 018C 00X5	18 x 0.5	11.6	103.8	123
04 02 019C 00X5	19 x 0.5	11.7	108.7	128
04 02 020C 00X5	20 x 0.5	12.6	114.3	135
04 02 024C 00X5	24 x 0.5	13.7	134.9	159
04 02 025C 00X5	25 x 0.5	13.9	139.4	164
04 02 027C 00X5	27 x 0.5	14.0	149.3	174
04 02 030C 00X5	30 x 0.5	14.6	163.2	189
04 02 002C 0X75	2 x 0.75	6.2	25.0	34
04 02 003C 0X75	3 x 0.75	6.4	32.4	42
04 02 004C 0X75	4 x 0.75	7.0	40.4	51
04 02 005C 0X75	5 x 0.75	7.6	48.7	61
04 02 007C 0X75	7 x 0.75	8.5	63.8	77
04 02 008C 0X75	8 x 0.75	9.2	72.3	88
04 02 010C 0X75	10 x 0.75	10.5	88.5	107
04 02 012C 0X75	12 x 0.75	10.9	102.4	122
04 02 018C 0X75	18 x 0.75	13	146.1	170
04 02 025C 0X75	25 x 0.75	15.5	198.2	227
04 02 030C 0X75	30 x 0.75	16.8	232.3	263
04 02 002C 0001	2 x 1	6.5	30.7	41
04 02 003C 0001	3 x 1	6.9	40.3	52
04 02 004C 0001	4 x 1	7.5	50.7	63
04 02 005C 0001	5 x 1	8.3	61.3	75
04 02 007C 0001	7 x 1	9.0	80.6	96
04 02 010C 0001	10 x 1	11.4	112.5	134
04 02 012C 0001	12 x 1	11.7	131.3	153
04 02 018C 0001	18 x 1	13.4	188.7	216
04 02 025C 0001	25 x 1	16.2	255.3	290
04 02 002C 01X5	2 x 1.5	7.5	63.0	88.0
04 02 003C 01X5	3 x 1.5	8.0	76.0	100.0
04 02 004C 01X5	4 x 1.5	8.7	98.0	126.0
04 02 005C 01X5	5 x 1.5	9.6	116.0	160.0
04 02 006C 01X5	6 x 1.5	10.6	140.0	192.0
04 02 007C 01X5	7 x 1.5	10.7	152.0	208.0
04 02 008C 01X5	8 x 1.5	11.7	172.0	244.0
04 02 010C 01X5	10 x 1.5	13.5	193.0	315.0
04 02 012C 01X5	12 x 1.5	14.0	254.0	338.0
04 02 014C 01X5	14 x 1.5	15.0	272.0	383.0
04 02 016C 01X5	16 x 1.5	15.7	285.0	424.0
04 02 019C 01X5	19 x 1.5	17.1	387.0	506.0
04 02 024C 01X5	24 x 1.5	19.5	448.0	690.0
04 02 027C 01X5	27 x 1.5	19.8	506.0	781.0
04 02 037C 01X5	37 x 1.5	23.6	682.0	941.0

Note:- Dimensions and specifications may be changed without prior notice.

LiYCY (TP)



- **Technical data**
- Special PVC data cables
- **Temperature range:** flexing -5°C to +70°C, Fixed installation -20°C to +80°C
- **Peak Operating voltage:** 350 V (not for purpose of high current and power installation)
0.14 mm²: 350 V > 0.14 mm²: 500 V
- **Test voltage:** 0.14 mm²: 1200 V > 0.14 mm²: 1500 V
- **Insulation resistance:** min. 20 MOhm x km
- **Capacitance** (approx. -Value) core/core = 120 nF/km core/screen = 160 nF/km
- **Inductance** approx. 0.65 mH/km
- **Minimum bending radius:** flexing 15 x cable ø, Fixed installation 6 x cable ø

Cable construction:

- Bare copper, fine wire conductors, bunch stranded
- PVC core insulation
- Colour coded to DIN 47100, with colour repetition
- Cores stranded in pair with optimal lay-length
- Cores stranded in layers with optimal lay-length
- Core wrapping with foil
- Tinned, copper braided screen, approx 85% coverage
- Special PVC outer sheath
- Sheath colour Grey (RAL 7035)
- Conductor make-up for 0.14 mm² = 8x0.15 mm 0.25 mm² = 14 x 0.15 mm
0.34 mm² = 7 x 0.25 mm

Properties

Overall braid minimises electrical interference Flame retardant to IEC 60332-1-2 Smaller dimension screened cables are suitable for use in computer systems, instrumentation technology office equipment, balance, etc.

Application: These cables are used in Data & Signal Transmission. The Screen ensures protection against EMC/EMI.

PART NUMBER	Number of pairs and conductor cross section (mm ²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 03 002P 0X14	2 x 2 x 0.14	5.2	12.7	36
04 03 003P 0X14	3 x 2 x 0.14	5.6	17.0	42
04 03 004P 0X14	4 x 2 x 0.14	6.2	20.9	51
04 03 006P 0X14	6 x 2 x 0.14	7.1	28.7	67
04 03 008P 0X14	8 x 2 x 0.14	7.8	37.2	82
04 03 010P 0X14	10 x 2 x 0.14	8.5	44.6	98
04 03 012P 0X14	12 x 2 x 0.14	9.3	49.8	114
04 03 016P 0X14	16 x 2 x 0.14	10.5	65.0	146
04 03 020P 0X14	20 x 2 x 0.14	11.4	76.3	171
04 03 025P 0X14	25 x 2 x 0.14	12.5	94.2	205
04 03 002P 0X25	2 x 2 x 0.25	6.3	20.4	55
04 03 003P 0X25	3 x 2 x 0.25	6.7	26.7	63
04 03 004P 0X25	4 x 2 x 0.25	7.5	32.7	78
04 03 006P 0X25	6 x 2 x 0.25	8.5	45.3	102
04 03 008P 0X25	8 x 2 x 0.25	9.6	58.7	131
04 03 010P 0X25	10 x 2 x 0.25	10.6	69.4	157
04 03 012P 0X25	12 x 2 x 0.25	11.2	82.1	179
04 03 016P 0X25	16 x 2 x 0.25	12.5	104.4	220
04 03 025P 0X25	25 x 2 x 0.25	15.4	154.4	333
04 03 002P 00X5	2 x 2 x 0.5	7.5	29.7	77
04 03 003P 00X5	3 x 2 x 0.5	8.5	42.3	103
04 03 004P 00X5	4 x 2 x 0.5	9.2	54.0	122
04 03 006P 00X5	6 x 2 x 0.5	11.1	75.0	175
04 03 008P 00X5	8 x 2 x 0.5	13.1	95.0	238
04 03 012P 00X5	12 x 2 x 0.5	15.0	136.1	317
04 03 016P 00X5	16 x 2 x 0.5	16.6	183.8	394
04 03 002P 0X75	2 x 2 x 0.75	8.6	40.6	105
04 03 003P 0X75	3 x 2 x 0.75	9.6	58.0	136
04 03 004P 0X75	4 x 2 x 0.75	10.1	73.3	154
04 03 005P 0X75	5 x 2 x 0.75	11.1	90.3	186
04 03 006P 0X75	6 x 2 x 0.75	12.0	103.6	216
04 03 008P 0X75	8 x 2 x 0.75	14.6	133.4	310
04 03 012P 0X75	12 x 2 x 0.75	16.1	193.1	392
04 03 002P 0001	2 x 2 x 1	8.9	50.9	117
04 03 003P 0001	3 x 2 x 1	10.3	73.1	159
04 03 004P 0001	4 x 2 x 1	11.2	94.7	194
04 03 005P 0001	5 x 2 x 1	11.9	112.6	220

Note:- Dimensions and specifications may be changed without prior notice.

Li2YCY (TP)



Technical data:

- **Conductor resistance** (loop) at 20°C 0.22 mm² max. 186 Ohm/km 0.34 mm² max. 115 Ohm/km 0.5 mm² max. 78.5 Ohm/km
- **Operating top level voltage** max. 250 V (not for purpose of high current and power installation)
- **Test voltage** core/core 2000 V core/Screen 1000 V
- **Insulation resistance** min. 5 GOhm x km
- **Mutual capacitance** at 800 Hz max. 60 nF/km
- **Characteristic impedance** 100 Ohm ± 15
- **Cross-talk attenuation up** 1 MHz min. 50 dB up 10 MHz min. 40 dB
- **Inductance approx.** 0.65 mH/km
- **Temperature range** flexing -5°C to +70°C, Fixed installation -20°C to +80°C
- **Minimum bending radius flexing** 15 x cable ø, Fixed installation 6 x cable ø

Cable construction:

- Bare copper stranded wires, 7-wires
- Conductor make-up for 0.22 mm² = 7 x 0.20 mm 0.34 mm² = 7 x 0.25 mm 0.5 mm² = 7 x 0.30 mm
- Core insulation of PE(Polyethylene)
- Core colours to DIN 47100, with colour repetition
- Cores stranded in pair with optimal lay-length
- Pair stranded in layers with optimal lay-length
- Core wrapping with foil
- Tinned, copper braided screen
- PVC outer sheath, Grey(RAL 7035)
- Type Yv with reinforced outer sheath of PVC for underground laying

Properties:

Flame retardant to IEC 60332-1-2 The twisted-pair lay-up prevents electrical unbalances within the cable and this thus effectively suppresses cross-talking effects

Application:

These PE-insulated data cables with twisted pairs are used in particular for the interference-free transmission of data and signals over longer distances. The high transmission rates are suitable for RS 422 and RS 485 interfaces.

The version ... Yv, colour black with reinforced outer sheath, is suitable for installation in the ground.

Li-2YCY Grey

PART NUMBER	Number of pairs and conductor cross section (mm ²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 04 002P 0X22	2 x 2 x 0.22	6.4	18.1	53
04 04 003P 0X22	3 x 2 x 0.22	6.7	24.4	59
04 04 004P 0X22	4 x 2 x 0.22	7.3	30.4	70
04 04 008P 0X22	8 x 2 x 0.22	9.0	53.1	107
04 04 010P 0X22	10 x 2 x 0.22	10.5	63.6	143
04 04 001P 0X34	1 x 2 x 0.34	5.82	15.5	44
04 04 002P 0X34	2 x 2 x 0.34	7.6	24.3	75
04 04 003P 0X34	3 x 2 x 0.34	8.0	33.4	85
04 04 004P 0X34	4 x 2 x 0.34	8.6	42.1	99
04 04 008P 0X34	8 x 2 x 0.34	11.2	75.3	167
04 04 001P 00X5	1 x 2 x 0.5	6.32	19.3	52
04 04 002P 00X5	2 x 2 x 0.5	8.4	31.9	93
04 04 003P 00X5	3 x 2 x 0.5	8.8	44.2	105
04 04 004P 00X5	4 x 2 x 0.5	9.6	56.2	126
04 04 008P 00X5	8 x 2 x 0.5	12.3	101.0	208
04 04 010P 00X5	10 x 2 x 0.5	14.5	123.2	282

Li2YCY (TP)

Li-2YCYv Black for Underground laying

PART NUMBER	Number of pairs and conductor cross section (mm²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 05 002P 0X22	2 x 2 x 0.22	8.1	18.1	81
04 05 003P 0X22	3 x 2 x 0.22	8.7	24.4	94
04 05 004P 0X22	4 x 2 x 0.22	8.8	30.4	98
04 05 008P 0X22	8 x 2 x 0.22	10.7	53.1	145
04 05 010P 0X22	10 x 2 x 0.22	12.0	63.6	181
04 05 001P 0X34	1 x 2 x 0.34	7.4	15.5	67
04 05 002P 0X34	2 x 2 x 0.34	9.3	24.3	108
04 05 003P 0X34	3 x 2 x 0.34	10	33.4	126
04 05 004P 0X34	4 x 2 x 0.34	10.3	42.1	136
04 05 008P 0X34	8 x 2 x 0.34	12.6	75.3	205
04 05 001P 00X5	1 x 2 x 0.5	7.9	19.3	77
04 05 002P 00X5	2 x 2 x 0.5	10.1	31.9	129
04 05 003P 00X5	3 x 2 x 0.5	10.9	44.2	152
04 05 004P 00X5	4 x 2 x 0.5	11.2	56.2	164
04 05 008P 00X5	8 x 2 x 0.5	13.9	101.0	256
04 05 010P 00X5	10 x 2 x 0.5	16.0	123.2	334

Note:- Dimensions and specifications may be changed without prior notice.
* To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

Li2YCY PiMF-CY

RR KABEL LI2YCY PIMF-CY



- **Technical data:**
 - Cables in accordance to DIN 47100, table T9
 - **Nominal voltage:** max. 250 V (not for purpose of high current and power installation)
 - **Test voltage:** core/core 2000 V core/Screen 1000 V
 - **Insulation resistance:** min. 5 GOhm x km
 - **Mutual capacitance:** at 800 Hz 0.22 mm² max, 70 nF/km 0.34 mm² max, 70 nF/km 0.5 mm² max, 75 nF/km 1 mm² max, 85 nF/km
 - **Inductance:** approx. 0.4 mH/km Cross-talk attenuation min. 80 dB up to 1 MHz Characteristic impedance at f > 1 MHz
 - **Minimum bending radius:** Fixed 10 x cable ø
 - **Temperature range:** flexing -5°C to +80°C, Fixed installation -20°C to +80°C
- **Cable construction:**
 - Bare copper, fine 7- wire conductors,
 - PE Core insulation
 - Colour code as per DIN 47100
 - PiMF : (pair in metal foil) cores twisted in pairs, foil wrapped plastic coated aluminium foil and copper drain-wire tinned, 100% coverage
 - PiMFs are stranded in layer
 - Core wrapping with plastic tapes
 - Overall copper screened braiding, 85 % coverage
 - Outer jacket, TM2 in adapted to EN 50363-4.1
 - Colour grey (RAL 7032)

Properties:

Flame retardant to IEC 60332-1-2

The twisted-pair lay-up prevents electrical unbalances within the cable and this thus effectively suppresses cross-talking effects

Application:

Absolute disturbance-free data transfer both for installed terminals in all areas of medicine and data technology. Also suitable for use in machine tool and steel producing industries, traffic signal systems, assembly lines and food processing.

Dimensions

Li-2YCY Grey

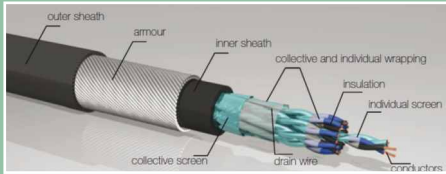
PART NUMBER	Number of pairs and conductor cross section (mm ²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 06 002P 0X22	2 x 2 x 0.22	7.7	27.2	78.6
04 06 003P 0X22	3 x 2 x 0.22	8.4	36.2	91.2
04 06 004P 0X22	4 x 2 x 0.22	9.4	45.4	112.2
04 06 008P 0X22	8 x 2 x 0.22	12.4	80.0	185.6
04 06 010P 0X22	10 x 2 x 0.22	13.7	104.5	227.8
04 06 002P 0X34	2 x 2 x 0.34	8.0	35.6	89.7
04 06 003P 0X34	3 x 2 x 0.34	9.4	49.3	121.9
04 06 004P 0X34	4 x 2 x 0.34	10.2	60.1	140.1
04 06 008P 0X34	8 x 2 x 0.34	13.4	108.4	233.6
04 06 010P 0X34	10 x 2 x 0.34	14.9	140.3	290.5

PART NUMBER	Number of pairs and conductor cross section (mm ²)	Nominal Cable Diameter. mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
04 06 002P 00X5	2 x 2 x 0.5	8.5	46.0	107.1
04 06 003P 00X5	3 x 2 x 0.5	10.4	62.4	154.7
04 06 004P 00X5	4 x 2 x 0.5	11.3	80.3	183.4
04 06 005P 00X5	5 x 2 x 0.5	11.8	97.6	201.4
04 06 008P 00X5	8 x 2 x 0.5	14.5	155.5	303.4
04 06 010P 00X5	10 x 2 x 0.5	16.6	189.6	390.3
04 06 002P 0001	2 x 2 x 1	9.9	67.2	149.5
04 06 003P 0001	3 x 2 x 1	11.8	94.7	209.7
04 06 004P 0001	4 x 2 x 1	12.7	121.3	244.8
04 06 010P 0001	10 x 2 x 1	19.7	292.3	579.4

CHAPTER-V

INSTRUMENTATION CABLES





INSTRUMENTATION CABLE AS PER BS 5308-1 OVERALL SHIELDED XLPE-PVC (300/500 V)

Technical Data:

- **Conductor:** Annealed copper wires according to class 1 or 2 or 5 of BS EN 60228
- **Insulation:** XLPE according to BS EN 50290-2-29
- **Pairs:** twisted
- **Identification pairs:** Blue & White. Blue cores indicate pair identification
- **Assembly:** Concentric layers
- **Overall screen:** aluminium/polyster tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5 mm² polyester tape 0.023 mm

Bedding (If applicable)

- PVC type TM 51 according to BS EN 50290-2-22

Armour (if applicable)

- Galvanized steel wire

Cable sheath

- PVC type TM51 according to BS EN 50290-2-22

Marking

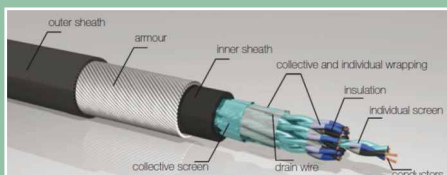
- RR KABEL - n x m x a 300/500 V GEN TO PAS 5308 P1
- Applicable Standards

PAS 5308 - 1 Design guidelines

IEC 60332-1 Flame retardant

IEC 60332-3C Fire retardant on bunched cables (if applicable)

Bending Radius - For Type I-12D & Type II-14D



INSTRUMENTATION CABLE AS PER BS 5308-1 OVERALL SHIELDED XLPE-PVC (300/500 V)

Table I:

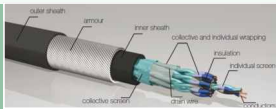
Nominal Cross Section mm ²	Indicative configuration	Class of conductor	Max. DC conductor resistance at 20°C (Ω/km)		Diameter over insulation (mm)
			Multicore	Multipair	
0.5	1/0.8 mm	1	36	36.8	1.9
0.5	16/0.2 mm	5	39.0	39.7	2.1
1	1/1.13 mm	1	18.1	18.4	2.4
1.5	7/0.53 mm	2	12.1	12.3	2.85
2.5	7/0.67 mm	2	7.41	7.6	3.4

Table II:

PART NUMBER	Cross sectional area (mm ²)	Type I-Overall shielded				Type II-Overall shielded armoured						
		Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 01 001P 00X5	1 x 2 x 0.5	4.0	UE4XHR	5.6	41	UE4XHRFR	05 02 001P 00X5	5.6	0.9	7.4	10.0	205
05 01 002P 00X5	2 x 2 x 0.5	5.2	UE4XOHR	6.8	62	UE4XOHRFR	05 02 002P 00X5	6.8	0.9	8.6	11.2	256
05 01 005P 00X5	5 x 2 x 0.5	8.1		10.3	139		05 02 005P 00X5	10.3	0.9	12.1	14.9	431
05 01 010P 00X5	10x 2 x 0.5	11.5		13.8	248		05 02 010P 00X5	13.8	1.3	16.3	19.5	759
05 01 015P 00X5	15 x 2 x 0.5	14.0		16.4	347		05 02 015P 00X5	16.4	1.6	19.6	22.8	1075
05 01 020P 00X5	20 x 2 x 0.5	16.3		18.9	453		05 02 020P 00X5	18.9	1.6	22.1	25.5	1295
05 01 030P 00X5	30 x 2 x 0.5	20.0		22.6	644		05 02 030P 00X5	22.6	1.6	25.8	29.4	1659
05 01 001P 0X75	1 x 2 x 0.5	4.4	FE4XHR	6.0	43	FE4XHRFR	05 02 001P 0X75	6.0	0.9	7.8	10.4	217
05 01 002P 0X75	2 x 2 x 0.5	5.7	FE4XOHR	7.3	65	FE4XOHRFR	05 02 002P 0X75	7.3	0.9	9.1	11.7	272
05 01 005P 0X75	5 x 2 x 0.5	9.0		11.1	144		05 02 005P 0X75	11.1	1.3	13.6	16.6	553
05 01 010P 0X75	10x 2 x 0.5	12.6		15.0	256		05 02 010P 0X75	15.0	1.6	18.2	21.4	923
05 01 015P 0X75	15 x 2 x 0.5	15.5		18.1	366		05 02 015P 0X75	18.1	1.6	21.3	24.7	1173
05 01 020P 0X75	20 x 2 x 0.5	17.9		20.5	465		05 02 020P 0X75	20.5	1.6	23.7	27.3	1390
05 01 030P 0X75	30 x 2 x 0.5	22.0		25.0	684		05 02 030P 0X75	25.0	1.6	28.2	32.0	1818
05 01 001P 0001	1 x 2 x 1.0	5.0	UE4XHR	6.6	59	UE4XHRFR	05 02 001P 0001	6.6	0.9	8.4	11.0	248
05 01 002P 0001	2 x 2 x 1.0	6.5	UE4XOHR	8.1	95	UE4XOHRFR	05 02 002P 0001	8.1	0.9	9.9	12.7	328
05 01 005P 0001	5 x 2 x 1.0	10.1		12.3	220		05 02 005P 0001	12.3	1.3	14.8	17.8	670
05 01 010P 0001	10x 2 x 1.0	14.3		16.7	404		05 02 010P 0001	16.7	1.3	19.2	22.6	1026
05 01 015P 0001	15 x 2 x 1.0	17.6		20.2	586		05 02 015P 0001	20.2	1.6	23.4	27.0	1498
05 01 020P 0001	20 x 2 x 1.0	20.3		23.3	780		05 02 020P 0001	23.3	1.6	26.5	30.1	1827
05 01 030P 0001	30 x 2 x 1.0	25.0		28.0	1120		05 02 030P 0001	28.0	1.6	31.2	35.2	2403
05 01 001P 01X5	1 x 2 x 1.5	5.9	RE4XHR	7.5	76	RE4XHRFR	05 02 001P 01X5	7.5	0.9	9.3	12.1	294
05 01 002P 01X5	2 x 2 x 1.5	7.6	RE4XOHR	9.4	131	RE4XOHRFR	05 02 002P 01X5	9.4	0.9	11.2	14.0	400
05 01 005P 01X5	5 x 2 x 1.5	12.0		14.4	303		05 02 005P 01X5	14.4	1.3	16.9	20.1	833
05 01 010P 01X5	10x 2 x 1.5	16.9		19.5	561		05 02 010P 01X5	19.5	1.6	22.7	26.3	1445
05 01 015P 01X5	15 x 2 x 1.5	20.8		23.8	828		05 02 015P 01X5	23.8	1.6	27.0	30.8	1909
05 01 020P 01X5	20 x 2 x 1.5	24.0		27.0	1071		05 02 020P 01X5	27.0	1.6	30.2	34.2	2310
05 01 030P 01X5	30 x 2 x 1.5	29.5		32.9	1582		05 02 030P 01X5	32.9	2.0	36.9	41.1	3387
05 01 001P 02X5	1 x 2 x 2.5	7.0	RE4XHR	8.6	107	RE4XHRFR	05 02 001P 02X5	8.6	0.9	10.4	13.2	354
05 01 002P 02X5	2 x 2 x 2.5	9.1	RE4XOHR	10.9	190	RE4XOHRFR	05 02 002P 02X5	10.9	0.9	12.7	15.5	496
05 01 005P 02X5	5 x 2 x 2.5	14.2		16.6	449		05 02 005P 02X5	16.6	1.3	19.1	22.5	1068
05 01 010P 02X5	10x 2 x 2.5	20.1		22.9	858		05 02 010P 02X5	22.9	1.6	26.1	29.9	1903
05 01 015P 02X5	15 x 2 x 2.5	24.7		27.9	1269		05 02 015P 02X5	27.9	1.6	31.1	35.1	2546
05 01 020P 02X5	20 x 2 x 2.5	28.5		31.9	1667		05 02 020P 02X5	31.9	2.0	35.9	40.1	3420
05 01 030P 02X5	30 x 2 x 2.5	35.0		38.8	2463		05 02 030P 02X5	38.8	2.0	42.8	47.4	4628

Identification codes

Conductor			Metallic screen	H	aluminium tape screen
	F	round flexible conductor		F	Steel wires armour
	R	round rigid conductor		N	Steel strip
Insulation	U	round rigid conductor	Sheath/Outer sheath	R	PVC sheath
	E	Polyethylene insulation		M1	LSOH thermoplastic sheath
Assembly	E4	XLPE insulation	Marking details	n	No. of pairs
	O	Laid up cores		m	Pairs
	X	twisted pairs		a	Cross sectional area



INSTRUMENTATION CABLE AS PER PAS 5308-1 INDIVIDUAL & OVERALL SHIELDED XLPE-PVC (300/500 V)

- **Technical Data:**
- **Conductor:** Annealed copper wires according to class 1 or 2 or 5 of BS EN 60228
- **Insulation:** XLPE according to BS EN 50290-2-29
- **Pairs:** twisted
- **Identification pairs:** Blue & White. Blue cores indicate pair identification
- **Individual screen:** aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5 mm² polyester tape 0.023 mm
- **Assembly:** Concentric layers

Overall screen

- aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5 mm² polyester tape 0.023 mm

Bedding (if applicable)

- PVC type TM 51 according to BS EN 50290-2-22

Armour (if applicable)

- Galvanized steel wire

Cable sheath

- PVC type TM51 according to BS EN 50290-2-22

Marking

- RR KABEL - n x m x a 300/500 V GEN TO PAS 5308 P1

Applicable Standards

BS 5308 - 1 Design guidelines

IEC 60332-1 Flame retardant

IEC 60332-3C Fire retardant on bunched cables (if applicable)

Bending Radius - For Type I-12D & Type II-14D

Table I:

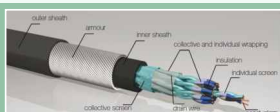
Nominal Cross Section mm ²	Indicative configuration	Class of conductor	Max. DC conductor resistance at 20°C (Ω/km)		Diameter over insulation (mm)
			Multicore	Multipair	
0.5	1/0.8 mm	1	36	36.8	1.9
0.5	16/0.2 mm	5	39.0	39.7	2.1
1	1/1.13 mm	1	18.1	18.4	2.4
1.5	7/0.53 mm	2	12.1	12.3	2.85
2.5	7/0.67 mm	2	7.41	7.6	3.4

Table II:

PART NUMBER	Cross sectional area (mm ²)	Type I-Individual and Overall shielded				Type II-Individual and Overall shielded armoured						
		Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 03 002P 00X5	2 x 2 x 0.5	5.5	UE4XOHR	7.2	73	UE4XHOHRFR	05 04 002P 00X5	7.2	0.9	8.9	11.5	275
05 03 005P 00X5	5 x 2 x 0.5	9.0		11.2	168		05 04 005P 00X5	11.2	0.9	13.0	15.8	481
05 03 010P 00X5	10x 2 x 0.5	13.2		15.6	307		05 04 010P 00X5	15.6	1.25	18.1	21.3	876
05 03 015P 00X5	15 x 2 x 0.5	16.7		19.1	435		05 04 015P 00X5	19.1	1.6	22.3	25.5	1270
05 03 020P 00X5	20 x 2 x 0.5	19.8		22.4	572		05 04 020P 00X5	22.4	1.6	25.6	29.0	1559
05 03 030P 00X5	30 x 2 x 0.5	25.3		27.9	823		05 04 030P 00X5	27.9	1.6	31.0	34.6	2059
05 03 002P 0X75	2 x 2 x 0.5	6.0	FE4XOHR	7.6	76	FE4XHOHRFR	05 04 002P 0X75	7.6	0.9	9.4	12.0	291
05 03 005P 0X75	5 x 2 x 0.5	9.8		12	173		05 04 005P 0X75	12	1.25	14.5	17.5	610
05 03 010P 0X75	10x 2 x 0.5	14.4		16.8	315		05 04 010P 0X75	16.8	1.6	20.0	23.2	1053
05 03 015P 0X75	15 x 2 x 0.5	18.1		20.7	456		05 04 015P 0X75	20.7	1.6	23.9	27.3	1372
05 03 020P 0X75	20 x 2 x 0.5	21.4		24	586		05 04 020P 0X75	24	1.6	27.2	30.8	1657
05 03 030P 0X75	30 x 2 x 0.5	27.3		30.3	870		05 04 030P 0X75	30.3	1.6	33.5	37.3	2228
05 03 002P 0001	2 x 2 x 1.0	6.8	UE4XOHR	8.4	106	UE4XHOHRFR	05 04 002P 0001	8.4	0.9	10.2	13.0	347
05 03 005P 0001	5 x 2 x 1.0	11.0		13.2	248		05 04 005P 0001	13.2	1.25	15.7	18.7	726
05 03 010P 0001	10x 2 x 1.0	16.1		18.5	462		05 04 010P 0001	18.5	1.25	21.0	24.4	1143
05 03 015P 0001	15 x 2 x 1.0	20.2		22.8	675		05 04 015P 0001	22.8	1.6	26.0	29.6	1696
05 03 020P 0001	20 x 2 x 1.0	23.9		26.8	902		05 04 020P 0001	26.8	1.6	30.0	33.6	2095
05 03 030P 0001	30 x 2 x 1.0	30.3		33.3	1304		05 04 030P 0001	33.3	2.0	37.3	41.3	3100
05 03 002P 01X5	2 x 2 x 1.5	8.0	RE4XOHR	9.8	142	RE4XHOHRFR	05 04 002P 01X5	9.8	1.25	12.3	15.1	496
05 03 005P 01X5	5 x 2 x 1.5	12.9		15.3	332		05 04 005P 01X5	15.3	1.25	17.8	21.0	889
05 03 010P 01X5	10x 2 x 1.5	18.7		21.3	620		05 04 010P 01X5	21.3	1.6	24.5	28.1	1576
05 03 015P 01X5	15 x 2 x 1.5	23.4		26.4	919		05 04 015P 01X5	26.4	1.6	29.6	33.4	2110
05 03 020P 01X5	20 x 2 x 1.5	27.5		30.5	1192		05 04 020P 01X5	30.5	2.0	34.5	38.5	2846
05 03 030P 01X5	30 x 2 x 1.5	34.8		38.2	1769		05 04 030P 01X5	38.2	2.0	42.2	46.4	3845
05 03 002P 02X5	2 x 2 x 2.5	9.4	RE4XOHR	11.4	207	RE4XHOHRFR	05 04 002P 02X5	11.4	1.25	13.9	16.9	623
05 03 005P 02X5	5 x 2 x 2.5	15.1		17.5	478		05 04 005P 02X5	17.5	1.6	20.7	24.1	1260
05 03 010P 02X5	10x 2 x 2.5	21.9		24.9	930		05 04 010P 02X5	24.9	1.6	28.1	31.9	2055
05 03 015P 02X5	15 x 2 x 2.5	27.3		30.5	1361		05 04 015P 02X5	30.5	2.0	34.5	38.7	3033
05 03 020P 02X5	20 x 2 x 2.5	32.0		35.6	1809		05 04 020P 02X5	35.6	2.0	39.6	44.0	3773
05 03 030P 02X5	30 x 2 x 2.5	40.3		44.3	2677		05 04 030P 02X5	44.3	2.5	49.3	54.1	5634

Identification codes

Conductor			Metallic screen	H	aluminium tape screen
	F	round flexible conductor	Armour/ metallic sheath	F	Steel wires armour
	R	round rigid conductor	Sheath/Outer sheath	N	Steel strip
Insulation	U	round rigid conductor	Marking details	R	PVC sheath
	E	Polyethylene insulation		M1	LSOH thermoplastic sheath
Assembly	E4	XLPE insulation		n	No. of pairs
	O	Laid up cores		m	Pairs
	X	twisted pairs		a	Cross sectional area



INSTRUMENTATION CABLE AS PER PAS 5308-2
OVERALL SHIELDED CABLE PVC / PVC (300/500 V)

Technical Data:

- Conductor:** Annealed copper wires according to class 1 or 2 or 5 of BS EN 60228
- Insulation:** PVC type TI 51 according to BS EN 50290-2-21
- Pairs:** Twisted
- Identification pairs:** Blue & White. Blue cores indicate pair identification
- Individual screen:** Aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wire of a total section of 0.5 mm² polyester tape 0.023 mm

Bedding (If applicable)

- PVC type TM 51 according to BS EN 50290-2-22

Armour (if applicable)

- Galvanized steel wire

Cable sheath

- PVC type TM 51 according to BS EN 50290-2-22

Marking

- RR KABEL - n x m x a 300/500 V GEN to PAS 5308 P2

Applicable Standards

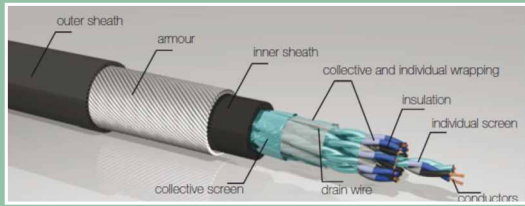
PAS 5308 - 2	Design guidelines
IEC 60332-1	Flammability test
IEC 60332-3C	Fire retardant on bunched cables (if applicable)
Bending Radius - For Type I-12D & Type II-14D	

Table I:

Nominal Cross Section mm ²	Indicative configuration	Class of conductor	Max. DC conductor resistance at 20°C (Ω/km)		Diameter over insulation (mm)
			Multicore	Multipair	
0.5	16/0.2 mm	5	39.0	39.7	2.1
0.75	24/0.2 mm	5	26.0	26.5	2.3
1.5	7/0.53 mm	2	12.1	12.3	2.85
2.5	7/0.67 mm	2	7.41	7.6	3.4

Table II:

PART N UMBER	Cross sectional area (mm ²)	Type I-Individual and Overall shielded				Type II-Individual and Overall shielded armoured						
		Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 05 001P 00X5	1 x 2 x 0.5	4.4	FRXHR	6.0	46	FRXHRFR	05 05 001P 02X5	6.0	0.9	7.8	10.4	219
05 05 002P 00X5	2 x 2 x 0.5	5.7	FRXOHR	7.3	71	FRXOHRFR	05 05 002P 02X5	7.3	0.9	9.1	11.7	277
05 05 003P 00X5	3 x 2 x 0.5	6.9		8.5	96		05 05 003P 02X5	8.5	0.9	10.3	12.9	334
05 05 004P 00X5	4 x 2 x 0.5	8.0		9.6	120		05 05 004P 02X5	9.6	0.9	11.4	14.0	385
05 05 005P 00X5	5 x 2 x 0.5	8.9		10.9	155		05 05 005P 02X5	10.9	0.9	12.7	15.7	469
05 05 006P 00X5	6 x 2 x 0.5	9.8		11.4	168		05 05 006P 02X5	11.4	0.9	13.2	16.2	494
05 05 008P 00X5	8 x 2 x 0.5	11.3		12.9	214		05 05 008P 02X5	12.9	0.9	14.7	17.7	580
05 05 010P 00X5	10x 2 x 0.5	12.6		14.8	281		05 05 010P 02X5	14.8	1.25	17.3	20.5	823
05 05 012P 00X5	12 x 2 x 0.5	13.8		15.4	304		05 05 012P 02X5	15.4	1.25	17.9	21.1	867
05 05 015P 00X5	15 x 2 x 0.5	15.5		17.9	406		05 05 015P 02X5	17.9	1.6	21.1	24.5	1203
05 05 016P 00X5	16 x 2 x 0.5	16.0		17.6	393		05 05 016P 02X5	17.6	1.6	20.8	24.2	1178
05 05 018P 00X5	18 x 2 x 0.5	17.0		18.6	437		05 05 018P 02X5	18.6	1.6	21.8	25.2	1263
05 05 020P 00X5	20 x 2 x 0.5	17.9		20.5	531		05 05 020P 02X5	20.5	1.6	23.7	27.3	1452
05 05 025P 00X5	25 x 2 x 0.5	20.0		21.6	590		05 05 025P 02X5	21.6	1.6	24.8	28.4	1561
05 05 030P 00X5	30 x 2 x 0.5	22.0		25.0	783		05 05 030P 02X5	25.0	1.6	28.2	32.0	1914
05 05 001P 0X75	1 x 2 x 0.75	4.8	FRXHR	6.4	54	FRXHRFR	05 06 001P 00X5	6.4	0.9	8.2	10.8	238
05 05 002P 0X75	2 x 2 x 0.75	6.2	FRXOHR	7.8	87	FRXOHRFR	05 06 002P 00X5	7.8	0.9	9.6	12.4	312
05 05 003P 0X75	3 x 2 x 0.75	7.6		9.2	119		05 06 003P 00X5	9.2	0.9	11.0	13.8	380
05 05 004P 0X75	4 x 2 x 0.75	8.7		10.3	150		05 06 004P 00X5	10.3	0.9	12.1	14.9	441
05 05 005P 0X75	5 x 2 x 0.75	9.7		11.7	193		05 06 005P 00X5	11.7	1.25	14.2	17.2	620
05 05 006P 0X75	6 x 2 x 0.75	10.7		12.3	212		05 06 006P 00X5	12.3	1.25	14.8	17.8	657
05 05 008P 0X75	8 x 2 x 0.75	12.3		13.9	272		05 06 008P 00X5	13.9	1.25	16.4	19.4	773
05 05 010P 0X75	10x 2 x 0.75	13.8		16.2	363		05 06 010P 00X5	16.2	1.6	19.4	22.8	1087
05 05 012P 0X75	12 x 2 x 0.75	15.1		16.7	390		05 06 012P 00X5	16.7	1.6	19.9	23.3	1137
05 05 015P 0X75	15 x 2 x 0.75	16.9		19.5	525		05 06 015P 00X5	19.5	1.6	22.7	26.3	1403
05 05 016P 0X75	16 x 2 x 0.75	17.4		19.0	506		05 06 016P 00X5	19.0	1.6	22.2	25.8	1366
05 05 018P 0X75	18 x 2 x 0.75	18.5		20.1	564		05 06 018P 00X5	20.1	1.6	23.3	26.9	1469
05 05 020P 0X75	20 x 2 x 0.75	19.5		22.3	687		05 06 020P 00X5	22.3	1.6	25.5	29.3	1702
05 05 025P 0X75	25 x 2 x 0.75	21.9		23.5	765		05 06 025P 00X5	23.5	1.6	26.7	30.5	1829
05 05 030P 0X75	30 x 2 x 0.75	24.0		27.0	1000		05 06 030P 00X5	27.0	1.6	30.2	34.2	2234
05 05 001P 01X5	1 x 2 x 1.5	5.9	RRXHR	7.5	81	RRXHRFR	05 06 001P 0X75	7.5	0.9	9.3	12.1	298
05 05 002P 01X5	2 x 2 x 1.5	7.6	RRXOHR	9.4	142	RRXOHRFR	05 06 002P 0X75	9.4	0.9	11.2	14.0	409
05 05 003P 01X5	3 x 2 x 1.5	9.3		11.1	198		05 06 003P 0X75	11.1	0.9	12.9	15.7	510
05 05 004P 01X5	4 x 2 x 1.5	10.7		12.5	254		05 06 004P 0X75	12.5	0.9	14.3	17.1	602
05 05 005P 01X5	5 x 2 x 1.5	12.0		14.2	323		05 06 005P 0X75	14.2	1.25	16.7	19.9	843
05 05 006P 01X5	6 x 2 x 1.5	13.1		14.9	363		05 06 006P 0X75	14.9	1.25	17.4	20.6	909
05 05 008P 01X5	8 x 2 x 1.5	15.2		17.0	470		05 06 008P 0X75	17.0	1.25	19.5	22.7	1086
05 05 010P 01X5	10 x 2 x 1.5	16.9		19.5	615		05 06 010P 0X75	19.5	1.6	22.7	26.3	1496
05 05 012P 01X5	12 x 2 x 1.5	18.6		20.4	682		05 06 012P 0X75	20.4	1.6	23.6	27.2	1599
05 05 015P 01X5	15 x 2 x 1.5	20.8		23.6	897		05 06 015P 0X75	23.6	1.6	26.8	30.6	1966
05 05 016P 01X5	16 x 2 x 1.5	21.5		23.3	892		05 06 016P 0X75	23.3	1.6	26.5	30.3	1947
05 05 018P 01X5	18 x 2 x 1.5	22.8		24.6	996		05 06 018P 0X75	24.6	1.6	27.8	31.6	2108
05 05 020P 01X5	20 x 2 x 1.5	24.0		27.0	1179		05 06 020P 0X75	27.0	1.6	30.2	34.2	2414
05 05 025P 01X5	25 x 2 x 1.5	26.9		28.7	1359		05 06 025P 0X75	28.7	1.6	31.9	35.9	2667
05 05 030P 01X5	30 x 2 x 1.5	29.5		32.9	1745		05 06 030P 0X75	32.9	2.0	36.9	41.1	3544



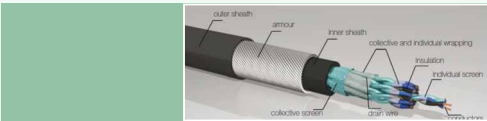
INSTRUMENTATION CABLE AS PER PAS 5308-2 OVERALL SHIELDED CABLE PVC / PVC (300/500 V)

Table II: Cont..

Type I-Individual and Overall shielded						Type II-Individual and Overall shielded armoured						
PART NUMBER	Cross sectional area (mm ²)	Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 06 001P 01X5	1 x 2 x 2.5	7.0	RRXHR	8.6	114	RRXHR	05 06 001P 02X5	8.6	0.9	10.4	13.2	360
05 06 002P 01X5	2 x 2 x 2.5	9.1	RRXOHR	10.9	205	RRXOHR	05 06 002P 02X5	10.9	0.9	12.7	15.5	509
05 06 003P 01X5	3 x 2 x 2.5	11.1		12.9	291		05 06 003P 02X5	12.9	0.9	14.7	17.5	648
05 06 004P 01X5	4 x 2 x 2.5	12.7		14.5	377		05 06 004P 02X5	14.5	0.9	16.3	19.1	777
05 06 005P 01X5	5 x 2 x 2.5	14.2		16.6	485		05 06 005P 02X5	16.6	1.25	19.1	22.5	1102
05 06 006P 01X5	6 x 2 x 2.5	15.6		17.4	545		05 06 006P 02X5	17.4	1.25	19.9	23.3	1187
05 06 008P 01X5	8 x 2 x 2.5	18.0		19.8	711		05 06 008P 02X5	19.8	1.25	22.3	25.7	1437
05 06 010P 01X5	10 x 2 x 2.5	20.1		22.9	931		05 06 010P 02X5	22.9	1.6	26.1	29.9	1972
05 06 012P 01X5	12 x 2 x 2.5	22.1		23.9	1039		05 06 012P 02X5	23.9	1.6	27.1	30.9	2120
05 06 015P 01X5	15 x 2 x 2.5	24.7		27.9	1379		05 06 015P 02X5	27.9	1.6	31.1	35.1	2651
05 06 016P 01X5	16 x 2 x 2.5	25.5		27.3	1365		05 06 016P 02X5	27.3	1.6	30.5	34.5	2611
05 06 018P 01X5	18 x 2 x 2.5	27.1		28.9	1527		05 06 018P 02X5	28.9	1.6	32.1	36.1	2842
05 06 020P 01X5	20 x 2 x 2.5	28.5		31.9	1813		05 06 020P 02X5	31.9	2.0	35.9	40.1	3560
05 06 025P 01X5	25 x 2 x 2.5	31.9		33.7	2092		05 06 025P 02X5	33.7	2.0	37.7	41.9	3934
05 06 030P 01X5	30 x 2 x 2.5	35.0		36.8	2493		05 06 030P 02X5	36.8	2.0	40.8	45.4	4544

Applicable Identification codes

Conductor	F - Round flexible conductor R - Round rigid conductor	Assembly	O - Laid up pairs, X - twisted pairs		Marking details	
		Metallic screen	H - Aluminium tape screen		n	No. of pairs
Insulation	R - PVC insulation	Armour	F - steel wires armour		m	Pairs
		Cable sheath	R - PVC sheath		a	Cross sectional area



INSTRUMENTATION CABLE AS PER PAS 5308-2
INDIVIDUAL AND OVERALL SHIELDED PVC / PVC (300/500 V)

- **Technical Data:**
- **Conductor:** Annealed copper wires according to class 1 or 2 or 5 of BS EN 60228
- **Insulation:** PVC type TI 51 according to BS EN 50290-2-21
- **Pairs:** Twisted
- **Identification pairs:** Blue & White. Blue cores indicate pair identification
- **Individual screen:** Aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5 mm² polyester tape 0.023 mm
- **Assembly:** Concentric layers

- Overall screen**
- aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wires of a total section of 0.5 mm² polyester tape 0.023 mm

- Bedding (if applicable)**
- PVC type TM51 according to BS EN 50290-2-22

- Armour (if applicable)**
- Galvanized steel wire

- Cable sheath**
- PVC type TM51 according to BS EN 50290-2-22

- Marking**
- RR KABEL - n x m x a 300/500 V PAS 5308 Part 2

- Applicable Standards**
- PAS 5308 - 2** Design guidelines
- IEC 60332-1** Flammability test
- IEC 60332-3C** Fire retardant on bunched cables (if applicable)
- Bending Radius - For Type I-12D & Type II-14D

Table III:

PART NUMBER	Cross sectional area (mm²)	Type I-Individual and overall shielded				Type II-Individual and overall shielded armoured						
		Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 07 002P 00X5	2 x 2 x 0.5	6.0	FRXHOHR	7.8	79.6	FRXHOHRFR	05 07 016P 02X5	7.8	0.9	9.6	12.4	306
05 07 003P 00X5	3 x 2 x 0.5	7.5		9.3	109.6		05 07 018P 02X5	9.3	0.9	11.1	13.9	373
05 07 004P 00X5	4 x 2 x 0.5	8.7		10.5	139.0		05 07 020P 02X5	10.5	0.9	12.3	15.1	434
05 07 005P 00X5	5 x 2 x 0.5	9.8		11.8	172.6		05 07 025P 02X5	11.8	1.25	14.3	17.3	602
05 07 006P 00X5	6 x 2 x 0.5	10.8		12.8	201.6		05 07 030P 02X5	12.8	1.25	15.3	18.3	666
05 07 008P 00X5	8 x 2 x 0.5	12.7		14.7	259.0		05 08 002P 00X5	14.7	1.25	17.2	20.2	786
05 07 010P 00X5	10x 2 x 0.5	14.4		16.8	328.7		05 08 003P 00X5	16.8	1.6	20.0	23.4	1079
05 07 012P 00X5	12 x 2 x 0.5	15.9		18.3	386.1		05 08 004P 00X5	18.3	1.6	21.5	24.9	1202
05 07 015P 00X5	15 x 2 x 0.5	18.1		20.7	479.5		05 08 005P 00X5	20.7	1.6	23.9	27.5	1409
05 07 016P 00X5	16 x 2 x 0.5	18.8		21.4	508.1		05 08 006P 00X5	21.4	1.6	24.6	28.2	1467
05 07 018P 00X5	18 x 2 x 0.5	20.1		22.7	564.9		05 08 008P 00X5	22.7	1.6	25.9	29.5	1581
05 07 020P 00X5	20 x 2 x 0.5	21.4		24.2	631.0		05 08 010P 00X5	24.2	1.6	27.4	31.2	1726
05 07 025P 00X5	25 x 2 x 0.5	24.4		27.2	772.9		05 08 012P 00X5	27.2	1.6	30.4	34.2	1999
05 07 030P 00X5	30 x 2 x 0.5	27.3		30.5	937.4		05 08 015P 00X5	30.5	1.6	33.7	37.7	2322
05 07 002P 0X75	2 x 2 x 0.75	6.6	FRXHOHR	8.4	94.8	FRXHOHRFR	05 08 016P 00X5	8.4	0.9	10.2	13.0	334
05 07 003P 0X75	3 x 2 x 0.75	8.1		9.9	132.0		05 08 018P 00X5	9.9	0.9	11.7	14.5	412
05 07 004P 0X75	4 x 2 x 0.75	9.4		11.2	168.5		05 08 020P 00X5	11.2	0.9	13.0	15.8	483
05 07 005P 0X75	5 x 2 x 0.75	10.6		12.6	209.3		05 08 025P 00X5	12.6	1.25	15.1	18.1	667
05 07 006P 0X75	6 x 2 x 0.75	11.7		13.7	245.4		05 08 030P 00X5	13.7	1.25	16.2	19.2	740
05 07 008P 0X75	8 x 2 x 0.75	13.7		15.7	316.7		05 08 002P 0X75	15.7	1.25	18.2	21.2	879
05 07 010P 0X75	10x 2 x 0.75	15.5		17.9	401.2		05 08 003P 0X75	17.9	1.6	21.1	24.5	1200
05 07 012P 0X75	12 x 2 x 0.75	17.2		19.6	472.6		05 08 004P 0X75	19.6	1.6	22.8	26.2	1342
05 07 015P 0X75	15 x 2 x 0.75	19.5		22.3	596.2		05 08 005P 0X75	22.3	1.6	25.5	29.1	1595
05 07 016P 0X75	16 x 2 x 0.75	20.2		23.0	631.9		05 08 006P 0X75	23.0	1.6	26.2	29.8	1662
05 07 018P 0X75	18 x 2 x 0.75	21.7		24.5	703.3		05 08 008P 0X75	24.5	1.6	27.7	31.3	1794
05 07 020P 0X75	20 x 2 x 0.75	23.0		26.0	784.5		05 08 010P 0X75	26.0	1.6	29.2	33.0	1959
05 07 025P 0X75	25 x 2 x 0.75	26.2		29.2	962.2		05 08 012P 0X75	29.2	1.6	32.4	36.2	2276
05 07 030P 0X75	30 x 2 x 0.75	29.3		32.5	1151.3		05 08 015P 0X75	32.5	2.0	36.5	40.7	2926
05 07 002P 01X5	2 x 2 x 1.5	8.0	RRXHOHR	10.0	148.3	RRXHOHRFR	05 08 016P 0X75	10.0	1.25	12.5	15.5	516
05 07 003P 01X5	3 x 2 x 1.5	9.8		11.8	209.6		05 08 018P 0X75	11.8	1.25	14.3	17.3	641
05 07 004P 01X5	4 x 2 x 1.5	11.4		13.4	269.9		05 08 020P 0X75	13.4	1.25	15.9	18.9	755
05 07 005P 01X5	5 x 2 x 1.5	12.9		15.1	335.4		05 08 025P 0X75	15.1	1.25	17.6	20.8	886
05 07 006P 01X5	6 x 2 x 1.5	14.2		16.4	395.2		05 08 030P 0X75	16.4	1.25	18.9	22.1	991
05 07 008P 01X5	8 x 2 x 1.5	16.6		18.8	513.5		05 08 002P 01X5	18.8	1.25	21.3	24.5	1191
05 07 010P 01X5	10 x 2 x 1.5	18.7		21.5	655.8		05 08 003P 01X5	21.5	1.6	24.7	28.3	1620
05 07 012P 01X5	12 x 2 x 1.5	20.7		23.5	774.7		05 08 004P 01X5	23.5	1.6	26.7	30.3	1824
05 07 015P 01X5	15 x 2 x 1.5	23.4		26.4	962.2		05 08 005P 01X5	26.4	1.6	29.6	33.4	2153
05 07 016P 01X5	16 x 2 x 1.5	24.3		27.3	1021.3		05 08 006P 01X5	27.3	1.6	30.5	34.3	2250
05 07 018P 01X5	18 x 2 x 1.5	25.9		28.9	1139.2		05 08 008P 01X5	28.9	1.6	32.1	35.9	2440
05 07 020P 01X5	20 x 2 x 1.5	27.5		30.7	1268.7		05 08 010P 01X5	30.7	2.0	34.7	38.9	2952
05 07 025P 01X5	25 x 2 x 1.5	31.3		34.5	1562.5		05 08 012P 01X5	34.5	2.0	38.5	42.7	3444
05 07 030P 01X5	30 x 2 x 1.5	34.8		38.4	1884.6		05 08 015P 01X5	38.4	2.0	42.4	46.8	3995
05 07 002P 02X5	2 x 2 x 2.5	9.4	RRXHOHR	11.4	210.7	RRXHOHRFR	05 08 016P 01X5	11.4	1.25	13.9	16.9	627
05 07 003P 02X5	3 x 2 x 2.5	11.6		13.6	301.7		05 08 018P 01X5	13.6	1.25	16.1	19.1	792
05 07 004P 02X5	4 x 2 x 2.5	13.4		15.4	391.5		05 08 020P 01X5	15.4	1.25	17.9	20.9	945
05 07 005P 02X5	5 x 2 x 2.5	15.1		17.5	494.1		05 08 025P 01X5	17.5	1.6	20.7	24.1	1276
05 07 006P 02X5	6 x 2 x 2.5	16.6		19.0	583.8		05 08 030P 01X5	19.0	1.6	22.2	25.6	1430
05 07 008P 02X5	8 x 2 x 2.5	19.4		21.8	761.7		05 08 002P 02X5	21.8	1.6	25.0	28.4	1725
05 07 010P 02X5	10 x 2 x 2.5	21.9		24.9	967.3		05 08 003P 02X5	24.9	1.6	28.1	31.9	2092
05 07 012P 02X5	12 x 2 x 2.5	24.2		27.2	1145.6		05 08 004P 02X5	27.2	1.6	30.4	34.2	2369
05 07 015P 02X5	15 x 2 x 2.5	27.3		30.5	1423.4		05 08 005P 02X5	30.5	2.0	34.5	38.7	3095

INSTRUMENTATION CABLE AS PER PAS 5308-2

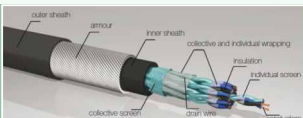
INDIVIDUAL AND OVERALL SHIELDED PVC / PVC (300/500 V)

Table III : Cont..

		Type I-Individual and overall shielded				Type II-Individual and overall shielded armoured						
PART NUMBER	Cross sectional area (mm ²)	Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 08 006P 02X5	16 x 2 x 2.5	28.3	RRXHOHR	31.5	1512.1	RRXHOHRFR	05 08 016P 02X5	31.5	2.0	35.5	39.7	3236
05 08 008P 02X5	18 x 2 x 2.5	30.2		33.4	1689.0		05 08 018P 02X5	33.4	2.0	37.4	41.6	3514
05 08 010P 02X5	20 x 2 x 2.5	32.0		35.6	1893.3		05 08 020P 02X5	35.6	2.0	39.6	44.0	3857
05 08 012P 02X5	25 x 2 x 2.5	36.3		39.9	2335.8		05 08 025P 02X5	39.9	2.5	44.9	49.3	4960
05 08 015P 02X5	30 x 2 x 2.5	40.3		44.3	2810.9		05 08 030P 02X5	44.3	2.5	49.3	54.1	5768

Applicable Identification codes

Conductor	F - Round flexible conductor R - Round rigid conductor	Assembly	O - Laid up pairs, X - twisted pairs		Marking details	
		Metallic screen	H - Aluminium tape screen		n	No. of pairs
Insulation	R- PVC insulation	Armour	F - steel wires armour		m	Pairs
		Cable sheath	R - PVC sheath		a	Cross sectional area



INSTRUMENTATION CABLE AS PER PAS 5308-2 MULTICORE SHIELDED PVC / PVC (300/500 V)

Technical Data:

- **Conductor:** Annealed copper wires according to class 1 or 2 or 5 of BS EN 60228
- **Insulation:** PVC type TI 51 according to BS EN 50290-2-21
- **Pairs:** Twisted
- **Identification:** All black cores with white printed numbers.
- **Overall screen:** Aluminium/polyester tape 0.024 mm in electrical contact with tinned annealed copper wire of a total section of 0.5 mm² polyester tape 0.023 mm

Bedding (If applicable)

- PVC type TM 51 according to BS EN 50290-2-22

Armour (if applicable)

- Galvanized steel wire

Cable sheath

- PVC type TM 51 according to BS EN 50290-2-22

Marking

- RR KABEL - c x a 300/500 V GEN to PAS 5308 P2 T1

Applicable Standards

PAS 5308 - 2	Design guidelines
IEC 60332-1	Flammability test
IEC 60332-3C	Fire retardant on bunched cables (if applicable)
Bending Radius - For Type I-12D & Type II-14D	

Table III:

		Type I- Multicore Overall shielded				Type II- Multicore shielded armoured						
PART NUMBER	Cross sectional area (mm²)	Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 09 002C 00X5	2 x 0.5	4.4	RROHR	5.8	45	RROHRFR	05 09 016C 01X5	5.8	0.9	7.6	10.2	213
05 09 003C 00X5	3 x 0.5	4.7		6.1	57		05 09 018C 01X5	6.1	0.9	7.9	10.5	233
05 09 004C 00X5	4 x 0.5	5.3		6.7	69		05 09 020C 01X5	6.7	0.9	8.5	11.1	259
05 09 005C 00X5	5 x 0.5	5.9		7.3	81		05 09 025C 01X5	7.3	0.9	9.1	11.7	287
05 09 007C 00X5	7 x 0.5	6.6		8.0	104		05 09 027C 01X5	8.0	0.9	9.8	12.6	335
05 09 008C 00X5	8 x 0.5	7.4		8.8	118		05 09 032C 01X5	8.8	0.9	10.6	13.4	370
05 09 010C 00X5	10 x 0.5	8.6		10.2	148		05 09 034C 01X5	10.2	1.25	12.7	15.7	523
05 09 012C 00X5	12 x 0.5	8.9		10.5	169		05 09 037C 01X5	10.5	1.25	13.0	16.0	556
05 09 014C 00X5	14 x 0.5	9.5		11.1	192		05 09 042C 01X5	11.1	1.25	13.6	16.6	597
05 09 016C 00X5	16 x 0.5	10.1		11.7	215		05 09 050C 01X5	11.7	1.25	14.2	17.2	640
05 09 018C 00X5	18 x 0.5	10.7		12.3	238		05 09 052C 01X5	12.3	1.25	14.8	17.8	684
05 09 020C 00X5	20 x 0.5	11.4		13.2	267		05 09 061C 01X5	13.2	1.25	15.7	18.7	745
05 09 025C 00X5	25 x 0.5	12.9		14.7	325		05 09 002C 02X5	14.7	1.25	17.2	20.2	854
05 09 030C 00X5	30 x 0.5	13.7		15.5	380		05 09 003C 02X5	15.5	1.25	18.0	21.0	933
05 09 032C 00X5	32 x 0.5	14.3		16.1	403		05 09 004C 02X5	16.1	1.25	18.6	21.6	977
05 09 034C 00X5	34 x 0.5	14.9		16.7	426		05 09 005C 02X5	16.7	1.25	19.2	22.2	1022
05 09 040C 00X5	40 x 0.5	15.6		17.8	508		05 09 007C 02X5	17.8	1.6	21.0	24.4	1301
05 09 042C 00X5	42 x 0.5	16.3		18.5	532		05 09 012C 02X5	18.5	1.6	21.7	25.1	1356
05 09 050C 00X5	50 x 0.5	17.9		20.1	622		05 09 014C 02X5	20.1	1.6	23.3	26.9	1525
05 09 052C 00X5	52 x 0.5	17.9		20.1	642		05 09 018C 02X5	20.1	1.6	23.3	26.9	1545
05 09 061C 00X5	61 x 0.5	19.1		21.7	762		05 09 025C 02X5	21.7	1.6	24.9	28.5	1735
05 09 002C 0X75	2 x 0.75	4.8	RROHR	6.2	53	RROHRFR	05 09 034C 02X5	6.2	0.9	8.0	10.6	231
05 09 003C 0X75	3 x 0.75	5.2		6.6	68		05 09 050C 02X5	6.6	0.9	8.4	11.0	256
05 09 004C 0X75	4 x 0.75	5.8		7.2	84		05 09 061C 02X5	7.2	0.9	9.0	11.8	292
05 09 005C 0X75	5 x 0.75	6.4		7.8	99		05 10 002C 00X5	7.8	0.9	9.6	12.4	325
05 09 007C 0X75	7 x 0.75	7.2		8.8	134		05 10 003C 00X5	8.8	0.9	10.6	13.4	385
05 09 008C 0X75	8 x 0.75	8.1		9.7	151		05 10 004C 00X5	9.7	0.9	11.5	14.3	427
05 09 010C 0X75	10 x 0.75	9.4		11.2	189		05 10 005C 00X5	11.2	1.25	13.7	16.7	598
05 09 012C 0X75	12 x 0.75	9.8		11.6	217		05 10 007C 00X5	11.6	1.25	14.1	17.1	639
05 09 014C 0X75	14 x 0.75	10.3		12.1	247		05 10 008C 00X5	12.1	1.25	14.6	17.6	688
05 09 015C 0X75	15 x 0.75	11.0		12.8	263		05 10 010C 00X5	12.8	1.25	15.3	18.3	727
05 09 018C 0X75	18 x 0.75	11.7		13.5	307		05 10 012C 00X5	13.5	1.25	16.0	19.0	794
05 09 020C 0X75	20 x 0.75	12.5		14.5	344		05 10 014C 00X5	14.5	1.25	17.0	20.2	874
05 09 025C 0X75	25 x 0.75	14.1		16.1	420		05 10 016C 00X5	16.1	1.25	18.6	21.8	1007
05 09 027C 0X75	27 x 0.75	14.3		16.3	448		05 10 018C 00X5	16.3	1.25	18.8	22.0	1043
05 09 032C 0X75	32 x 0.75	15.6		17.6	521		05 10 020C 00X5	17.6	1.25	20.1	23.3	1159
05 09 034C 0X75	34 x 0.75	16.3		18.3	551		05 10 025C 00X5	18.3	1.60	21.5	24.7	1354
05 09 037C 0X75	37 x 0.75	16.5		18.5	593		05 10 030C 00X5	18.5	1.60	21.7	24.9	1405
05 09 040C 0X75	40 x 0.75	17.1		19.5	655		05 10 032C 00X5	19.5	1.60	22.7	26.1	1519
05 09 042C 0X75	42 x 0.75	17.9		20.3	687		05 10 034C 00X5	20.3	1.60	23.5	26.9	1586
05 09 050C 0X75	50 x 0.75	19.5		22.1	815		05 10 040C 00X5	22.1	1.60	25.3	28.7	1792
05 09 061C 0X75	61 x 0.75	20.9		23.5	970		05 10 042C 00X5	23.5	1.60	26.7	30.3	2021
05 09 002C 01X5	2 x 1.5	5.1	RROHR	6.5	70	RROHRFR	05 10 050C 00X5	6.5	0.90	8.3	11.1	262
05 09 003C 01X5	3 x 1.5	6.4		7.8	105		05 10 052C 00X5	7.8	0.90	9.6	12.4	329
05 09 004C 01X5	4 x 1.5	7.1		8.7	136		05 10 061C 00X5	8.7	0.90	10.5	13.3	384
05 09 005C 01X5	5 x 1.5	7.9		9.5	163		05 10 002C 0X75	9.5	0.90	11.3	14.1	433
05 09 007C 01X5	7 x 1.5	8.9		10.5	216		05 10 003C 0X75	10.5	1.25	13.0	16.0	601
05 09 008C 01X5	8 x 1.5	10.0		11.6	245		05 10 004C 0X75	11.6	1.25	14.1	17.1	669
05 09 010C 01X5	10 x 1.5	11.6		13.4	307		05 10 005C 0X75	13.4	1.25	15.9	18.9	791
05 09 012C 01X5	12 x 1.5	12.1		13.9	357		05 10 007C 0X75	13.9	1.25	16.4	19.4	856
05 09 014C 01X5	14 x 1.5	12.8		14.6	408		05 10 008C 0X75	14.6	1.25	17.1	20.1	932

INSTRUMENTATION CABLE AS PER PAS 5308-2 MULTICORE SHIELDED PVC / PVC (300/500 V)

Table III:

PART NUMBER	Cross sectional area (mm ²)	Type I- Multicore Overall shielded				Type II- Multicore shielded armoured						
		Diameter over assembly plastic tape (mm)	Type	Outer diameter approx (mm)	Weight of cable approx (kg/km)	Type	PART NUMBER	Diameter over inner sheath (mm)	Diameter of armour wires (mm)	Diameter over armour (mm)	Outer diameter approx (mm)	Weight of cable approx (kg/km)
05 10 010C 0X75	16 x 1.5	13.6	RROHR	15.4	460	RROHR	05 10 016C 01X5	15.4	1.25	17.9	20.9	1012
05 10 012C 0X75	18 x 1.5	14.5		16.3	513		05 10 018C 01X5	16.3	1.25	18.8	21.8	1093
05 10 014C 0X75	20 x 1.5	15.4		17.6	583		05 10 020C 01X5	17.6	1.60	20.8	24.2	1368
05 10 015C 0X75	25 x 1.5	17.3		19.5	714		05 10 025C 01X5	19.5	1.60	22.7	26.1	1580
05 10 018C 0X75	27 x 1.5	17.7		19.9	765		05 10 027C 01X5	19.9	1.60	23.1	26.5	1649
05 10 020C 0X75	32 x 1.5	19.3		21.5	894		05 10 032C 01X5	21.5	1.60	24.7	28.1	1844
05 10 025C 0X75	34 x 1.5	20.2		22.4	947		05 10 034C 01X5	22.4	1.60	25.6	29.0	1933
05 10 027C 0X75	37 x 1.5	20.4		22.6	1021		05 10 037C 01X5	22.6	1.60	25.8	29.2	2019
05 10 032C 0X75	42 x 1.5	22.1		24.7	1175		05 10 042C 01X5	24.7	2.00	28.7	32.3	2495
05 10 034C 0X75	50 x 1.5	24.0		26.8	1393		05 10 050C 01X5	26.8	2.00	30.8	34.4	2818
05 10 037C 0X75	52 x 1.5	24.2		27.0	1443		05 10 052C 01X5	27.0	2.00	31.0	34.6	2876
05 10 040C 0X75	61 x 1.5	25.9		28.7	1671		05 10 061C 01X5	28.7	2.00	32.7	36.3	3190
05 10 042C 0X75	2 x 2.5	7.0	RROHR	8.4	110	RROHR	05 10 002C 02X5	8.4	0.90	10.2	13.0	351
05 10 050C 0X75	3 x 2.5	7.5		9.1	154		05 10 003C 02X5	9.1	0.90	10.9	13.7	415
05 10 061C 0X75	4 x 2.5	8.4		10.0	196		05 10 004C 02X5	10.0	0.90	11.8	14.6	479
05 10 002C 01X5	5 x 2.5	9.4		11.2	243		05 10 005C 02X5	11.2	0.90	13.0	15.8	556
05 10 003C 01X5	7 x 2.5	10.6		12.4	324		05 10 007C 02X5	12.4	1.25	14.9	17.9	773
05 10 004C 01X5	12 x 2.5	14.3		16.3	539		05 10 012C 02X5	16.3	1.60	19.5	22.7	1260
05 10 005C 01X5	14 x 2.5	15.2		17.2	618		05 10 014C 02X5	17.2	1.60	20.4	23.6	1375
05 10 007C 01X5	18 x 2.5	17.2		19.6	799		05 10 018C 02X5	19.6	1.60	22.8	26.0	1656
05 10 008C 01X5	25 x 2.5	20.6		23.0	1084		05 10 025C 02X5	23.0	2.00	27.0	30.4	2298
05 10 010C 01X5	34 x 2.5	24.0		26.6	1456		05 10 034C 02X5	26.6	2.00	30.6	34.0	2854
05 10 012C 01X5	50 x 2.5	28.6		31.4	2104		05 10 050C 02X5	31.4	2.50	36.4	40.0	4104
05 10 014C 01X5	61 x 2.5	30.8		33.6	2533		05 10 061C 02X5	33.6	2.50	38.6	42.2	4670

Applicable Identification codes

Conductor	F - Round flexible conductor R - Round rigid conductor	Assembly	O - Laid up pairs, X - twisted pairs		Marking details	
		Metallic screen	H - Aluminium tape screen		n	No. of pairs
Insulation	R- PVC insulation	Armour	F - steel wires armour		m	Pairs
		Cable sheath	R - PVC sheath		a	Cross sectional area

CHAPTER-VI

SILICON CABLES



SiF / SiFF



Technical data

- Silicone single core cable with higher heat-resistance
- **Temperature range:** -50°C to +180°C (up to + 200°C for short time with adequate ventilation)
- **Nominal voltage:** U₀/U 300/500 V
- **Test voltage** 2000 V
- **Minimum bending radius:**
Fixed installation: 6 x cable Ø One bend at end of core: 3 x cable Ø
- * For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts. Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

Cable construction

- Tinned copper conductor to EN 60228 cl. 5
- Silicone core insulation

Type SiFF

- as SiF but with high flexible copper strands (see content technical information)

Properties

- **Advantages**
High ignition or flash point
- **Resistant to**
High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clopenes, diluted acids, Dyes and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen and UV
- **Halogen-free**
according to IEC 60754-2
- **Behaviour in fire**
Flame propagation test according to IEC 60332-1-2

Application

Suitable for higher temperatures upto 180 Deg. C. as well as low temperature areas, Heat Resistant, suitable for Short time operation upto 220 Deg. C. Halogen Free, The use is in Steel, Glass, Aviation, Ship Building, Cement, Ceramic Industries.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

SiF

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 03 001C 0X25	0.25	1.9	2.4	5.5
06 03 001C 00X5	0.5	2.1	4.5	8.6
06 03 001C 0X75	0.75	2.4	6.7	11.8
06 03 001C 0001	1.0	2.5	9.0	13.5
06 03 001C 01X5	1.5	2.8	12.9	18.5
06 03 001C 02X5	2.5	3.5	21.5	30.0
06 03 001C 0004	4.0	4.2	34.1	47.3
06 03 001C 0006	6.0	5.2	51.2	71.1
06 03 001C 0010	10.0	7.0	87.1	119.4
06 03 001C 0016	16.0	8.4	145.1	187.7
06 03 001C 0025	25.0	9.9	225.8	289.6
06 03 001C 0035	35.0	11.0	317.9	398.3
06 03 001C 0050	50.0	12.5	456.2	559.7
06 03 001C 0070	70.0	14.5	644.6	765.8

SiFF

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 04 001C 0X25	0.25	1.9	2.5	6
06 04 001C 00X5	0.5	2.1	4.9	8
06 04 001C 0X75	0.75	2.5	7.3	12
06 04 001C 0001	1.0	2.7	9.8	15
06 04 001C 01X5	1.5	3.0	14.7	21
06 04 001C 02X5	2.5	3.8	24.5	35
06 04 001C 0004	4.0	4.6	39.2	54
06 04 001C 0006	6.0	5.7	53.9	78
06 04 001C 0010	10.0	7.6	89.8	133

Note:- Dimensions and specifications may be changed without prior notice.

SiHF



Technical data

- Special silicone multicore cable with higher heat-resistance range adapted to DIN VDE 0250 part 1 and part 816
- **Temperature range:**
-60°C to +180°C
(up to +220°C for short time)
- **Temperature limit at the conductor:**
in operation +180°C
- **Nominal voltage:** U_0/U 300/500 V
- **Test voltage:** 2000 V
- **Insulation resistance:**
min. 200 MΩ x km
- **Minimum bending radius:**
flexing 10 x cable Ø,
fixed installation 5 x cable Ø

Cable construction

- Tinned copper conductor to cl. 5, EN 60228 cl. 5
- Silicone core insulation
- Core identification to DIN VDE 0293-308
colour coded or black cores with
continuous white numbers
- For 2-cores brown, blue
For 3-cores and above cable provided
without protective conductor
- For 6-cores and above all black cores
with number coding
- Cores stranded in layers with optimal lay-length
- Outer jacket of silicone
- Jacket colour preferably redbrown

Properties

- **Advantages**
Hardly changes of dielectric strength and the insulation resistance also at high temperatures, high ignition or flash point, in case of fire, forms an insulating layer of SiO₂
- **Resistant to**
High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clopenes, diluted acids, dyes and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen and UV
- **Halogen-free**
according to IEC 60754-2
- **Behaviour in fire**
Flame propagation test according to IEC 60332-1-2
IEC 60332-3C
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

Application:

Suitable for higher temperatures upto 180 Deg. C. Heat Resistant, suitable for Short time operation upto 220 Deg. C. Halogen Free, The use is in Steel, Glass, Aviation, Ship Building, Cement, Ceramic Industries.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

SiHF

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km	PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 01 002C 00X5	2 x 0.5	5.6	8.0	36	06 01 010C 0001	10 x 1	11.8	79.9	198
06 01 003C 00X5	3 x 0.5	5.9	12.0	43	06 01 012C 0001	12 x 1	12.2	95.9	221
06 01 004C 00X5	4 x 0.5	6.5	16.0	53	06 01 016C 0001	16 x 1	13.6	127.8	281
06 01 005C 00X5	5 x 0.5	7.1	20.0	64	06 01 018C 0001	18 x 1	14.3	143.8	314
06 01 006C 00X5	6 x 0.5	7.7	24.0	76					
06 01 007C 00X5	7 x 0.5	7.9	28.0	82	06 01 002C 01X5	2 x 1.5	7.3	23.4	70
06 01 008C 00X5	8 x 0.5	8.8	32.0	100	06 01 003C 01X5	3 x 1.5	7.8	35.1	86
06 01 010C 00X5	10 x 0.5	10.2	40.0	131	06 01 004C 01X5	4 x 1.5	8.5	46.8	108
06 01 012C 00X5	12 x 0.5	10.5	47.9	144	06 01 005C 01X5	5 x 1.5	9.3	58.5	131
06 01 016C 00X5	16 x 0.5	11.7	63.9	182	06 01 006C 01X5	6 x 1.5	10.2	70.2	156
06 01 018C 00X5	18 x 0.5	12.3	71.9	203	06 01 007C 01X5	7 x 1.5	10.5	81.9	173
06 01 025C 00X5	25 x 0.5	14.7	99.9	287	06 01 008C 01X5	8 x 1.5	11.6	93.6	207
					06 01 010C 01X5	10 x 1.5	13.2	117.0	263
06 01 002C 0X75	2 x 0.75	6.2	12.0	46	06 01 012C 01X5	12 x 1.5	13.9	140.5	300
06 01 003C 0X75	3 x 0.75	6.6	18.0	56	06 01 014C 01X5	14 x 1.5	14.6	163.9	339
06 01 004C 0X75	4 x 0.75	7.2	24.0	69					
06 01 005C 0X75	5 x 0.75	7.9	30.0	84	06 01 002C 02X5	2 x 2.5	8.6	39.0	102
06 01 006C 0X75	6 x 0.75	8.6	36.0	100	06 01 003C 02X5	3 x 2.5	9.2	58.5	129
06 01 007C 0X75	7 x 0.75	8.9	42.0	110	06 01 004C 02X5	4 x 2.5	10.1	78.0	162
06 01 008C 0X75	8 x 0.75	9.9	47.9	132	06 01 005C 02X5	5 x 2.5	11.1	97.5	198
06 01 010C 0X75	10 x 0.75	11.4	59.9	172	06 01 006C 02X5	6 x 2.5	12.1	117.0	237
06 01 012C 0X75	12 x 0.75	11.8	71.9	191	06 01 007C 02X5	7 x 2.5	12.5	136.6	263
06 01 016C 0X75	16 x 0.75	13.1	95.9	242	06 01 008C 02X5	8 x 2.5	13.9	156.1	314
06 01 018C 0X75	18 x 0.75	13.8	107.9	270					
					06 01 002C 0004	2 x 4	10.4	62.0	154
06 01 002C 0001	2 x 1	6.4	16.0	52	06 01 003C 0004	3 x 4	11.1	93.1	194
06 01 003C 0001	3 x 1	6.8	24.0	64	06 01 004C 0004	4 x 4	12.6	124.1	254
06 01 004C 0001	4 x 1	7.5	32.0	79	06 01 005C 0004	5 x 4	13.7	155.1	310
06 01 005C 0001	5 x 1	8.2	40.0	96					
06 01 006C 0001	6 x 1	8.9	47.9	115	06 01 002C 0006	2 x 6	12.8	93.1	232.6
06 01 007C 0001	7 x 1	9.2	55.9	127	06 01 003C 0006	3 x 6	13.6	139.6	293.4
06 01 008C 0001	8 x 1	10.2	63.9	152	06 01 004C 0006	4 x 6	15.0	186.1	369.7

Note:- Dimensions and specifications may be changed without prior notice.

X= without green-yellow earth core (OB)

SiHF- GLS



Technical data

- Special silicone multicore cable with higher heat-resistance range adapted to DIN VDE 0250 part 1 and part 816
- **Temperature range:** -50°C to +180°C (up to + 220°C for short time)
- **Temperature:** limit at the conductor in operation +180°C
- **Nominal voltage:** U₀ /U 300/500 V
- **Test voltage:** 2000 V
- **Insulation resistance:** min. 200 MΩ x km
- **Minimum bending radius:** flexing 10 x cable Ø, Fixed installation 5 x cable Ø

Cable construction

- Tinned copper conductor to cl. 5, EN 60228 cl. 5
- Silicone core insulation
- Core identification to DIN VDE 0293-308 colour coded or black cores with continuous white numbers
- For 2-cores brown, blue
For 3 -cores and above cable provided without protective conductor
- For 6-cores and above all black cores with number coding
- Cores stranded in layers with optimal lay-length
- Outer jacket of silicone
- Jacket colour preferably redbrown
- Glass fibre tape over the jacket
- Galvanized steel wire outer braiding

Properties

- **Advantages**
Hardly changes of dielectric strength and the insulation resistance also at high temperatures, high ignition or flash point, in case of fire, forms an insulating layer of SiO₂
- **Resistant to**
High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clopenes, diluted acids, dyes and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen and UV
- **Halogen-free**
according to IEC 60754-2
- **Behaviour in fire**
Flame propagation test according to IEC 60332-1-2

Application

Suitable for higher temperatures upto 180 Deg. C. Heat Resistant, suitable for Short time operation upto 220 Deg. C. Halogen Free, The use is in Steel, Glass, Aviation, Ship Building, Cement, Ceramic Industries. The steel Braid offers mechanical protection.

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Weight ca. kg/km	PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 02 002C 0X75	2 x 0.75	7.6	13.0	94	06 02 007C 01X5	7 x 1.5	11.9	89.1	229
06 02 003C 0X75	3 x 0.75	8.0	19.6	102	06 02 012C 01X5	12 x 1.5	15.3	152.8	355
06 02 004C 0X75	4 x 0.75	8.6	26.1	121					
06 02 005C 0X75	5 x 0.75	9.3	32.6	134	06 02 002C 02X5	2 x 2.5	10.0	42.4	167
06 02 007C 0X75	7 x 0.75	10.3	45.6	159	06 02 003C 02X5	3 x 2.5	10.6	63.7	191
					06 02 004C 02X5	4 x 2.5	11.5	84.9	224
06 02 002C 0001	2 x 1	7.8	17.4	103	06 02 005C 02X5	5 x 2.5	12.5	106.1	260
06 02 003C 0001	3 x 1	8.2	26.1	112	06 02 007C 02X5	7 x 2.5	13.9	148.5	321
06 02 004C 0001	4 x 1	8.9	34.8	131					
06 02 005C 0001	5 x 1	9.6	43.5	148	06 02 002C 0004	2 x 4	11.8	67.5	234
06 02 007C 0001	7 x 1	10.6	60.8	180	06 02 003C 0004	3 x 4	12.5	101.2	269
					06 02 004C 0004	4 x 4	14.0	135.0	329
06 02 002C 01X5	2 x 1.5	8.7	25.5	124	06 02 005C 0004	5 x 4	15.1	168.7	385
06 02 003C 01X5	3 x 1.5	9.2	38.2	142					
06 02 004C 01X5	4 x 1.5	9.9	50.9	162	06 02 002C 0006	2 x 6	14.2	101.2	324
06 02 005C 01X5	5 x 1.5	10.7	63.7	189	06 02 003C 0006	3 x 6	15.0	151.8	376

Note:- Dimensions and specifications may be changed without prior notice.

* X= without green-yellow earth core (OB).

SiF-GL, SiD, SiD-GL



Technical data

- Special silicone single core cable with higher heat-resistance range
- **Temperature range:**
-50°C to +180°C
(up to + 200°C for short time with adequate ventilation)
- **Nominal voltage:** U₀ /U 300/500V
- **Test voltage:** 2000 V
- **Minimum bending radius:**
Fixed installation: 6 x cable ø
One bend at end of core: 3 x cable ø
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts. Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

Cable construction

- Tinned copper conductor to EN 60228 cl. 5
- Silicone core insulation
- Glass-fibre braiding

Type SiD

- Solid tinned copper conductor with silicone insulated

Type SiD-GL

- as SiD but with an additional
- Glass-fibre braiding

Properties

- **Advantages**
High ignition or flash point
- **Resistant to**
High molecular oils, fats from vegetables and animals, alcohols, plasticizers and diluted acids, dyes and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen and UV
- **Halogen-free**
according to IEC 60754-2
- **Behaviour in fire**
Flame propagation test according to IEC 60332-1-2

Application

Suitable for higher temperatures upto 180 Deg. C. as well as low temperature areas, Heat Resistant, suitable for Short time operation upto 220 Deg. C. Halogen Free, The use is in Steel, Glass, Aviation, Ship Building, Cement, Ceramic Industries.

SiF-GL -cables are used in high, as well as extremely low temperature areas.

Halogen Free, The use is in Steel, Glass, Aviation, Ship Building, Cement, Ceramic Industries.

SiD/SiD-GL is used in control cabinet manufacturing, Electric motor industry, Lighting technology, heating equipment, air conditioning systems

CE = The product conforms to EC Low-Voltage Directive 2006/95/EC

Dimensions

SiF-GL

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 05 001C 0X25	0.25	2.4	2.4	6
06 05 001C 00X5	0.5	2.6	4.5	9
06 05 001C 0X75	0.75	2.9	6.7	12
06 05 001C 0001	1.0	3.0	9.0	14
06 05 001C 01X5	1.5	3.3	12.9	20
06 05 001C 02X5	2.5	3.9	21.5	31
06 05 001C 0004	4.0	4.7	34.1	48
06 05 001C 0006	6.0	5.7	51.2	73
06 05 001C 0010	10.0	7.5	87.1	126
06 05 001C 0016	16.0	8.9	145.1	199
06 05 001C 0025	25.0	10.8	225.8	305
06 05 001C 0035	35.0	12.1	317.9	415
06 05 001C 0050	50.0	14.1	456.2	587

SiD

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 06 001C 00X2	0.2	1.7	2.0	4.4
06 06 001C 0X28	0.28	1.8	2.8	5.4
06 06 001C 00X5	0.5	2.0	5.0	8.1
06 06 001C 0X75	0.75	2.1	7.4	10.6
06 06 001C 0001	1.0	2.3	9.9	13.6
06 06 001C 01X5	1.5	2.5	14.9	18.9
06 06 001C 02X5	2.5	3.2	24.8	31.3
06 06 001C 0004	4.0	3.9	39.6	49.0
06 06 001C 0006	6.0	4.4	59.4	70.3

SiD-GL

PART NUMBER	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
06 07 001C 00X5	0.5	2.5	2.0	6
06 07 001C 0X75	0.75	2.7	2.8	7
06 07 001C 0001	1.0	2.8	5.0	10
06 07 001C 01X5	1.5	3.1	7.4	14
06 07 001C 02X5	2.5	3.7	9.9	19
06 07 001C 0004	4.0	4.4	14.9	28
06 07 001C 0006	6.0	4.9	24.8	41

Note:- Dimensions and specifications may be changed without prior notice.

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

CHAPTER-VII

SOLAR CABLES





Solar Cable

Technical Data

RR KABEL Solar cables are intended for use in photovoltaic power supply systems and similar applications as free free hanging, movable, fixed installation and buried in ground in constructional covered systems. The cables can be used indoor, outdoor, in hazard explosion areas, in industry and agriculture. They are suitable for applications in equipment with protective insulation (protecting class II).

- **Conformity**
Requirements for cables for PV systems, 2 Pfg 1169/08.2007
- **Tests**
According to 2 Pfg 1169/08.2007
- **Thermal parameters**
- **Max. permissible ambient temperature**
+90°C (stationary and in motion)
- **Max. permissible operating temperature of the conductor**
+120°C; Interpretation according to IEC 60216: permanent temperature 120°C for 20.000 h (= 2.3 years), at max. 90°C permanent temperature (= 30 years)
- **Short-circuit temperature**
+200°C (at the conductor max. 5 sec.)
- **Damp-Heat Test**
According to EN 60068-2-78
1.000h at 90°C and 85% humidity
- **Min. permissible ambient temperature**
-40°C (stationary and in motion)
- **Resistance to cold**
Bending test at low temperature according to DIN EN 60811-1-4, Impact test similar to DIN EN 50305
- **Minimum Bending Radius**
Fixed Installation approx. 4 x cableØ
- **Rated Voltage**
AC 0.6/1.0 kV
- **Max. PV-System Voltage**
DC up to 2.0 kV possible
- **Max. permissible operating voltage in AC systems**
0.7/1.2 kV
- **Max. permissible operating voltage in DC systems**
0.9/1.8 kV
- **Test Voltage**
AC 6 kV / DC 10 kV (15 min.)
- **Mechanical parameters**
- **Tensile load**
15 N/mm² in operation
50 N/mm² during installation
- **Shrinkage test**
According to EN 60811-1-3
- **Shore-hardness**
85 according to DIN EN 53505
- **Pressure test at high temperature**
According to EN 60811-3-1
- **Dynamic penetration test**
According to Requirements for cables for PV systems, DKE/VDE 411.2.3

Chemical Parameters

Mineral oil resistance

24h, 100°C according to DIN VDE 0473-811-2-1, DIN EN 60811-2-1

Acid and alkaline resistance

According to EN 60811-2-1

7 days, 23°C (N-Oxalic acid, N-Sodium hydroxide)

Ammonia resistance

30 days in saturated ammonia atmosphere (internal testing)

Behaviour in case of fire

Flame propataion

Single cable according to DIN VDE 0482 Part 332-1-2, DIN EN 60332-1-2

Multiple cable according to DIN VDE 0482 Part 266-2-5, DIN EN 50305-9

Low smoke emission according to DIN VDE 0482 Part 268-2,

DIN EN 50268-2 (light transmittance > 70%)

Corrosivity according to DIN EN 50267-2-2

Toxicity according to DIN EN 50305

Weather resistance

Ozone resistance according to DIN EN 50396 test type B, HD 22.2 test type B UV-resistance according to UL 1581 (Xeno-Test), ISO 4892-2 (Method A) and HD 506/A1-2.4.20 Absorption of water (gravimetric) according to DIN VDE 0473-811-1-3, DIN EN 60811-1-3

PART NUMBER	Nominal cross-section	Conductor diameter [mm]	Overall diameter of cable, (nom.)[mm]	Approx. net weight [kg/km]	Current carying capacity at 60°C ambient temp. (free in air) [A]	Conductor resistance at 20°C, ©/Km
07 01 001C 01X5	1.5	1.5	4.5	33	30	13.7
07 01 001C 02X5	2.5	1.9	5.2	47	41	8.21
07 01 001C 0004	4	2.4	5.9	64	55	5.09
07 01 001C 0006	6	3.0	6.9	91	70	3.39
07 01 001C 0010	10	3.9	8.3	141	98	1.95
07 01 001C 0016	16	5.0	10.0	217	132	1.24
07 01 001C 0025	25	6.2	11.0	298	176	0.795
07 01 001C 0035	35	7.4	13.0	418	218	0.565
07 01 001C 0050	50	8.8	15.3	590	276	0.393
07 01 001C 0070	70	10.5	17.0	786	347	0.277
07 01 001C 0095	95	12.1	19.1	1024	416	0.210
07 01 001C 0120	120	13.7	22.7	1358	488	0.164
07 01 001C 0150	150	15.2	25.5	1692	566	0.132
07 01 001C 0185	185	16.9	28.3	2093	644	0.108
07 01 001C 0240	240	19.2	30.0	2545	775	0.0817

CHAPTER-VIII

AUTO CABLES



FLY

- **Technical Data:**
- **Construction/ Materials Conductor:** soft annealed electrolytic copper Cu-ETP according to DIN EN 13602, bare. Conductor construction according to ISO 6722
- **Insulation:** Plasticized PVC with properties according to ISO 6722, class B, lead free
- **Standards and specifications:** ISO 6722
- **Temperature range:** -40° C to +105° C

Special properties:
Conductors with cross-sections > 6 mm² area also suitable as battery cables

Conductor construction						Insulation	Cable	
PART NUMBER	Nominal cross-section	No. of strands	Diameter of single wire	Diameter of conductor	DC Conductor resistance at 20p C	Wall thickness	Overall diameter	
	mm ²		Max. mm	Nom. mm	Ω /km, Max.	mm., Nom.	Min.	max.
08 01 001C 00X5	0.5	16	0.21	1.0	37.1	0.6	2.0	2.3
08 01 001C 0X75	0.75	24	0.21	1.2	24.7	0.6	2.2	2.5
08 01 001C 0001	1	32	0.21	1.35	18.5	0.6	2.4	2.7
08 01 001C 01X5	1.5	30	0.26	1.7	12.7	0.6	2.7	3.0
08 01 001C 0002	2	40	0.26	2.0	9.42	0.6	2.9	3.3
08 01 001C 02X5	2.5	50	0.26	2.2	7.6	0.7	3.3	3.6
08 01 001C 0003	3	60	0.26	2.4	6.15	0.7	3.5	3.9
08 01 001C 0004	4	56	0.31	2.75	4.71	0.8	4.0	4.4
08 01 001C 0006	6	84	0.31	3.3	3.14	0.8	4.6	5.0
08 01 001C 0010	10	80	0.41	4.5	1.82	1.0	6.0	6.5
08 01 001C 0016	16	126	0.41	6.3	1.16	1.0	7.0	8.3
08 01 001C 0025	25	196	0.41	7.8	0.743	1.3	8.7	10.2
08 01 001C 0035	35	276	0.41	9.0	0.527	1.3	10.0	10.7
08 01 001C 0050	50	400	0.41	10.5	0.368	1.5	11.9	13.0
08 01 001C 0070	70	560	0.41	12.5	0.259	1.5	14.0	15.0
08 01 001C 0095	95	740	0.41	14.8	0.196	1.6	15.4	16.2
08 01 001C 0120	120	960	0.41	16.5	0.153	1.6	18.7	19.7

Note : Packing available in 100 mtr., longer length in spools or wooden drums.
The data mentioned can be changed without prior information.

FLYY

Technical Data:

- **Construction/ Materials Conductor:** soft annealed electrolytic copper Cu-ETP according to DIN EN 13602, bare.
Conductor construction according to ISO 6722
- **Insulation:** Plasticized PVC with properties according to ISO 6722, class B, lead free
- **Standards and specifications:** ISO 6722
- **Temperature range:** -40° C to +105° C

All cross-sections can also be supplied with reduced insulation thickness (FLRY)

PART NUMBER	Nominal cross-section	No. of strands	Diameter of single wire	Diameter of conductor	DC Conductor resistance at 20p C	Wall thickness	Diameter of core	Sheath wall thickness	Overall diameter	
	mm ²		Max. mm	Nom. mm	Ω /km, Max.	mm., Nom.	mm., Nom.	mm., Nom.	Min.	max.
08 02 001C 00X5	0.5	16	0.21	1.0	37.1	0.6	2.1	0.4	2.7	3.1
08 02 001C 0X75	0.75	24	0.21	1.2	24.7	0.6	2.3	0.4	3	3.3
08 02 001C 0001	1	32	0.21	1.35	18.5	0.6	2.5	0.4	3.2	3.6
08 02 001C 01X5	1.5	30	0.26	1.7	12.7	0.6	2.8	0.5	3.7	4.1
08 02 001C 0002	2	40	0.26	2.0	9.42	0.6	3.0	0.5	3.9	4.3
08 02 001C 02X5	2.5	50	0.26	2.2	7.6	0.7	3.5	0.5	4.3	4.8

Note : Packing available in 100 mtr., longer length in spools or wooden drums.
The data mentioned can be changed without prior information.

FLRY - A

Technical Data:

- **Construction/ Materials Conductor:** soft annealed electrolytic copper Cu-ETP according to DIN EN 13602, bare. Conductor construction according to ISO 6722(Concentric Construction)
- **Insulation:** Plasticized PVC with properties according to ISO 6722, class B, lead free
- **Standards and specifications:** DIN VDE 72 551 Part 5 & 6 ISO 6722
- **Temperature range:** -40° C to +105° C

Special properties:

Concentric conductor (type A) and thin wall insulation

PART NUMBER	Nominal cross-section	No. of strands	Diameter of single wire	Diameter of conductor	DC Conductor resistance at 20° C, Ω /km, Max.		Wall thickness	Overall diameter
	mm ²		Max. mm	Nom. mm	bare/tinned min.	bare/tinned max.	mm. Nom.	Nom.
08 03 001C 0X22	0.22	7	0.21	0.7	77.9/-	84.8/86.5	0.2	1.2
08 03 001C 0X35	0.35	7	0.26	0.8	47.8/-	52.0/54.5	0.2	1.3
08 03 001C 00X5	0.5	19	0.19	1.0	34.1/-	37.1/38.2	0.22	1.6
08 03 001C 0X75	0.75	19	0.23	1.2	22.7/-	24.7/25.4	0.24	1.9
08 03 001C 0001	1	19	0.26	1.35	17.0/-	18.5/19.1	0.24	2.1
08 03 001C 01X5	1.5	19	0.32	1.7	11.7/-	12.7/13.0	0.24	2.4
08 03 001C 0002	2	19	0.37	2.0	8.66/-	9.42/9.69	0.28	2.8
08 03 001C 02X5	2.5	19	0.41	2.2	7.0/-	7.60/7.80	0.28	3

Note : Packing available in 100 mtr., longer length in spools or wooden drums.
The data mentioned can be changed without prior information.

FLRY - B

Technical Data:

- **Construction/ Materials Conductor:** soft annealed electrolytic copper Cu-ETP according to DIN EN 13602, bare.
- Conductor construction according to ISO 6722
- **Insulation:** Plasticized PVC with properties according to ISO 6722, class B, lead free
- **Standards and specifications:** DIN VDE 72 551 Part 5 & 6 ISO 6722
- **Temperature range:** -40° C to +105° C

PART NUMBER	Nominal cross-section	No. of strands	Diameter of single wire	Diameter of conductor	DC Conductor resistance at 20° C, Ω /km, Max.		Wall thickness	Overall diameter
	mm ²		Max. mm	Nom. mm	bare/tinned	bare/tinned		
					min.	max.	mm. Nom.	Nom.
08 04 001C0X35	0.35	12	0.21	0.9	47.8/-	52.0/54.5	0.2	1.4
08 04 001C00X5	0.5	16	0.21	1.0	34.1/-	37.1/38.2	0.22	1.6
08 04 001C0X75	0.75	24	0.21	1.2	22.7/-	24.7/25.4	0.24	1.9
08 04 001C0001	1	32	0.21	1.35	17.0/-	18.5/19.1	0.24	2.1
08 04 001C01X5	1.5	30	0.26	1.7	11.7/-	12.7/13.0	0.24	2.4
08 04 001C0002	2	30	0.31	2.0	8.6/-	9.42/9.69	0.28	2.8
08 04 001C02X5	2.5	50	0.26	2.2	7.0/-	7.60/7.80	0.28	3
08 04 001C0003	3	45	0.31	2.4	5.8/-	6.15/6.36	0.28	3.2
08 04 001C0004	4	56	0.31	2.75	4.32/-	4.7/4.8	0.32	3.7
08 04 001C0006	6	84	0.31	3.3	2.85/-	3.1/3.2	0.32	4.3
08 04 001C0010	10	80	0.41	4.5	-/-	1.82/1.85	0.48	6
08 04 001C0016	16	126	0.41	6.3	-/-	1.16/1.18	0.52	7.9
08 04 001C0025	25	196	0.41	7.8	-/-	0.743/0.757	0.52	9.4

Note : Packing available in 100 mtr., longer length in spools or wooden drums.
The data mentioned can be changed without prior information.

CHAPTER-IX

INTERNATIONAL APPROVED CABLES



UL 1007

Technical data

- PVC-insulated jumper wire to UL-Style and CSA-AWM
- Temperature range:**
flexible -5°C to +80°C
fixed installation -20°C to +80°C
CSA-AWM I A/B
- Nominal voltage:** 300V
- Test voltage:** 2000V
- Test voltage: (spark test)**
AWG 26-20: 4 kV
AWG 10-18: 5 kV
- Bending radius:**
Fixed Application : 5 cableø
Flexing : 10 cable ø

Cable construction

- Stranded copper conductor, tinned to UL-Std. 758 , CSA C 22.2 No.210-07
- PVC-core insulation according to UL-Standard 1581, Class 43 Table 50.182, heat and damp resistant

Properties:

- Conditionally resistant to**
Oils
Solvents
Acids
Dyes
- PVC self-extinguishing and flame retardant, test method to UL VW-1/CSA FT 1

Application

For the internal wiring of switchboards, electrical and electronics equipment, e. g. households, televisions, monitors and control desks.

CE = The product conforms with the EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	AWG-No.	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
09 01 001C 0026	26	1 x 0.14	1.3	1.4	3.0
09 01 001C 0024	24	1 x 0.21	1.5	2.1	4.3
09 01 001C 0022	22	1 x 0.33	1.6	3.5	5.8
09 01 001C 0020	20	1 x 0.52	1.9	5.2	8.0
09 01 001C 0018	18	1 x 0.82	2.2	8.3	12.0
09 01 001C 0016	16	1 x 1.32	2.5	13.5	18.4

NOTE:- Dimensions and specifications may be changed without prior notice.

AWM = Appliance Wiring Material

For internal wiring for electrical equipment and control apparatus e. g. electronic assembly components.

UL = Underwriters Laboratories Inc. (USA)

CSA = Canadian Standards Association (Canada)

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

UL 1569

Technical data:

- PVC-insulated jumper wire to UL-Style and CSA-AWM
- **Temperature range:**
flexible -5°C to +105°C
fixed installation -20°C to + 105°C
CSA-AWM I A/B
- **Nominal voltage:** 300V
- **Test voltage** 2000V
- **Test voltage: (spark test)**
AWG 26-20: 4 kV
AWG 10-18: 5 kV
- **Bending radius:**
Fixed Application : 5 cable ø
Flexing : 10 cable ø

Cable construction:

- Stranded copper conductor, plain or tinned to UL-Std. 758 and CSA C 22.2 No.210-07
- PVC-core insulation according to UL Standard 1581, Class 43 Tab. 50.182, heat and damp resistant

Properties:

- **Conditionally resistant to**
Oils
Solvents
Acids
Dyes
- PVC self-extinguishing and flame retardant, test method to UL VW-1/CSA FT 1

Application

For the internal wiring of switchboards, electrical and electronics equipment, e. g. households, televisions, monitors and control desks.

CE = The product conforms with the EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	AWG-No.	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
09 02 001C 0026	26	1 x 0.14	1.3	1.4	3.0
09 02 001C 0024	24	1 x 0.21	1.5	2.1	4.3
09 02 001C 0022	22	1 x 0.33	1.6	3.5	5.8
09 02 001C 0020	20	1 x 0.52	1.8	5.2	8.0
09 02 001C 0018	18	1 x 0.82	2.1	8.3	12.0
09 02 001C 0016	16	1 x 1.32	2.5	13.5	18.4
09 02 001C 0014	14	1 x 2.08	3.0	20.4	27.3
09 02 001C 0012	12	1 x 3.31	3.5	32.5	41.3
09 02 001C 0010	10	1 x 5.26	4.1	51.7	62.8

Note:- Dimensions and specifications may be changed without prior notice.

AWM = Appliance Wiring Material

For internal wiring for electrical equipment and control apparatus e. g. electronic assembly components.

UL = Underwriters Laboratories Inc. (USA)

CSA = Canadian Standards Association (Canada)

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

UL 1015

Technical data:

- PVC-insulated flexible cables for Internal Wiring of Appliances
- Temperature range:**
flexing -5°C to +105°C
fixed installation -20°C to +105°C
- Temperature at conductor:**
max. UL and CSA: +105°C
- Nominal voltage:** 600V
- Test voltage: (spark test)**
AWG 24: 4 kV
AWG 22 and 20: 5kV
AWG 18 to 16: 6kV
≥ AWG 8: 7.5kV
- UL-type AWM 105°C 600 V
- CSA-type AWM 105°C 600 V
- Bending radius:**
Fixed Application : 5 cable ø
Flexible Application : 10 x cable ø

Cable construction:

- Stranded copper conductor, plain or tinned to UL-Std. 758, CSA C 22.2 No.210-07
- PVC-core insulation according to UL-Standard 1581, Class 43 and CSA-C22.2 No. 210 UL VW-1 and CSA FT-1, heat and damp resistant

Properties:

- Conditionally resistant to**
Oils
Solvents
Acids
Dyes
- PVC self-extinguishing and flame retardant, test method to UL VW-1 and CSA FT-1

Application

For the internal wiring of panels, electrical equipment. Connection wire in machines laid in protective tubes and flexible pipes and also for motors and transformers.

CE = The product conforms with the EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	AWG-No.	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
0903001C0024	24	1x0.21	2.2	2.1	7
0903001C0022	22	1x0.33	2.4	3.5	9
0903001C0020	20	1x0.52	2.5	5.2	11
0903001C0018	18	1x0.82	2.8	8.3	16
0903001C0016	16	1x1.32	3.1	13.5	22
0903001C0014	14	1x2.08	3.5	20.4	31
0903001C0012	12	1x3.31	4.0	32.5	45
0903001C0010	10	1x5.26	4.6	51.7	68
0903001C0008	8	1x8.35	6.2	82.5	113
0903001C0006	6	1x13.3	8.0	132.1	184
0903001C0004	4	1x21.14	9.4	207.3	275
0903001C0003	3	1x26.65	10.2	262.0	339
0903001C0002	2	1x33.61	11.0	330.3	416
0903001C0001	1	1x42.38	13.0	416.9	543
0903001C1000	1/0	1x53.47	13.8	524.6	659
0903001C2000	2/0	1x67.4	15.2	661.0	820
0903001C3000	3/0	1x85.0	16.5	832.3	1013
0903001C4000	4/0	1x107.2	18.0	1050.9	1257
0903001C0250	250 kcmil	1x127	20.0	1245.0	1507
0903001C0300	300 kcmil	1x152	21.4	1489.8	1780
0903001C0350	350 kcmil	1x178	22.6	1734.6	2048
0903001C0400	400 kcmil	1x203	24.0	1989.9	2338
0903001C0500	500 kcmil	1x254	26.0	2479.5	2868

Note:- Dimensions and specifications may be changed without prior notice.

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

UL 1275

Technical data:

- PVC-insulated heavy wall lead wire, for use as hook-up wire and for refrigeration wiring
- **Temperature range:**
Suitable for use at -20°C to 105°C in air
- **Nominal voltage:** 600V
- **Test voltage:** 2000V
- **Bending radius:**
Fixed application 5 cable ø

Cable construction:

- Stranded copper conductor, tinned to UL-Std. 758, CSA C 22.2 No.210-07
- PVC-core insulation Recognized Component QMTT2 heat and damp resistant

Properties:

- Conditionally resistant to Oils
- PVC self-extinguishing and flame retardant, test method to UL VW-1/CSA FT 1

Application

For the internal wiring on refrigeration equipments

CE = The product conforms with the EC Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	AWG-No.	No. cores x cross-sec. mm ²	Nominal Cable Diameter mm	Cop. Weight kg/km	Approx. Cable Weight kg/km
09 04 001C 0018	18	1 x 0.82	4.3	8.3	27.4
09 04 001C 0016	16	1 x 1.32	4.6	13.5	35.1
09 04 001C 0014	14	1 x 2.08	5.0	20.4	44.9
09 04 001C 0012	12	1 x 3.31	5.5	32.5	60.6
09 04 001C 0010	10	1 x 5.26	6.1	51.7	84.5

Note:- Dimensions and specifications may be changed without prior notice.

AWM = Appliance Wiring Material

For internal wiring for electrical equipment and control apparatus e. g. electronic assembly components.

UL = Underwriters Laboratories Inc. (USA)

CSA = Canadian Standards Association (Canada)

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

Command Cable UL style 2464/300V, (80°C)

Technical data:

- Special PVC command cable, approved to UL-Style 2464, cores according to AWG 24-16 to UL-Style 1007/1569
- **Temperature range:**
flexible -10°C to +80°C
fixed installation -20°C to +80°C
- **Nominal voltage:** 300V
- **Test voltage:** 1500 V
- **Breakdown voltage:**
min. 3000 V
- **Minimum Bending radius:**
flexing approx. 15x cable ø

Cable structure:

- Annealed Plain copper, fine wire conductors
AWG 24-16, Table 30.3 UL 1581 ASTM-B
Conductor make-up to
0.22 mm² = 8x0.187mm
0.44 mm² = 16x0.187 mm
0.66 mm² = 24x0.187 mm
0.88 mm² = 32x0.187 mm
1.30 mm² = 30x0.235 mm
- Special PVC core insulation class 43, semirigid to UL-Std. 1581 table 50.182 and 50.183
- Colour coded to H05VV-F up to 5 cores
coloured black with numbers for above 5 cores
- Cores stranded in layers with optimal lay-length
- Special PVC outer jacket class 43 to UL-Std. 1581 table 50.182
- Outer jacket colour
Black RAL 9005
Grey RAL 7001

Properties:

- PVC flame retardant according to UL VW-1/CSA FT-1
- PVC self-extinguishing and flame retardant test method to UL VW-1/CSA FT1
- (RoHS compliant)

Application

Suitable for use as a command, measuring and control cable in tool making machinery conveyor system and production lines, in industrial plants and in air conditioning as well as in the steel producing industries.

CE = The product conforms to EC for Low-Voltage Directive 2006/95/EC

PART NUMBER	No.cores	AWG-no.	Nominal Cable Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 05 002C0024	2	24	5.1	4.0	32.9
09 05 003C0024	3	24	5.3	5.9	36.9
09 05 004C0024	4	24	5.7	7.9	43.5
09 05 006C0024	6	24	6.5	11.9	58.1
09 05 010C0024	10	24	7.9	19.8	87.8
09 05 012C0024	12	24	8.1	23.7	95.2
09 05 016C0024	16	24	8.9	31.6	116.5
09 05 018C0024	18	24	9.3	35.6	128.6
09 05 024C0024	24	24	10.7	47.4	170.6
09 05 002C0022	2	22	5.7	7.9	43.6
09 05 003C0022	3	22	5.9	11.9	50.1
09 05 004C0022	4	22	6.4	15.8	60.1
09 05 006C0022	6	22	7.4	23.7	82.3
09 05 010C0022	10	22	9.1	39.5	127.7
09 05 012C0022	12	22	9.4	47.4	140.0
09 05 016C0022	16	22	10.3	63.2	173.9
09 05 018C0022	18	22	10.8	71.1	192.9
09 05 024C0022	24	22	12.5	94.8	258.1
09 05 002C0020	2	20	6.1	11.9	52.3
09 05 003C0020	3	20	6.3	17.8	61.1
09 05 004C0020	4	20	6.9	23.7	74.1

PART NUMBER	No.cores	AWG-no.	Nominal Cable Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 05 006C0020	6	20	8.0	35.6	102.8
09 05 010C0020	10	20	9.9	59.3	161.6
09 05 012C0020	12	20	10.2	71.1	178.5
09 05 016C0020	16	20	11.2	94.8	223.6
09 05 018C0020	18	20	11.8	106.7	248.5
09 05 024C0020	24	20	13.7	142.3	333.8
09 05 002C0018	2	18	6.7	15.8	64.4
09 05 003C0018	3	18	7.0	23.7	75.9
09 05 004C0018	4	18	7.6	31.6	92.8
09 05 006C0018	6	18	8.9	47.4	130.2
09 05 010C0018	10	18	11.1	79.0	207.0
09 05 012C0018	12	18	11.4	94.8	229.4
09 05 016C0018	16	18	12.6	126.5	288.6
09 05 018C0018	18	18	13.3	142.3	321.5
09 05 024C0018	24	18	15.5	189.7	433.8
09 05 002C0016	2	16	7.3	23.4	80.4
09 05 003C0016	3	16	7.6	35.1	96.2
09 05 004C0016	4	16	8.3	46.8	118.8
09 05 006C0016	6	16	9.8	70.2	168.5
09 05 010C0016	10	16	12.3	117.0	271.0
09 05 012C0016	12	16	12.7	140.4	302.0
09 05 016C0016	16	16	14.0	187.2	382.6
09 05 018C0016	18	16	14.8	210.6	427.0
09 05 024C0016	24	16	17.3	280.8	577.7

Note: Dimensions and specifications may be changed without prior notice

UL 2587 cable, UL-approved 90°C 600 V

Technical data:

- Control cable of special-PVC to ULAWM Style 2587 cores according to UL 1015
- Temperature range:**
flexing -5°C to +90°C
fixed installation -20°C to +90°C
- Nominal voltage:**
according to UL 600 V
- Test voltage:** 3000 V
- Insulation resistance:**
min 20 M Ω x km
- Minimum Bending radius:**
for permanent approx, 7.5x cable $\varnothing$

Cable structure

- Bare copper, fine wire conductors 0.5-35 mm² (as per AWG-cross sections)
- Special PVC core insulation class 43 to UL Standard 1581
color codes as per H05VV-F upto 5 cores
- Black conductors with consecutive numbering in white for above 5 cores
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Special PVC outer sheath class 43 to UL Standard 1581
colour grey (RAL 7001)
- PVC self-extinguishing and flame retardant, test method VW-1, FT-1

Application:

Suitable for installation in dry, moist or wet environment. Used in machine tools, control systems, connection between control panels and machines, assembly lines and other industrial equipment. and moderate flexing applications. Resistant to mineral oils, synthetic oils and water based coolants. Aids easy stripping of sheath due to use of adequate Talc

CE= The product conforms to EC for Low-Voltage Directive 2006/95/EC

PART NUMBER	No.cores	AWG-no.	Nominal Cable Diameter mm	Cop. Weight kg / km	Weight ca. kg / km
09 06 002C 0022	2	22	6.4	7.9	53.0
09 06 003C 0022	3	22	7.1	11.9	68.5
09 06 004C 0022	4	22	8.5	15.8	96.9
09 06 006C 0022	6	22	11.0	23.7	157.9
09 06 010C 0022	10	22	11.7	39.5	190.7
09 06 012C 0022	12	22	12.1	47.4	208.4
09 06 016C 0022	16	22	13.5	63.2	262.2
09 06 018C 0022	18	22	15.3	71.1	327.8
09 06 024C 0022	24	22	17.8	94.8	444.5
09 06 002C 0020	2	20	6.8	11.9	62.4
09 06 003C 0020	3	20	7.1	17.8	73.5
09 06 004C 0020	4	20	8.2	23.7	96.5
09 06 006C 0020	6	20	9.8	35.6	139.3
09 06 010C 0020	10	20	12.5	59.3	229.5
09 06 012C 0020	12	20	13.0	71.1	252.2
09 06 016C 0020	16	20	15.5	94.8	353.8
09 06 018C 0020	18	20	16.3	106.7	393.8
09 06 024C 0020	24	20	19.0	142.3	535.0
09 06 002C 0018	2	18	7.1	15.8	70.4
09 06 003C 0018	3	18	7.5	23.7	83.8
09 06 004C 0018	4	18	8.5	31.6	110.1
09 06 006C 0018	6	18	10.2	47.4	159.5
09 06 010C 0018	10	18	13.1	79.0	263.7
09 06 012C 0018	12	18	13.6	94.8	291.1
09 06 016C 0018	16	18	16.2	126.5	405.8
09 06 018C 0018	18	18	17.0	142.3	452.2
09 06 024C 0018	24	18	19.9	189.7	615.0
09 06 002C 0016	2	16	7.6	23.4	85.2
09 06 003C 0016	3	16	8.3	35.1	107.7
09 06 004C 0016	4	16	9.1	46.8	135.1
09 06 006C 0016	6	16	11.0	70.2	196.8

PART NUMBER	No.cores	AWG-no.	Nominal Cable Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 06 010C 0016	10	16	14.1	117.0	326.7
09 06 012C 0016	12	16	15.6	140.4	398.3
09 06 016C 0016	16	16	17.3	187.2	501.9
09 06 018C 0016	18	16	18.3	210.6	560.2
09 06 024C 0016	24	16	21.4	280.8	762.5
09 06 002C 0014	2	14	8.7	39.0	119.9
09 06 003C 0014	3	14	9.2	58.5	146.6
09 06 004C 0014	4	14	10.2	78.0	185.4
09 06 005C 0014	5	14	12.3	97.5	255.8
09 06 002C 0012	2	12	9.8	62.0	162.6
09 06 003C 0012	3	12	10.4	93.0	202.0
09 06 004C 0012	4	12	11.6	124.0	257.3
09 06 005C 0012	5	12	14.0	155.0	353.7
09 06 002C 0010	2	10	10.9	93.0	214.7
09 06 003C 0010	3	10	11.6	139.5	270.6
09 06 004C 0010	4	10	12.9	186.0	346.5
09 06 002C 0008	2	8	15.3	158.4	402.6
09 06 003C 0008	3	8	16.2	237.6	501.4
09 06 004C 0008	4	8	18.0	316.8	638.1
09 06 002C 0006	2	6	19.4	263.8	654.5
09 06 003C 0006	3	6	21.1	395.7	843.3
09 06 004C 0006	4	6	23.5	527.6	1074.8
09 06 002C 0004	2	4	22.2	410.4	911.1
09 06 003C 0004	3	4	23.6	615.6	1153.6
09 06 004C 0004	4	4	26.3	820.7	1479.2
09 06 002C 0002	2	2	24.7	596.7	1201.9
09 06 003C 0002	3	2	26.3	895.1	1540.7
09 06 004C 0002	4	2	30.3	1193.4	2053.9

Note: Dimensions and specifications may be changed without prior notice

Multi-Conductor, Unshielded UL 2576, 2598

Technical data:

- **Temperature range:** 20°C to +80°C
- **Nominal voltage:** 300 V
- **Test voltage:** 1500V:
- **Minimum Bending radius:** Flexing approx. 15x cable ø

Cable structure:

Annealed Plain copper, fine wire conductors AWG 24-16, Table 30.3 UL 1581 ASTM-B
Special PVC core insulation class 43, semirigid to UL-Std. 1581 table 50.182 and 50.183
Colour coded to H05VV-F up to 5 cores
coloured black with numbers for above 5 cores Cores stranded in layers with optimal lay-length
Special PVC outer jacket class 43 to UL-Std. 1581 table 50.182
Outer jacket colour
Black RAL 9005 or Grey RAL 7001

Application:

- Internal wiring of
- Public address systems
- Intercoms
- Internal telephones
- Internal telephones
- Remote control circuits
- Wiring for machine tool control circuits
- Medical equipments

CE= The product conforms to for Low-Voltage Directive 2006/95/EC

PART NUMBER	No.cores	AWG-no.	Nominal Cable Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 07 002C0024	2	24	5.1	4.0	32.9
09 07 003C0024	3	24	5.3	5.9	36.9
09 07 004C0024	4	24	5.7	7.9	43.5
09 07 006C0024	6	24	6.5	11.9	58.1
09 07 010C0024	10	24	7.9	19.8	87.8
09 07 012C0024	12	24	8.1	23.7	95.2
09 07 016C0024	16	24	8.9	31.6	116.5
09 07 018C0024	18	24	9.3	35.6	128.6
09 07 024C0024	24	24	10.7	47.4	170.6
09 07 002C0022	2	22	5.7	7.9	43.6
09 07 003C0022	3	22	5.9	11.9	50.1
09 07 004C0022	4	22	6.4	15.8	60.1
09 07 006C0022	6	22	7.4	23.7	82.3
09 07 010C0022	10	22	9.1	39.5	127.7
09 07 012C0022	12	22	9.4	47.4	140.0
09 07 016C0022	16	22	10.3	63.2	173.9
09 07 018C0022	18	22	10.8	71.1	192.9
09 07 024C0022	24	22	12.5	94.8	258.1
09 07 002C0020	2	20	6.1	11.9	52.3
09 07 003C0020	3	20	6.3	17.8	61.1
09 07 004C0020	4	20	6.9	23.7	74.1

PART NUMBER	No.cores	AWG-no.	Nominal Cable Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 07 006C0020	6	20	8.0	35.6	102.8
09 07 010C0020	10	20	9.9	59.3	161.6
09 07 012C0020	12	20	10.2	71.1	178.5
09 07 016C0020	16	20	11.2	94.8	223.6
09 07 018C0020	18	20	11.8	106.7	248.5
09 07 024C0020	24	20	13.7	142.3	333.8
09 07 002C0018	2	18	6.7	15.8	64.4
09 07 003C0018	3	18	7.0	23.7	75.9
09 07 004C0018	4	18	7.6	31.6	92.8
09 07 006C0018	6	18	8.9	47.4	130.2
09 07 010C0018	10	18	11.1	79.0	207.0
09 07 012C0018	12	18	11.4	94.8	229.4
09 07 016C0018	16	18	12.6	126.5	288.6
09 07 018C0018	18	18	13.3	142.3	321.5
09 07 024C0018	24	18	15.5	189.7	433.8
09 07 002C0016	2	16	7.3	23.4	80.4
09 07 003C0016	3	16	7.6	35.1	96.2
09 07 004C0016	4	16	8.3	46.8	118.8
09 07 006C0016	6	16	9.8	70.2	168.5
09 07 010C0016	10	16	12.3	117.0	271.0
09 07 012C0016	12	16	12.7	140.4	302.0
09 07 016C0016	16	16	14.0	187.2	382.6
09 07 018C0016	18	16	14.8	210.6	427.0
09 07 024C0016	24	16	17.3	280.8	577.7

Note: specifications and dimensions may be changed without prior notice

TRI RATED CABLE

Technical data:

- PVC-insulated flexible cables for Internal Wiring of Appliances
- Temperature range:** flexing -5°C to +105°C, fixed installation -20°C to +105°C
- Temperature at conductor:** max. UL and CSA: +105°C
- Nominal voltage:** 600V
- Test voltage: (spark test)** AWG 24: 4 kV, AWG 22 and 20: 5kV, AWG 18 to 16: 6kV, AWG 8: 7.5kV
- UL-type AWM 105°C 600 V
- CSA-type AWM 105°C 600 V
- BS 6231 CK type 90°C 600 V
- Bending radius:** Fixed Application : 5 cable ø, Flexing : 10 cable ø

Cable construction:

- Stranded copper conductor, plain or tinned to UL-Std. 758, CSA C 22.2 No.210-07 & BS 6231 approved
- PVC-core insulation according to UL-Standard 1581, Class 43 and CSA-C22.2 No. 210 UL VW-1 and CSA FT-1, heat and damp resistant

Properties:

- Conditionally resistant to**
 - Oils
 - Solvents
 - Acids
 - Dyes
- PVC self-extinguishing and flame retardant, test method to UL VW-1 and CSA FT-1
- Flame retardant to IEC 60332-1-2

Application

For the internal wiring of panels, electrical equipment. Connection wire in machines laid in protective tubes and flexible pipes and also for motors and transformers.

CE = The product conforms to Low-Voltage Directive 2006/95/EC

Dimensions

PART NUMBER	AWG-No.	No. of cores x cross-sec. mm ²	Nominal Cable Diameter mm	Conductor Resistance at 20° Ohm / Km	Approx. Cable Weight kg/km
09 08 001C 0022	22	1 x 0.5	2.55	39	11
09 08 001C 0020	20	1 x 0.75	2.72	26	14
09 08 001C 0018	18	1 x 1	2.90	19.5	17
09 08 001C 0016	16	1 x 1.5	3.15	13.3	22
09 08 001C 0014	14	1 x 2.5	3.60	7.98	32
09 08 001C 0012	12	1 x 4	4.10	4.95	48
09 08 001C 0010	10	1 x 6	4.64	3.3	68
09 08 001C 0008	8	1 x 10	6.30	1.91	119
09 08 001C 0006	6	1 x 16	8.26	1.21	201
09 08 001C 0004	4	1 x 25	9.53	0.78	293
09 08 001C 0002	2	1 x 35	10.76	0.554	409
09 08 001C 0001	1	1 x 50	13.15	0.386	581
09 08 001C 2000	2/0	1 x 70	14.90	0.272	818
09 08 001C 3000	3/0	1 x 95	16.39	0.206	1041
09 08 001C 4000	4/0	1 x 120	17.95	0.161	1285
09 08 001C 0250	250 kcmil	1 x 150	20.25	0.129	1609
09 08 001C 0350	350 kcmil	1 x 185	22.40	0.106	2036
09 08 001C 0450	450 kcmil	1 x 240	24.70	0.0801	2599

Note:- Dimensions and specifications may be changed without prior notice.

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

Heat Resistant 90° C Panel Wire

Technical Data:

- **Insulation Colour:**
Black, Red, Blue, Yellow, Green/Yellow, Grey, Brown, Orange, White, Violet, Green, Pink
- **Standards:** BS6231 Type CK
- **Conductor:** Class 5 flexible plain copper conductor to BS EN 60228:2005 (previously Bs6360)
- **Insulation:** PVC (Polyvinyl Chloride)
- **Voltage Rating:** BS6231 : 600/1000V
- **Temperature Rating:** BS6231 : 90°C (105°C for 15,000 hours)
- **Minimum Bending Radius:** 6 x overall diameter

Application:

High temperature, flame retardant cable designed for use in switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers.

Note:

These cable are also catered with compliance to AWM, UL 1015 and CSA C22.2 No. 210-07

Dimensions

PART NUMBER	No of Cores x Nominal Cross Sectional Area # x mm ²	AWG	Nominal Thickness of Insulation	Nominal Overall Diameter	Nominal Weight kg/Km	UL Style Number
			mm	mm		
09 09 001C 00X5	1 x 0.50	22	0.80	2.55	12	1015
09 09 001C 0X75	1 x 0.75	20	0.80	2.75	15	1015
09 09 001C 0001	1 x 1.0	18	0.80	2.90	18	1015
09 09 001C 01X5	1 x 1.5	16	0.80	3.15	23	1015
09 09 001C 02X5	1 x 2.5	14	0.80	3.60	34	1015
09 09 001C 0004	1 x 4.0	12	0.80	4.15	48	1015
09 09 001C 0006	1 x 6.0	10	0.80	4.70	67	1015
09 09 001C 0010	1 x 10.00	8	1.14	6.40	119	1015
09 09 001C 0016	1 x 16.00	6	1.52	8.45	187	1015
09 09 001C 0025	1 x 25.00	4	1.52	9.60	291	1015
09 09 001C 0035	1 x 35.00	2	1.52	10.85	406	1015
09 09 001C 0050	1 x 50.00	1	2.02	13.30	580	1015
09 09 001C 0070	1 x 70.00	2/0	2.02	15.30	780	1015
09 09 001C 0095	1 x 95.00	3/0	2.02	17.10	1055	1015
09 09 001C 0120	1 x 120.00	4/0	2.02	18.45	1175	1015
09 09 001C 0150	1 x 150.00	250 MCM	2.41	21.00	1425	1015
09 09 001C 0185	1 x 185.00	350 MCM	2.41	22.90	1735	1015
09 09 001C 0240	1 x 240.00	450 MCM	2.41	25.60	2310	1015

Conductors:

Class 5 flexible Copper Conductors for Single Core and Multi-Core cables

Nominal Cross Sectional Area	Maximum Diameter of Wires in Conductor	Maximum Resistance of Conductor at at 20°C Plain Wires
mm ²	mm	ohms/km
0.50	0.21	39.0
0.75	0.21	26.0
1.00	0.21	19.5
1.50	0.26	13.3
2.50	0.26	7.98
4.00	0.31	4.95
6.00	0.31	3.30
10.00	0.41	1.91
16.00	0.41	1.21
25.00	0.41	0.780
35.00	0.41	0.554
50.00	0.41	0.386
70.00	0.51	0.272
95.00	0.51	0.206
120.00	0.51	0.161
150.00	0.51	0.129
185.00	0.51	0.106
240.00	0.51	0.0801

Table in accordance with BS EN 60228:2005 (previously Bs6360)

Heat Resistant 90° C Panel Wire

Electrical Characteristics:

Current Carrying Capacity (amperes) and Voltage Drop (per ampere per metre)

Nominal Cross Sectional Area mm ²	Current Rating Amps	Voltage Drop mV/A/m
0.50	11	46.00
0.75	14	31.00
1.00	17	22.00
1.50	21	15.00
2.50	30	9.10
4.00	41	5.70
6.00	53	3.80
10.00	75	2.20
16.00	100	1.40
25.00	136	0.89
35.00	167	0.64
50.00	204	0.45
70.00	259	0.32
95.00	321	0.24
120.00	374	0.19
150.00	418	0.16
185.00	480	0.13
240.00	593	0.10
50.00	204	0.45
70.00	259	0.32
95.00	321	0.24
120.00	374	0.19
150.00	418	0.16
185.00	480	0.13
240.00	593	0.10

Current ratings are based on a conductor operating temperature of **85°C** and an ambient air temperature of **45°C** and assumes single cable isolated in free air.

Correction Factors:

Ambient Temperature	45°C	50°C	55°C	60°C	65°C	70°C	75°C
Reduction Factor	1.0	0.97	0.90	0.82	0.73	0.63	0.52

Where Cables are to be grouped, the following factors should be applied :

Number of cables in group	2	3	4	5	6	7	8
Reduction Factor	0.80	0.70	0.65	0.60	0.56	0.53	0.50

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 **030** 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

Note: Specifications and dimensions may be changed without prior notice



Technical data:

- Power and control cable to IEC 60502-1
- Temperature range:**
flexing -5°C to +50°C
fixed installation -20°C to +70°C
- Nominal voltage:** U_0/U 0.6/1 kV
- Test voltage:** 4 kV
- Max. permissible tensile stress with cable grip for Cu-conductor = 50 N/mm²
- Minimum bending radius:**
for single core approx. 15 x cable Ø
for multi core approx. 12 x cable Ø

Cable construction:

- Plain copper conductor, to DIN VDE 0295 cl. 1 or cl. 2 solid or stranded type, BS 6360 cl. 1 or cl.2, IEC 60228 and HD 383
- PVC core insulation, DIV4 to HD 603.1
- Cores stranded concentrically
- Colour coded to DIN VDE 0293-308, 0276 part 603 or HD 186
- Core colour for 3 + 1/2 conductor
J-type : gnyl (1/2) bn, bk, gy
O-type : bu (1/2) bn, bk, gy
- PVC outer jacket, DMV5 to HD 603.1
- Sheath colour black

Properties:

- Flame propagation test according to IEC 60332-1-2
- Highest permissible voltage:**
- Direct current systems 1.8 kV
- Alternating current systems, single-phase systems 1.4 kV
Both conductor insulated, single-phase systems 0.7 kV
one conductor earthed, three-phase systems 1.2 kV
with concentric conductor and a cross-section of 240 mm² and above 3.6 kV

Application

Power cables for energy supply are installed in open air, in underground, in water, indoors, in cable ducts, power stations, for industry and distribution boards as well as in subscriber networks, where mechanical damages are not to be expected.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC

Dimensions

J-Type PART NUMBER	O-type PART NUMBER	No. cores x cross-sec. mm ²	Nominal Overall Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 10 001G 0004	09 10 001C 0004	1 x 4 re	6.90	34.23	86.09
09 10 001G 0006	09 10 001C 0006	1 x 6 re	7.44	51.23	109.57
09 10 001G 0010	09 10 001C 0010	1 x 10 re	8.30	86.23	155.33
09 10 001G 0016	09 10 001C 0016	1 x 16 re	9.27	137.22	218.84
09 10 001G 0025	09 10 001C 0025	1 x 25 rm	11.72	217.05	346.02
09 10 001G 0035	09 10 001C 0035	1 x 35 rm	12.92	301.14	451.74
09 10 001G 0050	09 10 001C 0050	1 x 50 rm	14.75	407.75	601.55
09 10 001G 0070	09 10 001C 0070	1 x 70 rm	16.63	588.80	823.61
09 10 001G 0095	09 10 001C 0095	1 x 95 rm	19.06	817.61	1118.75
09 10 001G 0120	09 10 001C 0120	1 x 120 rm	20.75	1031.37	1377.91
09 10 001G 0150	09 10 001C 0150	1 x 150 rm	22.81	1272.57	1687.08
09 10 001G 0185	09 10 001C 0185	1 x 185 rm	25.21	1592.32	2091.99
09 10 001G 0240	09 10 001C 0240	1 x 240 rm	28.39	2092.82	2714.43
09 10 001G 0300	09 10 001C 0300	1 x 300 rm	31.35	2625.61	3371.83
09 10 001G 0400	09 10 001C 0400	1 x 400 rm	34.90	3357.42	4265.20
09 10 001G 0500	09 10 001C 0500	1 x 500 rm	38.91	4311.45	5417.22
09 10 001G 0630	09 10 001C 0630	1 x 630 rm	43.13	5575.93	6888.58
09 10 002G 01X5	09 10 002C 01X5	2 x 1.5 re	11.32	26.08	178.57
09 10 002G 02X5	09 10 002C 02X5	2 x 2.5 re	12.12	42.59	215.29
09 10 002G 0004	09 10 002C 0004	2 x 4 re	13.99	68.46	296.72
09 10 002G 0006	09 10 002C 0006	2 x 6 re	15.03	102.47	362.42
09 10 002G 0010	09 10 002C 0010	2 x 10 re	16.76	172.46	488.34
09 10 002G 0016	09 10 002C 0016	2 x 16 re	18.71	274.43	658.74
09 10 002G 0025	09 10 002C 0025	2 x 25 rm	25.11	441.85	1134.40
09 10 003G 01X5	09 10 003C 01X5	3 x 1.5 re	11.87	39.12	204.61
09 10 003G 02X5	09 10 003C 02X5	3 x 2.5 re	12.72	63.89	251.12
09 10 003G 0004	09 10 003C 0004	3 x 4 re	14.73	102.69	350.90
09 10 003G 0006	09 10 003C 0006	3 x 6 re	15.88	153.70	436.48
09 10 003G 0010	09 10 003C 0010	3 x 10 re	17.73	258.69	600.66
09 10 003G 0016	09 10 003C 0016	3 x 16 re	19.85	411.65	826.27
09 10 003G 0025	09 10 003C 0025	3 x 25 rm	25.11	662.78	1311.40
09 10 003G 0035	09 10 003C 0035	3 x 35 sm	23.52	901.43	1431.61
09 10 003G 0050	09 10 003C 0050	3 x 50 sm	26.57	1220.54	1885.36
09 10 003G 0070	09 10 003C 0070	3 x 70 sm	29.61	1762.49	2549.87
09 10 003G 0095	09 10 003C 0095	3 x 95 sm	34.19	2447.40	3482.64
09 10 003G 0120	09 10 003C 0120	3 x 120 sm	36.81	3087.24	4247.94
09 10 003G 0150	09 10 003C 0150	3 x 150 sm	40.40	3809.26	5192.23
09 10 003G 0185	09 10 003C 0185	3 x 185 sm	44.81	4766.38	6456.39
09 10 003G 0240	09 10 003C 0240	3 x 240 sm	50.19	6264.56	8339.61

J-Type PART NUMBER	O-type PART NUMBER	No. cores x cross-sec. mm ²	Nominal Overall Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 10 004G 01X5	09 10 004C 01X5	4 x 1.5 re	12.73	52.16	241.23
09 10 004G 02X5	09 10 004C 02X5	4 x 2.5 re	13.72	85.18	301.04
09 10 004G 0004	09 10 004C 0004	4 x 4 re	15.96	136.92	425.15
09 10 004G 0006	09 10 004C 0006	4 x 6 re	17.23	204.93	533.75
09 10 004G 0010	09 10 004C 0010	4 x 10 re	19.31	344.92	744.05
09 10 004G 0016	09 10 004C 0016	4 x 16 re	21.69	548.87	1034.13
09 10 004G 0025	09 10 004C 0025	4 x 25 rm	27.59	868.22	1650.02
09 10 004G 0035	09 10 004C 0035	4 x 35 sm	28.05	1201.90	1871.44
09 10 004G 0050	09 10 004C 0050	4 x 50 sm	31.82	1627.38	2469.94
09 10 004G 0070	09 10 004C 0070	4 x 70 sm	36.18	2349.99	3399.26
09 10 004G 0095	09 10 004C 0095	4 x 95 sm	41.40	3263.20	4597.65
09 10 004G 0120	09 10 004C 0120	4 x 120 sm	45.23	4116.32	5676.25
09 10 004G 0150	09 10 004C 0150	4 x 150 sm	49.69	5079.01	6934.91
09 10 004G 0185	09 10 004C 0185	4 x 185 sm	55.26	6355.17	8636.11
09 10 004G 0240	09 10 004C 0240	4 x 240 sm	61.92	8352.75	11143.38
09 10 005G 01X5	09 10 005C 01X5	5 x 1.5 re	13.69	65.21	283.16
09 10 005G 02X5	09 10 005C 02X5	5 x 2.5 re	14.78	106.48	355.32
09 10 005G 0004	09 10 005C 0004	5 x 4 re	17.27	171.15	506.91
09 10 005G 0006	09 10 005C 0006	5 x 6 re	18.70	256.17	641.01
09 10 005G 0010	09 10 005C 0010	5 x 10 re	21.03	431.14	900.62
09 10 005G 0016	09 10 005C 0016	5 x 16 re	23.66	686.08	1258.15
09 10 005G 0025	09 10 005C 0025	5 x 25 rm	30.26	1104.64	2018.65
09 10 005G 0035	09 10 005C 0035	5 x 35 rm	35.29	1532.58	2825.06
09 10 005G 0050	09 10 005C 0050	5 x 50 rm	38.87	2075.12	3538.20
09 10 007G 01X5	09 10 007C 01X5	7 x 1.5 re	14.70	91.29	330.78
09 10 007G 02X5	09 10 007C 02X5	7 x 2.5 re	15.92	149.07	422.33
09 10 007G 0004	09 10 007C 0004	7 x 4 re	18.69	239.61	608.94
09 10 007G 0006	09 10 007C 0006	7 x 6 re	20.27	358.63	779.71
09 10 007G 0010	09 10 007C 0010	7 x 10 re	22.86	603.60	1113.81
09 10 010G 01X5	09 10 010C 01X5	10 x 1.5 re	18.20	130.41	530.25
09 10 010G 02X5	09 10 010C 02X5	10 x 2.5 re	19.70	212.95	595.52
09 10 012G 01X5	09 10 012C 01X5	12 x 1.5 re	18.63	156.49	519.37
09 10 012G 02X5	09 10 012C 02X5	12 x 2.5 re	20.30	255.54	673.22
09 10 014G 01X5	09 10 014C 01X5	14 x 1.5 re	19.46	182.58	581.31
09 10 014G 02X5	09 10 014C 02X5	14 x 2.5 re	21.25	298.14	758.73
09 10 016G 01X5	09 10 016C 01X5	16 x 1.5 re	20.46	208.66	648.18
09 10 016G 02X5	09 10 016C 02X5	16 x 2.5 re	22.35	340.73	848.93
09 10 019G 01X5	09 10 019C 01X5	19 x 1.5 re	21.46	247.78	737.81
09 10 019G 02X5	09 10 019C 02X5	19 x 2.5 re	23.50	404.61	973.01

NY

J-Type PART NUMBER	O-type PART NUMBER	No. cores x cross-sec. mm ²	Nominal Overall Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 10 021G 01X5	09 10 021C 01X5	21 x 1.5 re	22.59	273.87	808.83
09 10 021G 02X5	09 10 021C 02X5	21 x 2.5 re	24.74	447.20	1068.18
09 10 024G 01X5	09 10 024C 01X5	24 x 1.5 re	24.85	273.87	863.53
09 10 024G 02X5	09 10 024C 02X5	24 x 2.5 re	27.27	511.09	1230.30
09 10 030G 01X5	09 10 030C 01X5	30 x 1.5 re	26.24	391.24	1101.09
09 10 030G 02X5	09 10 030C 02X5	30 x 2.5 re	28.83	638.86	1466.06
09 10 040G 01X5	09 10 040C 01X5	40 x 1.5 re	29.35	521.65	1409.23
09 10 040G 02X5	09 10 040C 02X5	40 x 2.5 re	32.74	851.82	1924.56
09 10 052G 02X5	09 10 052C 02X5	52 x 2.5 re	36.82	1107.36	2444.63
09 10 061G 01X5	09 10 061C 01X5	61 x 1.5 re	35.43	795.52	2087.35

J-Type PART NUMBER	O-type PART NUMBER	No. cores x cross-sec. mm ²	Nominal Overall Diameter mm	Cop. Weight kg / km	Approx. Cable Weight kg/km
09 11 305G 0025	09 11 305C 0025	3 x 25 / 16 rm	23.62	786.63	1276.59
09 11 305G 0035	09 11 305C 0035	3 x 35 / 16 sm	25.44	1038.34	1590.55
09 11 305G 0050	09 11 305C 0050	3 x 50 / 25 sm	29.30	1437.11	2150.07
09 11 305G 0070	09 11 305C 0070	3 x 70 / 35 sm	33.29	2062.97	2952.07
09 11 305G 0095	09 11 305C 0095	3 x 95 / 50 sm	38.13	2854.24	3990.35
09 11 305G 0120	09 11 305C 0120	3 x 120 / 70 sm	41.73	3674.74	4981.78
09 11 305G 0150	09 11 305C 0150	3 x 150 / 70 sm	45.40	4396.75	5957.62
09 11 305G 0185	09 11 305C 0185	3 G 185 / 95 sm	50.59	5582.17	7481.05
09 11 305G 0240	09 11 305C 0240	3 x 240 / 120 sm	56.85	7293.64	9660.63
09 11 305G 0300	09 11 305C 0300	3 x 300 / 150 sm	62.70	9129.12	11957.60

Note:- Dimensions and specifications may be changed without prior notice.

Note

re = round conductor, single-wire
rm = round conductor, multiply-wire
sm = stranded, sectional core.

* In respect to 3 + 1/2 conductors

Whereby only one conductor is allowed to contain a smaller cross-section (as per DIN VDE 0276 part 603 table 5) and permitted to place as insulated core (green-yellow and blue as 1/2-conductor) stranded in layer.

Zero Halogen, Low Smoke single core cables having enhanced circuit integrity when exposed to fire

Technical Data:

- **Operating temperature:** -20 to +90° C. the cable should not be flexed when the temperature is below 0°
- **Minimum bending radius:** 8 x Overall diameter
- **Flame Propagation:** IEC 60332-1, BS EN 50265, IEC 60332-3, BS EN 50266
All basic colors available including green/yellow Sheathed version also available. Details available on request

Construction:

- **Conductors:** Stranded class 2 plain annealed copper Insulation: Mica-glass fire resistant tape covered by an extruded layer of cross-linked Zero Halogen, Low Smoke insulating compound

Circuit Integrity

- BS 6387 categories C, W & Z (when applied to a single cable) Exceeds IEC 60331 - 3 hours at 750°C - when the test temperature was increased to 950°C, equivalent to BS 6387 Category C

Acid Gas Emission: IEC 60754-1, BS EN 50267-2-1

Smoke Emission: IEC 61034, BS EN 50268

Application:

These cables are designed for installations in trunking and conduits where a fire situation may pose a major hazard. Circuit integrity is maintained. To achieve optimum performance such cables should be installed in metal conduits

PART NUMBER	Nominal area of conductor	Insulation thickness	Max. Overall diameter	Approx weight of cable	DC Conductor resistance Max at 20° C
	mm ²	mm	mm	kg/km	Ohm/km
09 12 001C 01X5	1.5	0.7	3.8	32	12.1
09 12 001C 02X5	2.5	0.8	4.5	43	7.41
09 12 001C 0004	4	0.8	5.0	55	4.61
09 12 001C 0006	6	0.8	5.5	85	3.08
09 12 001C 0010	10	1.0	7.0	146	1.83
09 12 001C 0016	16	1.0	8.0	198	1.15
09 12 001C 0025	25	1.2	9.7	320	0.727
09 12 001C 0035	35	1.2	10.8	410	0.524
09 12 001C 0050	50	1.4	13.3	549	0.387
09 12 001C 0070	70	1.4	15.1	770	0.268
09 12 001C 0095	95	1.6	17.5	1140	0.193
09 12 001C 0120	120	1.6	19.2	1425	0.153
09 12 001C 0150	150	1.8	21.2	1720	0.124
09 12 001C 0185	185	2.0	23.6	2155	0.0991

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 030 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

UL-Style 3289/3321/3173/3271/3344 XLPE Single cores, -65°C to +150°C, 600V

Technical Data:

Temperature range:

Flexible -5°C to +150°C

Fixed installation -65°C to +150°C

Temperature at Conductor: Max. UL: +150°C

Nominal Voltage: 600 V

Test voltage: (spark test) AWG 22 and 20 = 5 kV AWG 18 to 10 = 6

kV $\geq$ AWG 8 = 7.5 kV

Bending radius: Approx. 5 x cable $\varnothing$

Intended Use: Internal Wiring of Appliances.

Application:

UL 3289/3321 has excellent resistance to abrasion, deformation, cut-through and chemical attack. This wire is widely used in appliances, transformers, electrical heating, motors, ballast, lighting and cooking equipment. Suitable for use as Appliance Wiring Material (AWM), coil leads and as Class B IEEE 130°C Class Motor Leads. Economical replacement for silicone rubber/glass braid insulated wire and cable.

Properties:

PVC self-extinguishing and flame retardant, test method to FT-2 The materials used in manufacture are RoHS compliant

Cable construction:

- Stranded copper conductor tin coated/Plain
XLPE insulation according to UL-Std. 1581
Table 50.232, Complies to CSA No. 22.2 210 and 127-09

Dimensions

PART NUMBER	AWG	Metric cross section mm ²	No. of strands/ Strand Dia. mm	Max. DC resistance at 20°C, Ω /km	Insulation Thickness mm	Cable diameter. mm	Standard Length (meter/coil)
09 13 001C 0X50	22	0.50	16/0.2	39.0	0.762	2.4	100
09 13 001C 0X75	20	0.75	24/0.2	26.0	0.762	2.6	100
09 13 001C 0001	18	1.00	32/0.2	19.5	0.762	2.8	100
09 13 001C 01X5	16	1.50	30/0.25	13.3	0.762	3.1	100
09 13 001C 02X5	14	2.50	50/0.25	7.98	0.762	3.5	100
09 13 001C 0004	12	4.00	56/0.3	4.95	0.762	4.0	100
09 13 001C 0006	10	6.00	84/0.3	3.30	0.762	4.6	100
09 13 001C 0010	8	10.00	140/0.3	1.91	1.143	6.3	100
09 13 001C 0016	6	16.00	126/0.4	1.21	1.524	8.3	100
09 13 001C 0025	4	25.00	196/0.4	0.78	1.524	9.6	100
09 13 001C 0035	2	35.00	276/0.4	0.554	1.524	10.8	100
09 13 001C 0050	1	50.00	296/0.4	0.386	2.032	13.3	100
09 13 001C 0070	2/0	70.00	360/0.5	0.272	2.032	15.2	100
09 13 001C 0095	3/0	95.00	480/0.5	0.206	2.032	16.9	100
09 13 001C 0120	4/0	120.00	608/0.5	0.161	2.032	18.5	100

NOTE- Please add two digits for various colours in place of 00 4th & 5th digit. E.g. 0.5 sqmm red colour instead of 100 001 0050, the part number will be 100 030 0050

Black- 00; Blue- 01; Brown- 02; Red- 03; White- 04; Grey- 05; Violet- 06; Pink-07; Orange- 08; Yellow-09; Green-10

CHAPTER-X

BATTERY, CORDS, UNINYVIN, FIRE ALARM & BRAIDED STRAPS





Battery Cable

These cables are generally used for electrical and electronic connections for Battery chargers. The conductor is made of class 6 fine plain annealed copper. The bunching is done in two various types based on which two construction can be offered. The insulation is provided with a special elastomer resistant to Ozone, Acids, Solvents, Detergents, Vaseline & Oil. Also RoHS compliant

Normal Flex construction

Construction: Bare copper strands as per IEC 60228, IS 8130, class 6 Conductor construction with Normal flex / Super flex

Superflex construction

Technical Data:

- **Working voltage:** Max 200V
- **Test voltage:** 1000Volts
- **Static temperature:** -40°C to +90°C

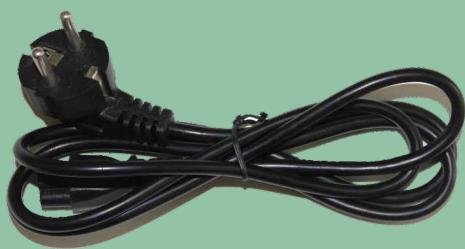
PART NUMBER	Nominal size	Max diameter of wires	Insulation thickness	Nominal Outer diameter +0.4/-0 mm	Max. cond. Resistance at 20p C
	mm ²		min		&!/km
1001001C0025	25	0.2	2.2	11.1	0.780
1001001C0035	35	0.2	2.5	12.8	0.554
1001001C0050	50	0.2	2.3	13.9	0.386
1001001C0070	70	0.2	2.4	16.0	0.272
1001001C0095	95	0.2	2.55	18.0	0.206
1001001C0120	120	0.2	2.55	19.7	0.161

Super Flex construction:

PART NUMBER	Nominal size	Max diameter of wires	Insulation thickness	Nominal Outer diameter +0.4/-0 mm	Max. cond. Resistance at 20p C
	mm ²		min		&!/km
1002001C0025	25	0.2	2.2	11.1	0.78
1002001C0035	35	0.2	2.5	12.8	0.554
1002001C0050	50	0.2	2.3	13.9	0.386
1002001C0070	70	0.2	2.4	16	0.272
1002001C0095	95	0.2	2.55	18	0.206

Insulation Properties:

Acid resistance Test	In sulphuric acid of specific gravity 1.28 at a temperature of 160 to 210 ° c and check the cable after 60 hrs. No effect on insulation. Insulation free from deformation and shrinkage
Chemical Resistance	Resistant against solvents and detergents, Vaseline, oil



POWER CORDS

Moulded 3 Pin Cords:

We provide a wide assortment of non rewirable moulded cords. Our range offers efficient performance and durability for rugged use. These cords are tested for conformity to required standards. We can offer these cord in various sizes and specifications. These are extensively used in electronic industry, especially in TV, video games, DVD player, Voltage Stabilizer, Heat Convector, Water Immersions Rods, Instant water heaters and others Electrical & Electronic Home Appliances.

Moulded Two Pin Plug:

We also produce a wide range of two pin plugs for various applications. These cords have a wide usage on various domestic Electrical and Electronic appliances and gadgets on which Earthing is not required. Customized moulding and cable selection is also offered. The standard offer is done with cable twin flat sheathed 0.5 Sq mm.

Construction:

The power supply cords are manufactured by using ISI marked cables. The cords are manufactured with the brass pins soldered to the cable cores. Such pins are then firstly moulded with polypropylene which offers a high degree of Dielectric strength, thereafter a final layer of coloured PVC matching to the cable jacket is moulded bearing the necessary marks and approvals. The cords for the Indian market are accorded the IS 1293: 2005 approval marks.

3 PIN MOULDED POWER CORDS AS PER IS:1293:2005

PART NUMBER	ITEM	DESCRIPTION/WIRE SIZE	CURRENT RATING	LENGTH
10 03 003C 00X5	Main Power Cords	0.50 SQ.MM. X 3 CORE	6 AMP	Available in specific length as req. by Customer/ Retail packs
10 03 003C 0X75		0.75 SQ.MM. X 3 CORE	6 AMP/16 AMP	
10 03 003C 0001		1.0 SQ.MM. X 3 CORE	6 AMP/16 AMP	
10 03 003C 01X5		1.50 SQ.MM. X 3 CORE	16 AMP	

TWO PIN FLAT MOULDED CORDS

PART NUMBER	ITEM	DESCRIPTION/WIRE SIZE	CURRENT RATING	LENGTH
10 03 F02C 00X5	Main Power Cords	0.5 Sq mm TWIN FLAT	6 AMP	Available in specific length as req. by Customer/ Retail packs

Note:

The entire construction is offered with RoHS compliance

UNINYVIN Cable



These cables are manufactured with insulation of HR PVC and braided with glass fiber and overall braided by nylon fiber and lacquered with nylon varnish. Such cables withstand high temperature. Their usage is mainly in UPS, aircraft wiring, DG panels due to low weight. Such cables are resistant to Ester based fluids (Hydraulic oil), Acids, Chemicals and Solvents. The Nylon and glass fibers are also very good heat resistant materials.

Technical Data:

- **Voltage:** rating -
- **Test voltage:**
- **Temperature:** -35°C to 105°C

Construction:

Fine annealed tin coated copper strands Strands as per IS 10241 part 3 Special core insulation HR PVC 105 °C Braided with Glass fiber 100% coverage Second layer of braid with Nylon fiber The overall construction is finally lacquered with Nylon varnish

Compliance:

IS 10241 Part 3, IS 8130
IS 10241 Part 1

Table I: Construction Details

PART NUMBER	Cable size	Conductor				Radial thickness	Nylon braid & Laquer		Overall diameter of cable		DC Conductor resistance at 20p C, &!/km	Current rating Amps
		Nom area mm²	No & Dia of wires mm	Diameter of conductor		PVC Insulation						
				Max. mm	Min. mm	Min	Max. mm	Min. mm	Max. mm	Min. mm		
1004001C0010	10	5.33	73/0.305	3.15	2.896	0.381	0.381	0.127	5.0	4.6	3.532	78
1004001C0008	8	8.76	120/0.305	3.242	3.937	0.381	0.381	0.127	6.3	5.9	2.154	111
1004001C0006	6	13.3	182/0.305	5.537	5.08	0.381	0.381	0.127	7.6	7.3	1.422	148
1004001C0004	4	21.5	294/0.305	6.909	6.452	0.483	0.381	0.127	9.3	8.8	0.877	205
1004001C0002	2	33.3	203/0.457	8.763	8.128	0.483	0.381	0.127	11.0	10.5	0.565	256
1004001C0001	1	40.7	248/0.457	9.754	9.119	0.559	0.381	0.127	12.2	11.7	0.463	282
1004001C0000	0	53.0	323/0.457	10.973	10.338	0.635	0.381	0.127	13.7	13.0	0.355	308
1004001C2000	00	68.3	416/0.457	12.446	11.684	0.686	0.381	0.127	15.4	14.6	0.276	346
1004001C3000	000	84.2	513/0.457	13.919	13.157	0.762	0.381	0.127	16.9	16.1	0.223	384
1004001C4000	0000	109	666/0.457	15.621	14.859	0.787	0.381	0.127	18.7	17.9	0.173	450

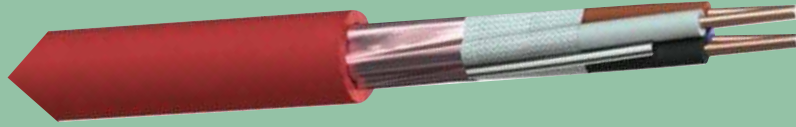
Table II: Test for Resistance to fluids

Sr.no	Fluids represented	Test fluid	Temp.of test	max.change in dia %
1	Aviation turbine fuel	Kerosene	20+/- 0.5	5
2	Fuel	70% iso octane 30% Toluene by vol.	20+/- 0.5	5
3	Hydraulic fluid	80% Ethylene glycol mono ethylether, 20% Castor oil by vol.	50+/- 2	5
4	Ester based lubricating oil	Ester based hydraulic fluid	100+/- 2	5

Note : Packing available in 100 mtr., longer length in spools or wooden drums.

The data mentioned can be changed without prior information. Kindly ask for updated data when in need

RATNAFLEX- Fire Alarm Cable



The standards for building safety now calls for various safety gadgets to detect and relate any threat to the master control rooms. Hence, the advent of Fire Alarm cables designed to meet the requirements of circuit integrity under Flame. Low smoke and emission under fire conditions are the hall marks of such cables designed. Such cables function even under prolonged exposure to flame. The construction of such cables being from inorganic materials aids for resistance to flame, hence survives the harshest fire conditions. Fire - Alarm cables comply with the requirements of the following :

BS 7629-1 : 2008 - 300/500V fire resistant electric cables having low emission of smoke and corrosive gases when affected by fire

BS 6387 Specification for performance requirements for cables required to maintain circuit conditions. Integrity under fire Category CWZ cables resistant to fire, water spray mechanical shock.

Standard fire resistant cables as described in Clause 26 2d of BS 5839-1:2002 +A2:2008 Fire detection and Fire alarm systems for buildings.

Class Ph30 and Ph60 when tested in accordance with BS EN 50200- Method of test for resistance to fire of unprotected small cables for use in emergency circuits.

Technical Data:

- **Conductor** : Plain annealed copper to BS 6360 Solid (Class - 1)
- **Earth Conductor** : Tinned annealed copper to BS EN 60228 (drain wire for multicore cables)
- **Sheath** : Thermoplastic Zero halogen, Low smoke, Flame retardant, abrasion resistant Type LTS3 to BS 7655 section 6.1
- **Insulation** : High performance Silicone rubber EI 2 to BS 7655 Section 1.1
- **Electrostatic Screen** : Aluminium / polyster tape min. 20 % Overlap
- **Temperature range**: -20 to +70C
- **Min. Bending Radius**: 6D
- **Halogen Free Fire Performance**: BS EN 50265-2-1, BS EN 50265-2-4

PART NUMBER	No. of conductors x Cross Section in sqmm	Size of cond. (no./mm)	Mean overall diameter mm	Maximum conductor resistance at 20°C ohms/km	Current rating DC of Current rating DC			Volt drop DC or Single Phase AC		
					single phase AC		of single phase AC			
					Enclosed	Amps	Clipped direct			
									mV/A/m	
1005 002C 0001	2 x 1.0	1/1.13	7.2	18.1	13	15		44		
1005 002C 01X5	2 x 1.5	1/1.38	8.1	12.1	16.5	20		29		
1005 003C 0001	3 x 1.0	1/1.13	7.6	18.1	13	15		44		
1005 003C 01X5	3 x 1.5	1/1.38	8.5	12.1	16.5	20		29		
1005 004C 0001	4 x 1.0	1/1.13	8.3	18.1	13	15		44		
1005 004C 01X5	4 x 1.5	1/1.38	9.4	12.1	16.5	20		29		

Note: Specifications and dimension may change without prior notice

Flexible Braided Copper & Tin Copper tapes accordingly DIN 72333 Part 3

Construction and Application:

Flexible braided copper / tin copper tapes consist of wires with a stringer wire dia of 0.16 to 0.2 mm. They can be used for all application accordingly DIN 72333 part 3 is as ground braiding tapes for batteries.

Packing:

* In rings on spools or wooden drums.

Technical Data:

• Material

* Annealed EC grade Cu Wire.

* Wire Dia - 0.16 to 0.2 mm

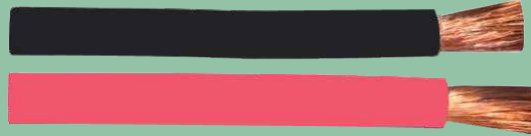
• Surface

* Plain copper or Tinned



Construction Data					
PART NUMBER	Cross-section	No of	Wire Diameter	Width	Thickness
	mm ²	wire	mm	mm	mm
10 06 001C 0006	6	36 X 6	0.19	10	1.3
10 06 001C 0010	10	48 X 7	0.19	15	1.7
10 06 001C 0016	16	48 X 11	0.19	19	2.3
10 06 001C 0025	25	48 X 17	0.19	24	2.7
10 06 001C 0035	35	48 X 23	0.19	30	2.7
10 06 001C 0050	50	48 X 33	0.19	33	3.5
10 06 001C 0070	70	48 X 43	0.19	35	5

RR KABEL - WELDEX



FEATURE

The cable has high flexibility subjected to light, ozone, oxygen, inert gas, and oil, and it is also resistant to the effects of cold, heat, and fire. Suitable for use in open air, in dry as well as damp interiors. The high degree of flexibility does not form knots on the cable which could lead to internal break of conductors.

MINIMUM BENDING RADIUS

5X cable diameter

TEMPERATURE RANGE

-20°C to +60°C

CABLE CONSTRUCTION

Super fine strands of plain Copper with single elastomeric insulation. Type SE 1 Conforming to the requirements of IS 6380 : 1984

TEST VOLTAGE

1000 V

SPECIFICATION

IS 9857 : 1990, IS 6380 : 1984, IS 8130 : 1984

Welding Cables :

In welding cable, a highly flexible Elastomeric PVC jacket surrounds fully annealed stranded bare copper. The insulated flexible Cables are used to connect welding machines. The heavy duty welding cable is resistant to flame, oil, abrasions, tar and grease.

PART NUMBER	No. of cores X nominal cross sectional area mm ²	Max. strand diameter (mm)	Max. Conductor Resistance (Spec) ohms/km	Nominal Insulation thickness mm	Nominal cable diameter mm
1007 001C 0016	16	0.21	1.21	2	9.2
1007 001C 0025	25	0.21	0.78	2	10.5
1007 001C 0035	35	0.21	0.554	2	11.5
1007 001C 0050	50	0.31	0.386	2.2	13.5
1007 001C 0070	70	0.31	0.272	2.4	15.5
1007 001C 0095	95	0.31	0.206	2.6	17.7

The conductor construction given above is indicative and will comply for conductor diameter and resistance as per IS : 8130-1984

Current Rating of General Service Normal Duty Elastomeric Compound Covered Cable with Copper Conductor					
Nominal Cross- Sectional Area of Conductor	Current Rating at a Maximum Duty Cycle of				
	100%	85%	60%	30%	20%
mm ²	A	A	A	A	A
16	94	102	121	172	210
25	125	136	161	228	279
35	156	169	201	285	349
50	197	214	254	360	440
70	248	269	320	453	555
95	299	342	386	546	669

Ambient air temperature = 30°C

Maximum conductor temperature = 60°C

Note: Dimensions and specification may change without prior notice

CHAPTER-XI

POWER CABLES





3.5 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Technical Detail For 1.1 KV, 3.5 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Type / Code Of Cable: A2XFY/2XFY, A2XWY/2XWY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size cores x	Minimum No. Of		Nominal	Minimum	Armouring with flat strip (A2XFY/ 2XFY)				Armouring with round wire (A2XWY/ 2XWY					
		Strands in		Thick-	Thick-	Nominal	Minimum	Approx.	Approx Net Wt	Nominal	Minimum	Approx.	Approx Net Wt		
		conductor		ness	ness										
		Sq.mm +		Of Insu.	of Inn. Sth.	Thick. Of	Thick. Of	Overall	Of Cable (Kg/Km)	Diameter	Thick.of	Overall	Of Cable (Kg/Km)		
	Neutral					Arm. Strip	Out. Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	A2XFY	2XFY	mm	mm	mm	A2XWY	2XWY
11 01 305C 0025	3 x 25 + 16	6 / 6	6 / 6	0.9/0.7	0.3	0.8	1.4	23	900	1400	1.6	1.4	25	1080	1685
11 01 305C 0035	3 x 35 + 16	6 / 6	6 / 6	0.9/0.7	0.3	0.8	1.4	25	1000	1800	1.6	1.4	27	1285	1980
11 01 305C 0050	3 x 50 + 25	6 / 6	6 / 6	1.0/0.9	0.3	0.8	1.4	28	1200	2300	1.6	1.56	30	1580	2685
11 01 305C 0070	3 x 70 + 35	12 / 6	12 / 6	1.1/0.9	0.4	0.8	1.56	32	1600	3200	2	1.56	35	2190	3690
11 01 305C 0095	3 x 95 + 50	15 / 6	15 / 6	1.1/1.0	0.4	0.8	1.56	35	2000	4100	2	1.56	38	2580	4585
11 01 305C 0120	3 x 120 + 70	15 / 12	18 / 12	1.2/1.1	0.4	0.8	1.72	39	2400	5100	2	1.72	42	3085	5680
11 01 305C 0150	3 x 150 + 70	15 / 12	18 / 12	1.4/1.1	0.5	0.8	1.72	43	2800	6000	2	1.88	46	3590	67905
11 01 305C 0185	3 x 185 + 95	30 / 15	30 / 15	1.6/1.1	0.5	0.8	1.88	47	3400	7400	2.5	2.04	51	4675	8615
11 01 305C 0240	3 x 240 + 120	30 / 15	34 / 18	1.7/1.2	0.6	0.8	2.04	53	4300	9500	2.5	2.2	56	5680	10485
11 01 305C 0300	3 x 300 + 150	30 / 15	34 / 18	1.8/1.4	0.6	0.8	2.2	57	5000	11500	2.5	2.36	60	6685	12990
11 01 305C 0400	3 x 400 + 185	53 / 30	53 / 30	2.0/1.6	0.7	0.8	2.52	88	6400	14500	3.15	2.68	71	8980	16980
11 01 305C 0500	3 x 500 + 240	53 / 30	53 / 34	2.2/1.7	0.7	0.8	2.68	74	7900	18000	3.15	2.84	79	10985	21485
11 01 305C 0630	3 x 630 + 300	53 / 30	53 / 34	2.4/1.8	0.7	0.8	3	82	9900	23000	4	3	88	14490	27985

Technical Data:

- Conductor:** AL/CU Stranded compact shaped conductor as per class-2, IS:8130
- Insulation:** Crosslinked Polyethylene (XLPE)(Phase core color - Red, Yellow, Blue.) (Neutral core color - Black)
- Inner Sheath :** PVC / PVC tape as per IS: 7098 (P-1)
- Armouring:** Single armouring of Galvanized Steel Strip/Wire.
- Outer Sheath:** PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)
- Color Of Outer Sheath:** Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size cores x Sq.mm + Neutral	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 90 deg c in Ohm/km		App. Reactance at 50 hz in Ohms/km	App. capactiance of cable in microF/KM	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
							With AL Cond.			With CU Cond.				
	Sq.mm	AL	CU	AL			CU	Ground	Duct	Air	Ground	Duct	Air	AL
3 x 25 + 16	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
3 x 35 + 16	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
3 x 50 + 25	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
3 x 70 + 35	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
3 x 95 + 50	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
3 x 120 + 70	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
3 x 150 + 70	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
3 x 185 + 95	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
3 x 240 + 120	0.125	0.0754	0.162	0.098	0.072	0.31	325	270	402	410	350	510	22.56	34.32
3 x 300 + 150	0.1	0.0601	0.13	0.078	0.071	0.33	370	305	461	460	390	590	28.2	42.9
3 x 400 + 185	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
3 x 500 + 240	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
3 x 630 + 300	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



4 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Technical Detail For 1.1 KV, 4 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Type / Code Of Cable:A2XFY/2XFY , A2XWY/2XWY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size Cross - Sectional Area	Minimum No. Of Strands in conductor		Nominal Thickness Of Insu.	Minimum Thickness of Inn. Sth.	Armouring with flat strip (A2XFY/ 2XFY)					Armouring with round wire (A2XWY/ 2XWY)					
						Nominal Thick. Of Arm. Strip	Minimum Thick. of Out. Sth.	Approx. Overall Dia.	Approx Net Wt Of Cable (Kg/Km)		Nominal Diameter Of Wire	Minimum Thick.of Out. Sth.	Approx. Overall Dia.	Approx Net Wt Of Cable (Kg/Km)		
		Al Cable. A2XFY	Cu Cable. 2XFY						mm	mm				mm	mm	mm
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
11 02 004C 0004	4	—	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	540	640
11 02 004C 0006	6	1	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	590	760
11 02 004C 0010	10	1	7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	N/A	1.4	1.4	21	655	940
11 02 004C 0016	16	6	6	0.7	0.3	0.8	1.4	20	700	1100	1.6	1.4	22	920	1280	
11 02 004C 0025	25	6	6	0.9	0.3	0.8	1.4	24	900	1500	1.6	1.4	26	1185	1750	
11 02 004C 0035	35	6	6	0.9	0.3	0.8	1.4	27	1100	2000	1.6	1.4	28	1420	2185	
11 02 004C 0050	50	6	6	1	0.3	0.8	1.56	30	1400	2500	1.6	1.56	32	1730	2830	
11 02 004C 0070	70	12	12	1.1	0.4	0.8	1.56	34	1800	3400	2	1.56	37	2375	3980	
11 02 004C 0095	95	15	15	1.1	0.4	0.8	1.56	37	2200	4400	2	1.72	40	2870	5130	
11 02 004C 0120	120	15	18	1.2	0.5	0.8	1.72	41	2700	5600	2	1.88	44	3475	6285	
11 02 004C 0150	150	15	18	1.4	0.5	0.8	1.88	46	3200	6800	2.5	2.04	49	4480	7980	
11 02 004C 0185	185	30	30	1.6	0.5	0.8	2.04	51	3900	8300	2.5	2.2	54	5185	9680	
11 02 004C 0240	240	30	34	1.7	0.6	0.8	2.2	57	4850	10500	2.5	2.36	65	6385	11985	
11 02 004C 0300	300	30	34	1.8	0.7	0.8	2.36	63	5850	13000	3.15	2.52	68	8280	15385	
11 02 004C 0400	400	53	53	2	0.7	0.8	2.68	71	7320	17000	3.15	2.84	76	9985	19480	
11 02 004C 0500	500	53	53	2.2	0.7	0.8	2.84	79	9000	21000	4	3	86	13480	24985	
11 02 004C 0630	630	53	53	2.4	0.7	0.8	3	88	11000	27000	4	3	94	15975	30485	

Technical Data:

- Conductor** : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded
- compacted shape class-2 as per IS:8130. In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2, round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130
- Insulation**: Crosslinked Polyethylene (XLPE)(Core color - Red, Yellow, Blue, Black)
- Inner Sheath** : PVC / PVC tape as per IS: 7098 (P-1)
- Armouring**: Single armouring of Galvanized Steel Strip/Wire.
- Outer Sheath**: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size cores x Sq.mm + Neutral Sq.mm	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 90 deg c in Ohm/km		App. Reactance at 50 hz in Ohms/km	App. capactiance of cable in microF/KM	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
	AL	CU	AL	CU			With AL Cond.			With CU Cond.				
							Ground	Duct	Air	Ground	Duct	Air	AL	CU
4	—	4.61	—	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.09	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.08	0.18	78	61	70	94	78	85	1.5	2.29
25	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



3.5 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Technical Detail For 1.1 KV, 3.5 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Type / Code Of Cable:AYFY/YFY , AYWY/YWY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size Cross - Sectional Area Sq.mm	Minimum No. Of Strands in conductor		Nominal Thickness Of Insu. mm	Minimum Thickness of Inn.Sth. mm	Armouring with flat strip (A YFY/ YFY)					Armouring with round wire (AYWY/ YWY)				
						Nominal Thick. Of Arm. Strip mm	Minimum Thick. of Out. Sth. mm	Approx. Overall Dia. mm	Approx Net Wt Of Cable (Kg/Km)		Nominal Diameter Of Wire mm	Minimum Thick.of Out.Sth. mm	Approx. Overall Dia. mm	Approx Net Wt Of Cable (Kg/Km)	
		Al Cable. A2XFY	Cu Cable. 2XFY						Al Cable. AYWY	Cu Cable. YWY					
11 03 305C 0025	3x25+16	6 / 6	6 / 6	1.2/1.0	0.3	0.8	1.4	24	1000	1550	1.6	1.4	26	1285	1825
11 03 305C 0035	3x35+16	6 / 6	6 / 6	1.2/1.0	0.3	0.8	1.4	26	1200	1950	1.6	1.4	28	1425	2125
11 03 305C 0050	3x50+25	6 / 6	6 / 6	1.4/1.2	0.3	0.8	1.56	30	1500	2600	1.6	1.56	31	1785	2790
11 03 305C 0070	3x70+35	12 / 6	12 / 6	1.4/1.2	0.4	0.8	1.56	34	1800	3300	2	1.56	36	2390	3780
11 03 305C 0095	3x95+50	15 / 6	15 / 6	1.6/1.4	0.4	0.8	1.56	37	2300	4350	2	1.72	39	2980	4980
11 03 305C 0120	3x120+70	15 / 12	18 / 12	1.6/1.4	0.5	0.8	1.72	41	2800	5450	2	1.88	43	3480	6080
11 03 305C 0150	3x150+70	15 / 12	18 / 12	1.8/1.4	0.5	0.8	1.88	45	3200	6400	2	1.88	47	3970	7180
11 03 305C 0185	3x185+95	30 / 15	30 / 15	2/1.6	0.5	0.8	2.04	49	3900	7900	2.5	2.04	53	5185	9150
11 03 305C 0240	3x240+120	30 / 15	34 / 18	2.20/1.6	0.6	0.8	2.2	55	4800	10000	2.5	2.3	58	6385	11480
11 03 305C 0300	3x300+150	30 / 15	34 / 18	2.4/1.8	0.6	0.8	2.36	61	5800	12300	3.15	2.52	65	8180	14480
11 03 305C 0400	3x400+185	53 / 30	53 / 30	2.6/2.0	0.7	0.8	2.68	69	7300	15800	3.15	2.63	75	9885	18380
11 03 305C 0500	3x500+240	53 / 30	53 / 34	3.0/2.2	0.7	0.8	2.84	77	9000	19500	4	3	84	13480	23985
11 03 305C 0630	3x630+300	53 / 30	53 / 34	3.4/2.40	0.7	0.8	3	87	11500	25000	4	3	92	15980	28480

Technical Data:

- Conductor :** AL/CU Stranded compact shaped conductor as per class-2, IS:8130
- Insulation:** PVC Type-A as per IS:5831. (Option: HR PVC Type -C, as per IS:5831)(Phase core color - Red, Yellow, Blue.) (Neutral core color Black)
- Inner Sheath :** PVC / PVC tape as per IS: 1554 (P-1)
- Armouring:** Single armouring of Galvanized Steel Strip/Wire.
- Outer Sheath:** PVC Type ST-1 as per IS:5831 (Option: PVC type ST-2 as per IS:5831, FR Type, FRLS Type)
Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size cores x Sq.mm + Neutral	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 85 deg c in Ohm/km		App. Reactance at 50 hz in	App. capactiance of cable in	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
							With AL Cond.			With CU Cond.				
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
3 x 25 + 16	1.2	0.727	1.44	0.87	0.083	0.42	76	63	70	99	81	90	1.9	2.88
3 x 35 + 16	0.868	0.524	1.04	0.63	0.082	0.48	92	77	86	120	99	110	2.66	4.03
3 x 50 + 25	0.641	0.387	0.769	0.464	0.082	0.49	110	95	105	145	125	135	3.8	5.75
3 x 70 + 35	0.443	0.268	0.532	0.322	0.076	0.56	135	115	130	175	150	165	5.32	8.05
3 x 95 + 50	0.32	0.193	0.384	0.232	0.076	0.58	165	140	155	210	175	200	7.22	10.9
3 x 120 + 70	0.253	0.153	0.304	0.184	0.075	0.63	185	155	180	240	195	230	9.12	13.8
3 x 150 + 70	0.206	0.124	0.247	0.1488	0.074	0.63	210	175	205	270	225	265	11.4	17.3
3 x 185 + 95	0.164	0.0991	0.197	0.1189	0.074	0.64	235	200	240	300	255	305	14.1	21.3
3 x 240 + 120	0.125	0.0754	0.151	0.0912	0.073	0.67	275	235	280	345	295	355	18.2	27.6
3 x 300 + 150	0.1	0.0601	0.122	0.0733	0.073	0.68	305	260	315	385	335	400	22.8	34.5
3 x 400 + 185	0.0778	0.047	0.0961	0.058	0.072	0.7	335	290	375	425	360	435	30.4	46
3 x 500 + 240	0.0605	0.0366	0.0759	0.459	0.072	0.7	370	320	425	470	390	520	38	57.5
3 x 630 + 300	0.0469	0.0283	0.061	0.0368	0.072	0.7	405	350	480	555	470	675	47.9	72.5



4 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Technical Detail For 1.1 KV, 4 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Type / Code Of Cable: AYFY/YFY , AYWY/YWY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size Cross - Sectional Area	Minimum No. Of Strands in conductor		Nominal Thickness Of Insu.	Minimum Thickness of Inn. Sth.	Armouring with flat strip (AYFY/YFY)			Approx. Net Wt Of Cable (Kg/Km)		Armouring with round wire (AYWY/ YWY)			Approx. Net Wt Of Cable (Kg/Km)	
						Nominal	Minimum	Approx.			Nominal	Minimum	Approx.		
						Thick. Of	Thick. of	Overall			Diameter	Thick. of	Overall		
						Arm. Strip	Out. Sth.	Dia.	Al	Cu	Of Wire	Out. Sth.	Dia.	Al	Cu
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	A2XFY	2XFY	mm	mm	mm	AYWY	YWY
11 04 004C 0004	4	—	1/7	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	630	775
11 04 004C 0006	6	1	1/7	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	21	870	1010
11 04 004C 0010	10	1	7	1	0.3	0.8	1.4	21	750	998	1.6	1.4	22	890	1130
11 04 004C 0016	16	6	6	1	0.3	0.8	1.4	22	860	1260	1.6	1.4	23	1110	1500
11 04 004C 0025	25	6	6	1.2	0.3	0.8	1.4	25	1100	1720	1.6	1.4	27	1385	2000
11 04 004C 0035	35	6	6	1.2	0.3	0.8	1.4	28	1300	2170	1.6	1.56	30	1580	2450
11 04 004C 0050	50	6	6	1.4	0.4	0.8	1.56	32	1600	2850	2	1.56	34	2185	3425
11 04 004C 0070	70	12	12	1.4	0.4	0.8	1.56	35	2000	3740	2	1.56	37	2625	4370
11 04 004C 0095	95	15	15	1.6	0.4	0.8	1.72	40	2600	5000	2	1.72	42	3285	5640
11 04 004C 0120	120	15	18	1.6	0.5	0.8	1.88	43	3050	6030	2	1.88	47	3825	6820
11 04 004C 0150	150	15	18	1.8	0.5	0.8	1.88	48	3600	7325	2.5	2.04	51	4830	8560
11 04 004C 0185	185	30	30	2	0.6	0.8	2.04	52	4300	8890	2.5	2.2	56	5780	10370
11 04 004C 0240	240	30	34	2.2	0.6	0.8	2.36	59	5400	11355	2.5	2.36	62	7685	12940
11 04 004C 0300	300	30	34	2.4	0.7	0.8	2.52	67	6600	14050	3.15	2.68	70	9185	16630
11 04 004C 0400	400	53	53	2.6	0.7	0.8	2.84	74	8200	18128	3.15	2.84	76	10980	20390
11 04 004C 0500	500	53	53	3	0.7	0.8	3	80	10500	22900	4	3	86	14980	27360
11 04 004C 0630	630	53	53	3.4	0.7	0.8	3	90	13000	28625	4	3	96	17975	33600

Technical Data:

- Conductor** : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130. In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2 round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.
- Insulation**: PVC TYPE-A as per IS:5831. (Option: PVC TYPE - C as per IS:5831) (Core color - Red, Yellow, Blue, Black)
- Inner Sheath** : PVC / PVC tape as per IS: 1554 (P-1)
- Armouring**: Single armouring of Galvanized Steel Strip/Wire.
- Outer Sheath**: PVC Type ST-1 as per IS:5831 (Option: PVC TYPE - ST-2 as per IS:5831, FR Type, FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size Cross - Sectional Area Sq.mm	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 85 deg c in Ohm/km		App. Reactance at 50 hz in Ohms/km	App. capectiance of cable in microF/KM	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
							With AL Cond.			With CU Cond.				
	AL	CU	AL	CU			Ground	Duct	Air	Ground	Duct	Air	AL	CU
4	—	4.61	—	5.53	0.098	0.23	28	23	23	36	30	30	0.304	0.46
6	4.61	3.08	5.53	3.7	0.096	0.28	35	30	30	45	38	39	0.456	0.69
10	3.08	1.83	3.7	2.2	0.091	0.34	46	39	40	60	50	52	0.76	1.15
16	1.91	1.15	2.29	1.38	0.085	0.4	60	50	51	77	64	66	1.22	1.84
25	1.2	0.727	1.44	0.87	0.083	0.42	76	63	70	99	81	90	1.9	2.88
35	0.868	0.524	1.04	0.63	0.082	0.48	92	77	86	120	99	110	2.66	4.03
50	0.641	0.387	0.769	0.464	0.082	0.49	110	95	105	145	125	135	3.8	5.75
70	0.443	0.268	0.532	0.322	0.076	0.56	135	115	130	175	150	165	5.32	8.05
95	0.32	0.193	0.384	0.232	0.076	0.58	165	140	155	210	175	200	7.22	10.9
120	0.253	0.153	0.304	0.184	0.075	0.63	185	155	180	240	195	230	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.074	0.63	210	175	205	270	225	265	11.4	17.3
185	0.164	0.0991	0.197	0.1189	0.074	0.64	235	200	240	300	255	305	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.073	0.67	275	235	280	345	295	355	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.073	0.68	305	260	315	385	335	400	22.8	34.5
400	0.078	0.047	0.0961	0.058	0.072	0.7	335	290	375	425	360	435	30.4	46
500	0.061	0.0366	0.0759	0.0459	0.072	0.7	370	320	425	470	390	520	38	57.5
630	0.047	0.0283	0.061	0.0368	0.072	0.7	405	350	480	555	470	675	47.9	72.5



3.5 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Technical Detail For 1.1 KV, 3.5 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Type / Code Of Cable:A2XY/2XY . As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size cores x Sq.mm + Neutral	Minimum No. Of Strands in conductor		Nominal Thickness Of Insulation	Minimum Thickness Of Inner Sheath	Nominal Thickness Of Outer Sheath	Approx. Overall Diameter	Approx. Net Wt Of Cable (Kg/Km)	
		AL	CU					AL Cable A2XY	CU Cable 2XY
	Sq.mm			mm	mm	mm	mm		
11 05 305C 0025	3 x 25 + 16	6 / 6	6 / 6	0.9/0.7	0.3	2.0	22	575	1125
11 05 305C 0035	3 x 35 + 16	6 / 6	6 / 6	0.9/0.7	0.3	2.0	24	685	1425
11 05 305C 0050	3 x 50 + 25	6 / 6	6 / 6	1.0/0.9	0.3	2.0	27	880	1980
11 05 305C 0070	3 x 70 + 35	12 / 6	12 / 6	1.1/0.9	0.4	2.2	31	1185	2680
11 05 305C 0095	3 x 95 + 50	15 / 6	15 / 6	1.1/1.0	0.4	2.2	34	1480	3580
11 05 305C 0120	3 x 120 + 70	15 / 12	18 / 12	1.2/1.1	0.4	2.2	38	1880	4480
11 05 305C 0150	3 x 150 + 70	15 / 12	18 / 12	1.4/1.1	0.5	2.4	43	2275	5485
11 05 305C 0185	3 x 185 + 95	30 / 15	30 / 15	1.6/1.1	0.5	2.6	46	2770	6785
11 05 305C 0240	3 x 240 + 120	30 / 15	34 / 18	1.7/1.2	0.6	2.8	52	3580	8675
11 05 305C 0300	3 x 300 + 150	30 / 15	34 / 18	1.8/1.4	0.6	3.0	57	4380	10780
11 05 305C 0400	3 x 400 + 185	53 / 30	53 / 30	2.0/1.6	0.7	3.4	65	5580	13980
11 05 305C 0500	3 x 500 + 240	53 / 30	53 / 34	2.2/1.7	0.7	3.6	73	6980	17425
11 05 305C 0630	3 x 630 + 300	53 / 30	53 / 34	2.4/1.8	0.7	4.0	82	8885	21970

Technical Data:

- **Conductor** : AL/CU Stranded compact shaped conductor as per class-2, IS:8130
- **Insulation**: Crosslinked Polyethylene (XLPE)(Phase core color - Red, Yellow, Blue.) (Neutral core color - Black)
- **Inner Sheath** : PVC / PVC tape as per IS: 7098 (P-1)
- **Outer Sheath**: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)
- **Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size cores x Sq.mm + Neutral	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 90 deg c in Ohm/km		App. Reactance at 50 hz in	App. capectiance of cable in	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
							With AL Cond.			With CU Cond.				
Sq.mm	AL	CU	AL	CU	Ohms/km	microf/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
3 x 25 + 16	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
3 x 35 + 16	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
3 x 50 + 25	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
3 x 70 + 35	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
3 x 95 + 50	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
3 x 120 + 70	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
3 x 150 + 70	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
3 x 185 + 95	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
3 x 240 + 120	0.125	0.0754	0.162	0.098	0.072	0.31	325	270	402	410	350	510	22.56	34.32
3 x 300 + 150	0.1	0.0601	0.13	0.078	0.071	0.33	370	305	461	460	390	590	28.2	42.9
3 x 400 + 185	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
3 x 500 + 240	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
3 x 630 + 300	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



4 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Technical Detail For 1.1 KV, 4 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Type / Code Of Cable:A2XY/2XY . As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size Cross - Sectional Area Sq.mm	Minimum No. Of Strands in conductor		Nominal Thickness Of Insulation mm	Minimum Thickness Of Inner Sheath mm	Nominal Thickness Of Outer Sheath mm	Approx. Overall Diameter mm	Approx. Net Wt Of Cable (Kg/Km)	
		AL	CU					AL Cable A2XY	CU Cable 2XY
11 06 004C 0004	4	—	1/7	0.7	0.3	1.8	17	240	340
11 06 004C 0006	6	1	1/7	0.7	0.3	1.8	18	340	480
11 06 004C 0010	10	1	7	0.7	0.3	1.8	20	390	640
11 06 004C 0016	16	6	6	0.7	0.3	1.8	20	440	840
11 06 004C 0025	25	6	6	0.9	0.3	2.0	24	650	1290
11 06 004C 0035	35	6	6	0.9	0.3	2.0	26	780	1685
11 06 004C 0050	50	6	6	1	0.3	2.0	29	985	2190
11 06 004C 0070	70	12	12	1.1	0.4	2.2	34	1380	3090
11 06 004C 0095	95	15	15	1.1	0.4	2.2	37	1685	3980
11 06 004C 0120	120	15	18	1.2	0.5	2.4	41	2125	5130
11 06 004C 0150	150	15	18	1.4	0.5	2.6	45	2630	6230
11 06 004C 0185	185	30	30	1.6	0.5	2.8	50	3230	7830
11 06 004C 0240	240	30	34	1.7	0.6	3.0	56	4080	9980
11 06 004C 0300	300	30	34	1.8	0.7	3.2	63	5030	12030
11 06 004C 0400	400	53	53	2	0.7	3.6	70	6385	15980
11 06 004C 0500	500	53	53	2.2	0.7	3.8	79	7980	19985
11 06 004C 0630	630	53	53	2.4	0.7	4.0	88	9985	25985

Technical Data:

- Conductor** : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130.In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2 round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.
- Insulation**: Crosslinked Polyethylene (XLPE)(Core color - Red, Yellow, Blue, Black)
- Inner Sheath** : PVC / PVC tape as per IS: 7098 (P-1)
- Outer Sheath**: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size Cross - Sectional Area Sq.mm	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 90 deg c in Ohm/km		App. Reactance at 50 hz in Ohms/km	App. capacitance of cable in microF/KM	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
	AL	CU	AL	CU			With AL Cond.			With CU Cond.			AL	CU
4	—	4.61	—	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.09	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.08	0.18	78	61	70	94	78	85	1.5	2.29
25	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.102	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.081	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
630	0.0469	0.0283	0.065	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



3.5 Cores AL/CU Conductor, PVC Insulated, Un- Armoured Cables

Technical Detail For 1.1 KV, 3.5 Cores AL/CU Conductor, PVC Insulated, Un- Armoured Cables

Type / Code Of Cable: AYY/YY . As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size cores x Sq.mm + Neutral	Minimum No. Of Strands in conuctor		Nominal Thickness Of Insulation	Minimum Thickness Of Inner Sheath	Nominal Thickness Of Outer Sheath	Approx. Overall Diameter	Approx. Net Wt Of Cable (Kg/Km)	
		AL	CU					AL Cable Ayy	CU Cable YY
11 07 305C 0025	3 x 25 + 16	6 / 6	6 / 6	1.2/1.0	0.3	2.0	24	680	1250
11 07 305C 0035	3 x 35 + 16	6 / 6	6 / 6	1.2/1.0	0.3	2.0	26	830	1585
11 07 305C 0050	3 x 50 + 25	6 / 6	6 / 6	1.4/1.2	0.3	2.0	29	1030	2080
11 07 305C 0070	3 x 70 + 35	12 / 6	12 / 6	1.4/1.2	0.4	2.2	32	1380	2880
11 07 305C 0095	3 x 95 + 50	15 / 6	15 / 6	1.6/1.4	0.4	2.2	36	1785	3885
11 07 305C 0120	3 x 120 + 70	15 / 12	18 / 12	1.6/1.4	0.5	2.4	40	2190	4830
11 07 305C 0150	3 x 150 + 70	15 / 12	18 / 12	1.8/1.4	0.5	2.4	44	2580	5780
11 07 305C 0185	3 x 185 + 95	30 / 15	30 / 15	2.0/1.6	0.5	2.6	48	3185	7180
11 07 305C 0240	3 x 240 + 120	30 / 15	34 / 18	2.20/1.6	0.6	3.0	54	4085	9280
11 07 305C 0300	3 x 300 + 150	30 / 15	34 / 18	2.4/1.8	0.6	3.2	62	4980	11480
11 07 305C 0400	3 x 400 + 185	53 / 30	53 / 30	2.6/2.0	0.7	3.4	68	6280	14985
11 07 305C 0500	3 x 500 + 240	53 / 30	53 / 34	3.0/2.2	0.7	3.8	77	7985	18480
11 07 305C 0630	3 x 630 + 300	53 / 30	53 / 34	3.4/2.40	0.7	4.0	87	9980	23485

Technical Data:

- Conductor :** AL/CU Stranded compact shaped conductor as per class-2, IS:8130
- Insulation:** PVC Type-A as per IS:5831. (Option: HR PVC Type -C, as per IS:5831)(Phase core color - Red, Yellow, Blue.) (Neutral core color Black)
- Inner Sheath :** PVC / PVC tape as per IS: 1554 (P-1)
- Outer Sheath:** PVC Type ST-1 as per IS:5831 (Option: PVC type ST-2 as per IS:5831/ FR Type/ FRLS Type)
Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size Cross - Sectional Area Sq.mm	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 85 deg c in Ohm/km		App. Reactance at 50 hz in Ohms/km	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
	AL	CU	AL	CU		With AL Cond.			With CU Cond.			AL	CU
3 x 25 + 16	1.2	0.727	1.44	0.87	0.083	76	63	70	99	81	90	1.9	2.88
3 x 35 + 16	0.868	0.524	1.04	0.63	0.082	92	77	86	120	99	110	2.66	4.03
3 x 50 + 25	0.641	0.387	0.769	0.464	0.082	110	95	105	145	125	135	3.8	5.75
3 x 70 + 35	0.443	0.268	0.532	0.322	0.076	135	115	130	175	150	165	5.32	8.05
3 x 95 + 50	0.32	0.193	0.384	0.232	0.076	165	140	155	210	175	200	7.22	10.9
3 x 120 + 70	0.253	0.153	0.304	0.184	0.075	185	155	180	240	195	230	9.12	13.8
3 x 150 + 70	0.206	0.124	0.247	0.1488	0.074	210	175	205	270	225	265	11.4	17.3
3 x 185 + 95	0.164	0.0991	0.197	0.1189	0.074	235	200	240	300	255	305	14.1	21.3
3 x 240 + 120	0.125	0.0754	0.151	0.0912	0.073	275	235	280	345	295	355	18.2	27.6
3 x 300 + 150	0.1	0.0601	0.122	0.0733	0.073	305	260	315	385	335	400	22.8	34.5
3 x 400 + 185	0.0778	0.047	0.0961	0.058	0.072	335	290	375	425	360	435	30.4	46
3 x 500 + 240	0.0605	0.0366	0.0759	0.459	0.072	370	320	425	470	390	520	38	57.5
3 x 630 + 300	0.0469	0.0283	0.061	0.0368	0.072	405	350	480	555	470	675	47.9	72.5



4 Cores AL/CU Conductor, PVC Insulated Un- Armoured Cables

Technical Detail For 1.1 KV, 4 Cores AL/CU Conductor, PVC Insulated Un- Armoured Cables

Type / Code Of Cable: AYY/YY . As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size Cross - Sectional Area Sq.mm	Minimum No. Of Strands in conductor		Nominal Thickness Of Insulation mm	Minimum Thickness Of Inner Sheath mm	Nominal Thickness Of Outer Sheath mm	Approx. Overall Diameter mm	Approx. Net Wt Of Cable (Kg/Km)	
		AL	CU					AL Cable AYY	CU Cable YY
11 08 004C 0004	4	—	1/7	1.0	0.3	1.8	16	290	390
11 08 004C 0006	6	1	1/7	1.0	0.3	1.8	18	380	530
11 08 004C 0010	10	1	7	1.0	0.3	1.8	20	530	770
11 08 004C 0016	16	6	6	1.0	0.3	2.0	23	550	940
11 08 004C 0025	25	6	6	1.2	0.3	2.0	26	740	1350
11 08 004C 0035	35	6	6	1.2	0.3	2.0	30	925	1785
11 08 004C 0050	50	6	6	1.4	0.4	2.2	34	1230	2480
11 08 004C 0070	70	12	12	1.4	0.4	2.2	38	1540	3285
11 08 004C 0095	95	15	15	1.6	0.4	2.4	43	2030	4385
11 08 004C 0120	120	15	18	1.6	0.5	2.4	46	2385	5360
11 08 004C 0150	150	15	18	1.8	0.5	2.6	51	2925	6650
11 08 004C 0185	185	30	30	2.0	0.6	2.8	55	3630	8230
11 08 004C 0240	240	30	34	2.2	0.6	3.0	60	4580	10530
11 08 004C 0300	300	30	34	2.4	0.7	3.4	66	5480	12950
11 08 004C 0400	400	53	53	2.6	0.7	3.6	73	6780	16700
11 08 004C 0500	500	53	53	3.0	0.7	4.0	82	8580	20980
11 08 004C 0630	630	53	53	3.4	0.7	4.0	92	10980	25980

Technical Data :

- Conductor** : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130.
In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2 round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.
- Insulation**: PVC TYPE -A, as per IS:5831.(Option : HR PVC TYPE -C, as per IS:5831) (Core color - Red, Yellow, Blue, Black)
- Inner Sheath** : PVC / PVC tape as per IS: 1554 (P-1)
- Outer Sheath**: PVC Type ST-1 as per IS:5831 (Option: PVC TYPE-ST-2 as per IS:5831, FR Type/ FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size Cross - Sectional Area Sq.mm	Max. Cond. D.C. Resistance at 20 deg c in Ohm/km		Max. Cond. A.C. Resistance at 85 deg c in Ohm/km		App. Resistance Reactance in Ohms/km	App. capectiance of cable in microF/KM	Normal* Current Rating In Amps						Short Circuit Current Rating for 1sec. Duration in K.Amps	
	AL	CU	AL	CU			With AL Cond.			With CU Cond.			AL	CU
4	—	4.61	—	5.53	0.098	0.23	28	23	23	36	30	30	0.304	0.46
6	4.61	3.08	5.53	3.7	0.096	0.28	35	30	30	45	38	39	0.456	0.69
10	3.08	1.83	3.7	2.2	0.091	0.34	46	39	40	60	50	52	0.76	1.15
16	1.91	1.15	2.29	1.38	0.085	0.4	60	50	51	77	64	66	1.22	1.84
25	1.2	0.727	1.44	0.87	0.083	0.42	76	63	70	99	81	90	1.9	2.88
35	0.868	0.524	1.04	0.63	0.082	0.48	92	77	86	120	99	110	2.66	4.03
50	0.641	0.387	0.769	0.464	0.082	0.49	110	95	105	145	125	135	3.8	5.75
70	0.443	0.268	0.532	0.322	0.076	0.56	135	115	130	175	150	165	5.32	8.05
95	0.32	0.193	0.384	0.232	0.076	0.58	165	140	155	210	175	200	7.22	10.9
120	0.253	0.153	0.304	0.184	0.075	0.63	185	155	180	240	195	230	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.074	0.63	210	175	205	270	225	265	11.4	17.3
185	0.164	0.0991	0.197	0.1189	0.074	0.64	235	200	240	300	255	305	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.073	0.67	275	235	280	345	295	355	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.073	0.68	305	260	315	385	335	400	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.072	0.7	335	290	375	425	360	435	30.4	46
500	0.0605	0.0366	0.0759	0.0459	0.072	0.7	370	320	425	470	390	520	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.072	0.7	405	350	480	555	470	675	47.9	72.5



1.5 SQ.MM Copper Conductor, XLPE Insulated Un-Armoured & Galvanized Steel Strip/Wire Armoured Control Cables

Technical Detail For 1.5 SQ.MM Copper Conductor, XLPE Insulated Un-Armoured & Galvanized Steel Strip/Wire Armoured Control Cables

Type / Code Of Cable:2XY/2XFY/2XWY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	NO OF CORES	Minimum Thickness of Inner Sh.	UNARMoured (2XY)			Armoured With Flat Strips (2XFY)				Armoured With Round Wire (2XWY)			
			Nom. Thick. Of Out. Sh. mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Kg/Km
11 09 002C 01X5	2	0.3	1.8	10.0	140	N/A	N/A	N/A	N/A	1.4	1.24	12.5	370
11 09 003C 01X5	3	0.3	1.8	10.5	160	N/A	N/A	N/A	N/A	1.4	1.24	13	390
11 09 004C 01X5	4	0.3	1.8	11.5	200	N/A	N/A	N/A	N/A	1.4	1.24	13.5	415
11 09 005C 01X5	5	0.3	1.8	12.5	225	N/A	N/A	N/A	N/A	1.4	1.24	14.5	465
11 09 006C 01X5	6	0.3	1.8	13.5	250	N/A	N/A	N/A	N/A	1.4	1.24	15.5	500
11 09 007C 01X5	7	0.3	1.8	13.5	260	N/A	N/A	N/A	N/A	1.4	1.24	15.5	520
11 09 010C 01X5	10	0.3	1.8	17.0	340	N/A	N/A	N/A	N/A	1.4	1.24	18.5	655
11 09 012C 01X5	12	0.3	1.8	17.5	390	N/A	N/A	N/A	N/A	1.6	1.4	19	720
11 09 014C 01X5	14	0.3	1.8	18.0	430	N/A	N/A	N/A	N/A	1.6	1.4	20	825
11 09 016C 01X5	16	0.3	1.8	18.5	475	0.8	1.4	19	750	1.6	1.4	21	925
11 09 019C 01X5	19	0.3	2.0	19.5	540	0.8	1.4	20	815	1.6	1.4	22	1010
11 09 024C 01X5	24	0.3	2.0	22.5	665	0.8	1.4	23	1000	1.6	1.4	25	1250
11 09 027C 01X5	27	0.3	2.0	23.0	750	0.8	1.4	23.5	1050	1.6	1.4	25.5	1330
11 09 030C 01X5	30	0.3	2.0	23.5	820	0.8	1.4	24	1125	1.6	1.4	26	1400
11 09 037C 01X5	37	0.3	2.0	26.0	665	0.8	1.4	26	1325	1.6	1.4	28	1550
11 09 040C 01X5	40	0.3	2.0	26.0	1050	0.8	1.4	26.5	1400	1.6	1.4	29.5	1700
11 09 044C 01X5	44	0.3	2.0	28.0	1150.0	0.8	1.4	28.5	1500	1.6	1.56	30.5	1850
11 09 052C 01X5	52	0.3	2.0	29.0	1300	0.8	1.56	30.5	1700	1.6	1.56	32	2050
11 09 061C 01X5	61	0.4	2.2	31.0	1500	0.8	1.56	32	1950	2.0	1.56	34.5	2550

Technical Data:

- Conductor** : CU Conductor solid as per class -1 IS:8130 or Stranded as per class-2 IS:8130.
- Insulation Material**: Crosslink Polyethylene XLPE Compound. Insulation Thickness 0.7 mm.
- Inner Sheath** : PVC / PVC tape as per IS: 7098 (P-1)
- Armouring**: Single armouring of Galvanized Steel Strip/Wire.
- Outer Sheath**: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

NO OF CORES	Maximum Cond. D.C. Resistance at 20 deg c Ohm/Km	APP. Cond. A.C. Resistance at In Ohm/Km at 90 deg c	Reactance of cable at 50 Hz In Ohms/km	Appro Capecit. of cable in microF/KM	Normal Current Rating in Amps With XLPE INSULATION			Short Circuit Current Rating for 1 Sec uration With XLPE Insulation
					Ground	Duct	Air	
2	12.1	15.2	0.11	0.096	30.0	27.0	28.0	0.215
3	12.1	15.2	0.11	0.096	28.0	23.0	24.0	0.215
4	12.1	15.2	0.11	0.096	28.0	23.0	24.0	0.215
5	12.1	15.2	0.11	0.096	28.0	23.0	24.0	0.215
6	12.1	15.2	0.11	0.096	20.5	18.0	19.0	0.215
7	12.1	15.2	0.11	0.096	19.5	18.0	19.0	0.215
10	12.1	15.2	0.11	0.096	18.0	15.5	16.5	0.215
12	12.1	15.2	0.11	0.096	17.0	14.5	15.0	0.215
14	12.1	15.2	0.11	0.096	15.5	14.5	15.0	0.215
16	12.1	15.2	0.11	0.096	15.5	13.0	14.0	0.215
19	12.1	15.2	0.11	0.096	14.5	13.0	14.0	0.215
24	12.1	15.2	0.11	0.096	13.0	12.0	12.5	0.215
27	12.1	15.2	0.11	0.096	13.0	12.0	12.5	0.215
30	12.1	15.2	0.11	0.096	12.0	10.5	11.0	0.215
37	12.1	15.2	0.11	0.096	11.0	9.5	10.5	0.215
40	12.1	15.2	0.11	0.096	11.0	9.5	10.5	0.215
44	12.1	15.2	0.11	0.096	10.0	8.5	9.0	0.215
52	12.1	15.2	0.11	0.096	9.5	7.5	8.0	0.215
61	12.1	15.2	0.11	0.096	8.5	7.0	7.5	0.215



2.5 SQ.MM Copper Conductor, XLPE Insulated Un-Armoured & Galvanizeed Steel Strip/Wire Armoured Control Cables

Technical Detail For 2.5 SQ.MM Copper Conductor, XLPE Insulated Un-Armoured & Galvanizeed Steel Strip/Wire Armoured Control Cables

Type / Code Of Cable:2XY/2XFY/2XWY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	NO OF CORES	Minimum Thickness of Inner Sh.	UNARMOURED (2XY)			Armoured With Flat Strips (2XFY)				Armoured With Round Wire (2XWY)			
			Nom. Thick. Of Out. Sh. mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Kg/Km
11 10 002C 02X5	2	0.3	1.8	10.5	170	N/A	N/A	N/A	N/A	1.4	1.24	12.5	390
11 10 003C 02X5	3	0.3	1.8	11.5	200	N/A	N/A	N/A	N/A	1.4	1.24	13.0	635
11 10 004C 02X5	4	0.3	1.8	12.0	235	N/A	N/A	N/A	N/A	1.4	1.24	14.0	585
11 10 005C 02X5	5	0.3	1.8	13.0	270	N/A	N/A	N/A	N/A	1.4	1.24	15.0	540
11 10 006C 02X5	6	0.3	1.8	14.0	310	N/A	N/A	N/A	N/A	1.4	1.24	15.5	595
11 10 007C 02X5	7	0.3	1.8	14.0	335	N/A	N/A	N/A	N/A	1.4	1.24	15.5	620
11 10 010C 02X5	10	0.3	1.8	17.0	350	N/A	N/A	N/A	N/A	1.6	1.4	19.5	870
11 10 012C 02X5	12	0.3	1.8	19.0	520	0.8	1.4	19.0	760	1.6	1.4	21.0	985
11 10 014C 02X5	14	0.3	1.8	19.5	575	0.8	1.4	19.5	820	1.6	1.4	21.5	1030
11 10 016C 02X5	16	0.3	2.0	20.0	655	0.8	1.4	20.0	890	1.6	1.4	22.0	1105
11 10 019C 02X5	19	0.3	2.0	21.0	745	0.8	1.4	21.0	990	1.6	1.4	23.0	1225
11 10 024C 02X5	24	0.3	2.0	23.5	910	0.8	1.4	24.0	1210	1.6	1.4	25.5	1470
11 10 027C 02X5	27	0.3	2.0	24.0	1040	0.8	1.4	24.5	1300	1.6	1.4	26.5	1580
11 10 030C 02X5	30	0.3	2.0	25.0	1085	0.8	1.4	25.5	1400	1.6	1.4	27.0	1680
11 10 037C 02X5	37	0.3	2.0	27.0	1290	0.8	1.4	27.5	1635	1.6	1.56	29.0	1950
11 10 040C 02X5	40	0.3	2.0	28.0	1390	0.8	1.56	28.5	1770	1.6	1.56	30.5	2145
11 10 044C 02X5	44	0.4	2.2	31.0	1550	0.8	1.56	31.0	1950	2.0	1.56	33.5	2525
11 10 052C 02X5	52	0.4	2.2	32.0	1790	0.8	1.56	32.5	2200	2.0	1.56	35.0	2785
11 10 061C 02X5	61	0.4	2.2	34.0	2050	0.8	1.56	34.0	2490	2.0	1.56	36.5	3105

Technical Data:

- **Conductor** : CU Conductor solid as per class -1 IS:8130 or Stranded as per class-2 IS:8130.
- **Insulation Material**: Crosslink Polyethylene XLPE Compound. Insulation Thickness 0.7 mm.
- **Inner Sheath** : PVC / PVC tape as per IS: 7098 (P-1)
- **Armouring**: Single armouring of Galvanized Steel Strip/Wire.
- **Outer Sheath**: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)
- **Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

NO OF CORES	Maximum Cond. D.C. Resistance at 20 deg c Ohm/Km	APP. Cond. A.C. Resistance at In Ohm/Km at 90 deg c	Reactance of cable at 50 Hz In Ohms/km	Appro Capecit. of cable in microF/KM	Normal Current Rating in Amps With XLPE INSULATION			Short Circuit Current Rating for 1 Sec uration With XLPE Insulation
					Ground	Duct	Air	
2	7.41	9.34	0.105	0.108	41.0	36.0	37.0	0.358
3	7.41	9.34	0.105	0.108	35.0	32.0	33.0	0.358
4	7.41	9.34	0.107	0.108	35.0	32.0	33.0	0.358
5	7.41	9.34	0.107	0.108	35.0	32.0	33.0	0.358
6	7.41	9.34	0.107	0.108	27.5	24.5	25.5	0.358
7	7.41	9.34	0.107	0.108	26.5	23.5	24.0	0.358
10	7.41	9.34	0.107	0.108	24.0	21.0	21.5	0.358
12	7.41	9.34	0.107	0.108	23.0	19.5	20.5	0.358
14	7.41	9.34	0.107	0.108	21.5	18.5	19.0	0.358
16	7.41	9.34	0.107	0.108	20.5	18.5	19.0	0.358
19	7.41	9.34	0.107	0.108	19.5	17.0	17.5	0.358
24	7.41	9.34	0.107	0.108	18.0	16.0	16.5	0.358
27	7.41	9.34	0.107	0.108	17.0	14.5	14.0	0.358
30	7.41	9.34	0.107	0.108	16.0	13.5	14.0	0.358
37	7.41	9.34	0.107	0.108	14.5	12.5	13.0	0.358
40	7.41	9.34	0.107	0.108	14.5	12.5	13.0	0.358
44	7.41	9.34	0.107	0.108	13.5	11.5	12.0	0.358
52	7.41	9.34	0.107	0.108	12.0	10.0	11	0.358
61	7.41	9.34	0.105	0.108	11.0	9.0	10	0.358



1.5 SQ.MM Copper Conductor, PVC Insulated Un-Armoured & Galvanized Steel Strip/Wire Armoured Control Cables

Technical Detail For 1.5 SQ.MM Copper Conductor, PVC Insulated Un-Armoured & Galvanized Steel Strip/Wire Armoured Control Cables

Type / Code Of Cable:YY/YFY/YWY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	NO OF CORES	Minimum Thickness of Inner Sh.	UNARMoured (YY)			Armoured With Flat Strips (YFY)				Armoured With Round Wire (YWY)			
			Nom. Thick. Of Out. Sh. mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Kg/Km
11 11 002C 01X5	2	0.3	1.8	12	180	N/A	N/A	N/A	N/A	1.4	1.24	13	380
11 11 003C 01X5	3	0.3	1.8	12.5	200	N/A	N/A	N/A	N/A	1.4	1.24	14	440
11 11 004C 01X5	4	0.3	1.8	13	230	N/A	N/A	N/A	N/A	1.4	1.24	15	480
11 11 005C 01X5	5	0.3	1.8	14	250	N/A	N/A	N/A	N/A	1.4	1.24	16	510
11 11 006C 01X5	6	0.3	1.8	15	290	N/A	N/A	N/A	N/A	1.4	1.24	17	570
11 11 007C 01X5	7	0.3	1.8	15	310	N/A	N/A	N/A	N/A	1.4	1.24	17	630
11 11 010C 01X5	10	0.3	1.8	18	420	N/A	N/A	N/A	N/A	1.4	1.24	20	780
11 11 012C 01X5	12	0.3	1.8	19	470	0.8	1.24	19	700	1.6	1.4	21	900
11 11 014C 01X5	14	0.3	1.8	20	530	0.8	1.4	20	800	1.6	1.4	22	980
11 11 016C 01X5	16	0.3	1.8	21	600	0.8	1.4	21	850	1.6	1.4	23	1050
11 11 019C 01X5	19	0.3	2.0	22	700	0.8	1.4	22	950	1.6	1.4	24	1160
11 11 024C 01X5	24	0.3	2.0	25	850	0.8	1.4	25	1150	1.6	1.4	27	1400
11 11 027C 01X5	27	0.3	2.0	26	920	0.8	1.4	26	1250	1.6	1.4	28	1480
11 11 030C 01X5	30	0.3	2.0	27	1000	0.8	1.4	27	1330	1.6	1.4	29	1600
11 11 037C 01X5	37	0.3	2.0	28	1200	0.8	1.4	29	1530	1.6	1.4	30	1800
11 11 040C 01X5	40	0.3	2.0	29	1270	0.8	1.4	30	1650	1.6	1.56	32	1980
11 11 044C 01X5	44	0.3	2.0	31	1400	0.8	1.56	32	1850	1.6	1.56	34	2150
11 11 052C 01X5	52	0.4	2.0	33	1650	0.8	1.56	34	2050	2.0	1.56	36	2650
11 11 061C 01X5	61	0.4	2.2	35	1850	0.8	1.56	35	2300	2.0	1.56	38	2950

Technical Data:

- Conductor** : CU Conductor solid as per class -1 IS:8130 or Stranded as per class-2 IS:8130.
- Insulation Material**: PVC Type-A as per IS:5831/Option:HR PVC (Type - C) as per IS:5831 Nominal Thickness of Insulation is 0.8 mm. Up to 5 cores by colour coding & more than 5 cores number printing on core as per IS:1554 (P-1)
- Inner Sheath** : PVC / PVC tape as per IS: 1554 (P-1)
- Armouring**: Single armouring of Galvanized Steel Strip/Wire.
- Outer Sheath**: PVC Type ST-1 as per IS:5831 (Option: PVC Type ST-2 as per IS:5831, FR Type/ FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

NO OF CORES	Maximum Cond. D.C. Resistance at 20 deg c Ohm/Km	APP. Cond. A.C. Resistance at In Ohm/Km		Reactance of cable at 50 Hz In Ohms/km	Appro Capecit. of cable in microF/KM	Normal Current Rating in Amps						Short Circuit Current Rating for 1 Sec. Duration	
						With general Insulation			With H.R. Insulation			With Gen. Purpose Insulation	With Heat Resistance Insulation
						Ground	Duct	Air	Ground	Duct	Air		
2	12.1	14.52	15.2	0.112	0.2	23	20	20	26	24	24	0.156	0.173
3	12.1	14.52	15.2	0.112	0.2	21	17	17	24	21	21	0.156	0.173
4	12.1	14.52	15.2	0.112	0.2	21	17	17	24	21	21	0.156	0.173
5	12.1	14.52	15.2	0.112	0.2	21	17	17	24	21	21	0.156	0.173
6	12.1	14.52	15.2	0.112	0.2	15	13	13	17	16	16	0.156	0.173
7	12.1	14.52	15.2	0.112	0.2	14	13	13	16	15	15	0.156	0.173
10	12.1	14.52	15.2	0.112	0.2	13	11	11	15	13	13	0.156	0.173
12	12.1	14.52	15.2	0.112	0.2	12	10	10	14	12	12	0.156	0.173
14	12.1	14.52	15.2	0.112	0.2	11	10	10	13	12	12	0.156	0.173
16	12.1	14.52	15.2	0.112	0.2	11	9	9	13	11	11	0.156	0.173
19	12.1	14.52	15.2	0.112	0.2	10	9	9	11	11	11	0.156	0.173
24	12.1	14.52	15.2	0.112	0.2	9	8	8	10	10	10	0.156	0.173
27	12.1	14.52	15.2	0.112	0.2	9	8	8	10	10	10	0.156	0.173
30	12.1	14.52	15.2	0.112	0.2	9	7	7	10	8	8	0.156	0.173
37	12.1	14.52	15.2	0.112	0.2	8	7	7	9	8	8	0.156	0.173
40	12.1	14.52	15.2	0.112	0.2	8	7	7	9	8	8	0.156	0.173
44	12.1	14.52	15.2	0.112	0.2	7	7	7	8	7	7	0.156	0.173
52	12.1	14.52	15.2	0.112	0.2	6	6	6	7	7	7	0.156	0.173
61	12.1	14.52	15.2	0.112	0.2	6	6	6	7	7	7	0.156	0.173



2.5 SQ.MM Copper Conductor, PVC Insulated Un-Armoured & Galvanized Steel Strip/Wire Armoured Control Cables

Technical Detail For 2.5 SQ.MM Copper Conductor, PVC Insulated Un-Armoured & Galvanized Steel Strip/Wire Armoured Control Cables

Type / Code Of Cable:YY/YFY/YWY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	NO OF CORES	Minimum Thickness of Inner Sh.	UNARMoured (YY)			Armoured With Flat Strips (YFY)				Armoured With Round Wire (YWY)			
			Nom. Thick. Of Out. Sh. mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Of Cable Kg/Km	Nom. Thick. of strip for Arm. mm	Min. Thick. of Out. sheath mm	App. Overall Dia. mm	App. Net Wt. Kg/Km
11 12 002C 02X5	2	0.3	1.8	13	220	N/A	N/A	N/A	N/A	1.4	1.24	14	440
11 12 003C 02X5	3	0.3	1.8	14	260	N/A	N/A	N/A	N/A	1.4	1.24	15	480
11 12 004C 02X5	4	0.3	1.8	15	310	N/A	N/A	N/A	N/A	1.4	1.24	16	560
11 12 005C 02X5	5	0.3	1.8	16	340	N/A	N/A	N/A	N/A	1.4	1.24	17	600
11 12 006C 02X5	6	0.3	1.8	17	390	N/A	N/A	N/A	N/A	1.4	1.24	19	685
11 12 007C 02X5	7	0.3	1.8	17	424	N/A	N/A	N/A	N/A	1.6	1.24	19	720
11 12 010C 02X5	10	0.3	1.8	20	570	0.8	1.4	21	850	1.6	1.4	23	1040
11 12 012C 02X5	12	0.3	2.0	21	670	0.8	1.4	22	950	1.6	1.4	24	1130
11 12 014C 02X5	14	0.3	2.0	22	750	0.8	1.4	23	1050	1.6	1.4	25	1080
11 12 016C 02X5	16	0.3	2.0	24	840	0.8	1.4	24	1120	1.6	1.4	26	1180
11 12 019C 02X5	19	0.3	2.0	25	950	0.8	1.4	25	1250	1.6	1.4	27	1340
11 12 024C 02X5	24	0.3	2.0	28	1200	0.8	1.4	29	1550	1.6	1.56	31	1680
11 12 027C 02X5	27	0.3	2.0	29	1300	0.8	1.4	30	1650	1.6	1.56	32	1840
11 12 030C 02X5	30	0.3	2.0	30	1400	0.8	1.56	31	1800	1.6	1.56	33	1985
11 12 037C 02X5	37	0.4	2.2	33	1700	0.8	1.56	34	2100	2.00	1.56	36	2580
11 12 040C 02X5	40	0.4	2.2	34	1850	0.8	1.56	35	2300	2.00	1.56	37	2740
11 12 044C 02X5	44	0.4	2.2	36	2000	0.8	1.56	37	2500	2.00	1.56	40	2980
11 12 052C 02X5	52	0.4	2.2	38	2350	0.8	1.56	39	2850	2.0	1.72	42	3380
11 12 061C 02X5	61	0.4	2.2	40	2700	0.8	1.56	41	3250	2.0	1.72	44	3780

Technical Data:

- Conductor** : CU Conductor solid as per class -1 IS:8130 or Stranded as per class-2 IS:8130.
- Insulation Material**: PVC Type-A as per IS:5831/Option:HR PVC (Type - C) as per IS:5831.
Nominal Thickness of Insulation is 0.9 mm.
Up to 5 cores by colour coding & more than 5 cores number printing on core as per IS:1554 (P-1)
- Inner Sheath** : PVC / PVC tape as per IS: 1554 (P-1)
- Armouring**: Single armouring of Galvanized Steel Strip/Wire
- Outer Sheath**: PVC Type ST-1 as per IS:5831 (Option: PVC Type ST-2 as per IS:5831, FR Type/ FRLS Type)
- Color Of Outer Sheath**: Black. (Options: Any other color as per requirement.)

Electrical Parameters

NO OF CORES	Maximum Cond. D.C. Resistance at 20 deg c Ohm/Km	APP. Cond. A.C. Resistance at In Ohm/Km		Reactance of cable at 50 Hz In Ohms/km	Appro Capecit. of cable in microF/KM	Normal Current Rating in Amps						Short Circuit Current Rating for 1 Sec. Duration	
						With general Insulation			With H.R. Insulation			With Gen. Purpose Insulation	With Heat Resistance Insulation
						Ground	Duct	Air	Ground	Duct	Air		
2	7.41	8.89	9.34	0.107	0.22	32	27	27	38	32	32	0.26	0.288
3	7.41	8.89	9.34	0.107	0.22	27	24	24	30	28	28	0.26	0.288
4	7.41	8.89	9.34	0.107	0.22	27	24	24	30	28	28	0.26	0.288
5	7.41	8.89	9.34	0.107	0.22	27	24	24	30	28	28	0.26	0.288
6	7.41	8.89	9.34	0.107	0.22	21	18	18	24	21	21	0.26	0.288
7	7.41	8.89	9.34	0.107	0.22	20	17	17	22	20	20	0.26	0.288
10	7.41	8.89	9.34	0.107	0.22	18	15	15	20	16	16	0.26	0.288
12	7.41	8.89	9.34	0.107	0.22	17	14	14	19	16	16	0.26	0.288
14	7.41	8.89	9.34	0.107	0.22	16	13	13	18	15	15	0.26	0.288
16	7.41	8.89	9.34	0.107	0.22	15	13	13	17	15	15	0.26	0.288
19	7.41	8.89	9.34	0.107	0.22	14	12	12	16	14	14	0.26	0.288
24	7.41	8.89	9.34	0.107	0.22	13	11	11	14	13	13	0.26	0.288
27	7.41	8.89	9.34	0.107	0.22	12	10	10	13	12	12	0.26	0.288
30	7.41	8.89	9.34	0.107	0.22	12	10	10	13	12	12	0.26	0.288
37	7.41	8.89	9.34	0.107	0.22	11	9	9	12	10	10	0.26	0.288
40	7.41	8.89	9.34	0.107	0.22	11	9	9	12	10	10	0.26	0.288
44	7.41	8.89	9.34	0.107	0.22	10	9	9	11	10	10	0.26	0.288
52	7.41	8.89	9.34	0.107	0.22	9	8	8	10	10	10	0.26	0.288
61	7.41	8.89	9.34	0.107	0.22	8	8	8	9	9	9	0.26	0.288



RR KABEL-SINGLE CORE POWER CABLE

Technical Detail For 1.1 KV, 1 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Type / Code Of Cable:

A2XY/2XY . As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Nominal	Approx.	Approx. Net Wt. Of Cable (Kg/Km)	
	Cross -	Strands in conductor		Thickness	Thickness Of	Over all		
	Sectional			Of Insulation	Outer Sheath	Diameter		
	Area						AL Cable	CU Cable
	Sq.mm	AL	CU	mm	mm	mm	A2XY	2XY
11 13 001C 0016	16	6	6	0.7	1.8	11	125	225
11 13 001C 0025	25	6	6	0.9	1.8	12	170	330
11 13 001C 0035	35	6	6	0.9	1.8	13	205	425
11 13 001C 0050	50	6	6	1	1.8	15	250	550
11 13 001C 0070	70	12	12	1.1	1.8	16	335	750
11 13 001C 0095	95	15	15	1.1	1.8	18	425	1000
11 13 001C 0120	120	15	18	1.2	1.8	20	515	1250
11 13 001C 0150	150	15	18	1.4	2.0	22	615	1520
11 13 001C 0185	185	30	30	1.6	2.0	24	770	1880
11 13 001C 0240	240	30	34	1.7	2.0	27	965	2415
11 13 001C 0300	300	30	34	1.8	2.0	30	1160	2980
11 13 001C 0400	400	53	53	2	2.2	33	1480	3800
11 13 001C 0500	500	53	53	2.2	2.2	36	1840	4815
11 13 001C 0630	630	53	53	2.4	2.2	40	2350	6150
11 13 001C 0800	800	53	53	2.6	2.4	47	2830	7840
11 13 001C 1000	1000	53	53	2.8	2.6	51	3670	9800

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact class-2 as per IS 8130
In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm & above stranded round or stranded compact class-2 as per IS 8130.

Insulation: Crosslinked Polyethulene (XLPE)(Core color - Red or Yellow or Blue or Black or Natural)

Outer Sheath: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capactiance							Current Rating	
Sectional	20 deg c in		90 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in							in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
16	1.91	1.15	2.44	1.47	0.108	0.5	81	80	83	104	102	106	1.5	2.29
25	1.2	0.727	1.54	0.931	0.102	0.52	99	90	115	130	115	145	2.35	3.58
35	0.868	0.524	1.11	0.671	0.097	0.6	117	110	135	155	140	175	3.29	5.01
50	0.641	0.387	0.82	0.495	0.092	0.63	138	125	170	185	165	215	4.7	7.15
70	0.443	0.268	0.567	0.343	0.088	0.68	168	155	210	225	200	270	6.58	10.01
95	0.32	0.193	0.411	0.248	0.085	0.79	204	185	255	265	235	330	8.93	13.59
120	0.253	0.153	0.325	0.197	0.082	0.79	230	210	300	300	265	380	11.28	17.16
150	0.206	0.124	0.265	0.159	0.082	0.79	265	230	342	335	300	430	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.082	0.79	295	260	385	380	335	495	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.079	0.84	340	300	450	435	385	590	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.078	0.86	390	335	519	490	430	670	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.077	0.88	450	380	605	550	480	780	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.076	0.9	500	430	700	610	530	900	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.075	0.94	555	485	809	680	590	1020	59.22	90.09
800	0.0367	0.0221	0.0533	0.0319	0.075	0.97	625	530	935	740	630	1140	75.2	114.4
1000	0.0291	0.0176	0.0444	0.0268	0.068	1.01	690	570	1065	780	660	1250	94	143



RR KABEL-SINGLE CORE POWER CABLE

Technical Detail For 1.1 KV, 1 Cores AL/CU Conductor, XLPE Insulated, Aluminum Strip/Wire Armoured Cables

Type / Code Of Cable:

A2XFaY/2XFaY , A2XWaY/2XWaY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Armouring with flat strip (A2XFaY/ 2XFaY)					Armouring with round wire (A2XWaY/ 2XWaY)				
	Cross -	Strands in conuctor		Thickness	Nominal	Minimum	Approx.	Approx Net Wt		Nominal	Minimum	Approx.	Approx Net Wt	
	Sectional			Of Insulation	Thick. Of	Thick.of	Overall	Of Cable (Kg/Km)		Diameter	Thick.of	Overall	Of Cable (Kg/Km)	
	Area				Arm.Strip	Out.Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	A2XFaY	2XFaY	mm	mm	mm	A2XWaY	2XWaY
11 14 001C 0016	16	6	6	1	N/A	N/A	N/A	N/A	N/A	1.4	1.24	13	200	300
11 14 001C 0025	25	6	6	1.2	N/A	N/A	N/A	N/A	N/A	1.4	1.24	14	300	455
11 14 001C 0035	35	6	6	1.2	N/A	N/A	N/A	N/A	N/A	1.4	1.24	15	350	567
11 14 001C 0050	50	6	6	1.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	17	420	730
11 14 001C 0070	70	12	12	1.4	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	520	954
11 14 001C 0095	95	15	15	1.4	0.8	1.4	21	600	1195	1.6	1.4	22	650	1235
11 14 001C 0120	120	15	18	1.5	0.8	1.4	23	700	1450	1.6	1.4	24	750	1494
11 14 001C 0150	150	15	18	1.7	0.8	1.4	24	800	1730	1.6	1.4	25	850	1780
11 14 001C 0185	185	30	30	1.9	0.8	1.4	26	950	2100	1.6	1.4	28	1000	2147
11 14 001C 0240	240	30	34	2	0.8	1.4	30	1200	2690	1.6	1.4	30	1250	2738
11 14 001C 0300	300	30	34	2.1	0.8	1.56	32	1400	3270	1.6	1.56	33	1500	3360
11 14 001C 0400	400	53	53	2.4	0.8	1.56	36	1750	4230	2	1.56	38	1900	4380
11 14 001C 0500	500	53	53	2.6	0.8	1.56	39	2150	5250	2	1.56	41	2350	5450
11 14 001C 0630	630	53	53	2.8	0.8	1.72	44	2700	6610	2	1.72	46	2900	6806
11 14 001C 0800	800	53	53	3.1	0.8	1.72	48	3350	8320	2	1.88	51	3600	8560
11 14 001C 1000	1000	53	53	3.3	0.8	1.88	54	4100	10300	2.5	2.04	56	4600	10800

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact class-2 as per IS 8130
In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm & above stranded round or stranded compact class-2 as per IS 8130.

Insulation: Crosslinked Polyethulene (XLPE)(Core color - Red, Yellow, Blue, Black)

Armouring: Single armouring of Aluminum Strip or Aluminum Wire as per IS 7098 P-1

Outer Sheath: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capectance							Current Rating	
Sectional	20 deg c in		90 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in							in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
16	1.91	1.15	2.44	1.47	0.122	0.4	76	80	73	104	102	106	1.5	2.29
25	1.2	0.727	1.54	0.931	0.116	0.4	99	90	115	130	115	145	2.35	3.58
35	0.868	0.524	1.11	0.671	0.11	0.47	117	110	140	155	140	175	3.29	5.01
50	0.641	0.387	0.82	0.495	0.103	0.5	138	125	170	185	165	215	4.7	7.15
70	0.443	0.268	0.567	0.343	0.099	0.55	168	155	210	225	200	270	6.58	10.01
95	0.32	0.193	0.411	0.248	0.097	0.64	204	185	255	265	235	330	8.93	13.59
120	0.253	0.153	0.325	0.197	0.093	0.67	230	210	300	300	265	380	11.28	17.16
150	0.206	0.124	0.265	0.159	0.091	0.67	265	230	342	335	300	430	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.09	0.67	295	260	385	380	335	495	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.086	0.72	340	300	450	435	385	590	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.085	0.75	390	335	519	490	430	670	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.085	0.75	450	380	605	550	480	780	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.083	0.77	500	430	700	610	530	900	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.082	0.81	555	485	809	680	590	1020	59.22	90.09
800	0.0367	0.0221	0.053	0.0319	0.081	0.88	625	530	935	740	630	1140	75.22	114.4
1000	0.0291	0.0176	0.0444	0.0268	0.081	0.88	690	570	1065	780	660	1250	94	143



RR KABEL-SINGLE CORE POWER CABLE

Technical Detail For 1.1 KV, 1 Cores AL/CU Conductor, PVC Insulated, Un- Armoured Cables

A2XY/2XY . As per IS: 1554 (P-1)

Type / Code Of Cable:

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Nominal	Approx.	Approx. Net Wt. Of Cable (Kg/Km)	
	Cross -	Strands in conductor		Thickness	Thickness Of	Over all		
	Sectional			Of Insulation	Outer Sheath	Diameter		
	Area						AL Cable	CU Cable
	Sq.mm	AL	CU	mm	mm	mm	A2XY	2XY
11 15 001C 0016	16	6	6	1.0	1.8	11	160	260
11 15 001C 0025	25	6	6	1.2	1.8	13	210	365
11 15 001C 0035	35	6	6	1.2	1.8	14	250	460
11 15 001C 0050	50	6	6	1.4	1.8	16	300	610
11 15 001C 0070	70	12	12	1.4	1.8	17	400	830
11 15 001C 0095	95	15	15	1.6	1.8	19	500	1100
11 15 001C 0120	120	15	18	1.6	2.0	21	600	1350
11 15 001C 0150	150	15	18	1.8	2.0	23	750	1680
11 15 001C 0185	185	30	30	2.0	2.0	25	900	2050
11 15 001C 0240	240	30	34	2.2	2.0	28	1100	2600
11 15 001C 0300	300	30	34	2.4	2.0	30	1350	3200
11 15 001C 0400	400	53	53	2.6	2.2	35	1700	4200
11 15 001C 0500	500	53	53	3.0	2.2	38	2150	5250
11 15 001C 0630	630	53	53	3.4	2.4	43	2750	6650
11 15 001C 0800	800	53	53	3.4	2.4	48	3300	8250
11 15 001C 1000	1000	53	53	3.4	2.6	52	4100	10300

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact class-2 as per IS 8130
In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm & above stranded round or stranded compact class-2 as per IS 8130.

Insulation: PVC Type A or Type C (Core color - Red or Yellow or Blue or Black or Natural)

Outer Sheath: PVC Type ST-1 as per IS:5831 (Option: ST 2 as per IS 5831 / FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capactiance	Current Rating In Amps						Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in							in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
16	1.91	1.15	2.29	1.38	0.11	1.01	66	65	64	85	83	82	1.22	1.84
25	1.2	0.727	1.44	0.87	0.105	1.05	86	84	84	110	110	110	1.9	2.88
35	0.868	0.524	1.04	0.63	0.1	1.22	100	100	105	130	125	130	2.66	4.03
50	0.641	0.387	0.769	0.464	0.098	1.22	120	115	130	155	150	165	3.8	5.75
70	0.443	0.268	0.532	0.322	0.091	1.43	140	135	155	190	175	205	5.32	8.05
95	0.32	0.193	0.384	0.232	0.088	1.47	175	155	190	220	200	245	7.22	10.9
120	0.253	0.153	0.304	0.184	0.086	1.62	195	170	220	250	220	280	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.085	1.62	220	190	250	280	245	320	11.14	17.3
185	0.164	0.0991	0.197	0.1189	0.084	1.62	240	210	290	305	260	370	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.082	1.72	270	225	335	345	285	425	18.2	27.3
300	0.1	0.0601	0.122	0.0733	0.08	1.74	295	245	380	375	310	475	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.08	1.81	325	275	435	400	335	550	30.4	46
500	0.0605	0.0366	0.0759	0.0459	0.079	1.86	345	295	480	425	355	590	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.077	1.87	390	320	550	470	375	660	47.9	72.5
800	0.0367	0.0221	0.0503	0.0303	0.077	1.98	450	380	610	530	425	725	60.8	92
1000	0.0291	0.0176	0.0422	0.0255	0.076	2.2	500	415	680	590	740	870	76	115



RR KABEL-SINGLE CORE POWER CABLE

Technical Detail For 1.1 KV, 1 Cores AL/CU Conductor, PVC Insulated, Aluminum Steel Strip/Wire Armoured Cables

AYFaY/YFaY , AYWaY/YWaY. As per IS: 1554 (P-1)

Type / Code Of Cable:

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Armouring with flat AL strip (A2XFaY/ 2XFaY)					Armouring with round wire (A2XWaY/ 2XWaY)				
	Cross -	Strands in conductor		Thickness	Nominal	Minimum	Approx.	Approx Net Wt		Nominal	Minimum	Approx.	Approx Net Wt	
	Sectional			Of Insulation	Thick. Of	Thick.of	Overall	Of Cable (Kg/Km)		Diameter	Thick.of	Overall	Of Cable (Kg/Km)	
	Area				Arm.Strip	Out.Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	AYFaY	YFaY	mm	mm	mm	AYWaY	YWaY
11 16 001C 0016	16	6	6	1.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	14	250	350
11 16 001C 0025	25	6	6	1.5	N/A	N/A	N/A	N/A	N/A	1.4	1.24	15	300	450
11 16 001C 0035	35	6	6	1.5	N/A	N/A	N/A	N/A	N/A	1.4	1.24	16	350	560
11 16 001C 0050	50	6	6	1.7	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	450	750
11 16 001C 0070	70	12	12	1.7	N/A	N/A	N/A	N/A	N/A	1.4	1.4	20	550	980
11 16 001C 0095	95	15	15	1.9	0.8	1.4	21	650	1230	1.6	1.4	22	700	1300
11 16 001C 0120	120	15	18	1.9	0.8	1.4	23	750	1500	1.6	1.4	24	800	1550
11 16 001C 0150	150	15	18	2.1	0.8	1.4	24	900	1830	1.6	1.4	26	950	1880
11 16 001C 0185	185	30	30	2.3	0.8	1.4	27	1050	2200	1.6	1.4	29	1100	2250
11 16 001C 0240	240	30	34	2.5	0.8	1.4	30	1300	2800	1.6	1.56	32	1400	2900
11 16 001C 0300	300	30	34	2.7	0.8	1.56	32	1600	3450	1.6	1.56	33	1650	3500
11 16 001C 0400	400	53	53	3.0	0.8	1.56	37	1950	4400	2.0	1.56	39	2100	4580
11 16 001C 0500	500	53	53	3.4	0.8	1.56	40	2400	5500	2.0	1.72	42	2700	5800
11 16 001C 0630	630	53	53	3.9	0.8	1.72	45	3100	7000	2.0	1.88	48	3300	7200
11 16 001C 0800	800	53	53	3.9	0.8	1.88	49	3700	8650	2.0	1.88	52	4000	8950
11 16 001C 1000	1000	53	53	3.9	0.8	2.04	55	4600	10800	2.5	2.04	59	4900	11000

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact class-2 as per IS 8130
In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm & above stranded round or stranded compact class-2 as per IS 8130.

Insulation: PVC Type A or Type C (Core color - Red or Yellow or Blue or Black or Natural)

Armouring : Single Armouring of Aluminum Wire or Aluminum Strip as per IS 1554 P-1

Outer Sheath: PVC Type ST-1 as per IS:5831 (Option: ST 2 as per IS 5831 / FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capectiance	Current Rating						Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in	Ground	Duct	Air	Ground	Duct	Air	in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM							AL	CU
16	1.91	1.15	2.29	1.38	0.128	0.81	66	65	64	85	83	82	1.22	1.84
25	1.2	0.727	1.44	0.87	0.12	0.87	86	84	84	110	110	110	1.9	2.88
35	0.868	0.524	1.04	0.63	0.114	1	100	100	105	130	125	130	2.66	4.03
50	0.641	0.387	0.769	0.464	0.11	1.03	120	115	130	155	150	165	3.8	5.75
70	0.443	0.268	0.532	0.322	0.103	1.21	140	135	155	190	175	205	5.32	8.05
95	0.32	0.193	0.384	0.232	0.101	1.27	175	155	190	220	200	245	7.22	10.9
120	0.253	0.153	0.304	0.184	0.096	1.42	195	170	220	250	220	280	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.094	1.42	220	190	250	280	245	320	11.4	17.3
185	0.164	0.0991	0.197	0.1189	0.092	1.44	240	210	290	305	260	370	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.09	1.53	270	225	335	345	285	425	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.088	1.56	295	245	380	375	310	475	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.088	1.59	325	275	435	400	335	550	30.4	46
500	0.0605	0.0366	0.076	0.0459	0.087	1.67	345	295	480	425	355	590	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.086	1.67	390	320	550	470	375	660	47.88	72.5
800	0.0367	0.0221	0.0503	0.0303	0.083	1.75	450	380	610	530	423	725	60.8	92
1000	0.0291	0.0176	0.0422	0.0255	0.082	1.94	500	414	680	590	471	870	76	115



RR KABEL-TWO CORE POWER CABLE

Technical Detail For 1.1 KV, 2 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

A2XY/2XY . As per IS: 7098 (P-1)

Type / Code Of Cable:

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Nominal	Approx.	Approx. Net Wt. Of Cable (Kg/Km)	
	Cross -	Strands in conuctor		Thickness	Thickness Of	Thickness Of	Over all		
	Sectional			Of Insulation	Inner Sheath	Outer Sheath	Diameter		
	Area							AL Cable	CU Cable
	Sq.mm	AL	CU	mm	mm	mm	mm	A2XY	2XY
11 17 002C 0004	4	—	1/7	0.7	0.3	1.8	13	180	235
11 17 002C 0006	6	1	1/7	0.7	0.3	1.8	14	220	300
11 17 002C 0010	10	1	6	0.7	0.3	1.8	17	280	400
11 17 002C 0016	16	6	6	0.7	0.3	1.8	17	300	440
11 17 002C 0025	25	6	6	0.9	0.3	2.0	19	340	650
11 17 002C 0035	35	6	6	0.9	0.3	2.0	20	415	840
11 17 002C 0050	50	6	6	1	0.3	2.0	22	520	1090
11 17 002C 0070	70	12	12	1.1	0.3	2.0	25	680	1500
11 17 002C 0095	95	15	15	1.1	0.4	2.2	28	880	2010
11 17 002C 0120	120	15	18	1.2	0.4	2.2	31	1080	2500
11 17 002C 0150	150	15	18	1.4	0.4	2.2	33	1295	3060
11 17 002C 0185	185	30	30	1.6	0.5	2.4	37	1630	3840
11 17 002C 0240	240	30	34	1.7	0.5	2.6	41	2070	4970
11 17 002C 0300	300	30	34	1.8	0.6	2.8	44	2520	6160
11 17 002C 0400	400	53	53	2	0.6	3	48	3200	7830
11 17 002C 0500	500	53	53	2.2	0.7	3.4	54	4040	9990
11 17 002C 0630	630	53	53	2.4	0.7	3.6	62	5130	12840

Technical Data:

Conductor: AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact round or Compact Shape Conductor class-2 as per IS:8130

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded round class-2 as per IS:8130. 10 sq.mm conductor is stranded round or stranded compact conductor class-2 as per IS 8130

Above 10 sq.mm conductor are stranded round or compact round or compacted shaped class-2 as per IS:8130. Insulation: Crosslinked Polyethulene (XLPE)(Core color - Red, Yellow, Blue, Black)

Inner Sheath : PVC / PVC tape as per IS: 7098 (P-1)

Outer Sheath: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capactiance	Current Rating						Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in	Ground	Duct	Air	Ground	Duct	Air	in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM							AL	CU
4	—	4.61	—	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.09	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.08	0.18	78	61	70	94	78	85	1.5	2.29
25	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



RR KABEL-TWO CORE POWER CABLE

Technical Detail For 1.1 KV, 2 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

A2XFY/2XFY , A2XWY/2XWY. As per IS: 7098 (P-1)

Type / Code Of Cable:

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Armouring with flat strip (A2XFY/ 2XFY)					Armouring with round wire (A2XWY/ 2XWY)				
	Cross -	Strands in conuctor		Thickness	Thickness	Nominal	Minimum	Approx.	Approx Net Wt		Nominal	Minimum	Approx.	Approx Net Wt	
	Sectional			Of Insu.	of Inn. Sth.	Thick. Of	Thick. of	Overall	Of Cable (Kg/Km)		Diameter	Thick.of	Overall	Of Cable (Kg/Km)	
	Area					Arm.Strip	Out. Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	A2XFY	2XFY	mm	mm	mm	A2XWY	2XWY
11 18 002C 0004	4	—	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	15	500	550
11 18 002C 0006	6	1	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	16	550	600
11 18 002C 0010	10	1	6	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	650	770
11 18 002C 0016	16	6	6	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.4	19	700	900
11 18 002C 0025	25	6	6	0.9	0.3	0.8	1.4	20	650	950	1.6	1.4	21	850	1150
11 18 002C 0035	35	6	6	0.9	0.3	0.8	1.4	21	750	1200	1.6	1.4	23	950	1400
11 18 002C 0050	50	6	6	1	0.3	0.8	1.4	23	900	1500	1.6	1.4	25	1100	1700
11 18 002C 0070	70	12	12	1.1	0.3	0.8	1.56	26	1100	1950	1.6	1.56	28	1400	2250
11 18 002C 0095	95	15	15	1.1	0.4	0.8	1.56	29	1350	2500	2	1.56	31	1850	3000
11 18 002C 0120	120	15	18	1.2	0.4	0.8	1.56	31	1600	3100	2	1.56	34	2150	3600
11 18 002C 0150	150	15	18	1.4	0.4	0.8	1.72	34	1900	3750	2	1.72	37	2450	4300
11 18 002C 0185	185	30	30	1.6	0.5	0.8	1.72	37	2250	4500	2	1.88	40	2900	5200
11 18 002C 0240	240	30	34	1.7	0.5	0.8	1.88	42	2800	5800	2.5	2.04	45	3850	6800
11 18 002C 0300	300	30	34	1.8	0.6	0.8	2.04	45	3300	7000	2.5	2.2	49	4450	8200
11 18 002C 0400	400	53	53	2	0.6	0.8	2.36	50	4100	9050	2.5	2.36	52	5350	10300
11 18 002C 0500	500	53	53	2.2	0.7	0.8	2.52	55	5000	11000	3.15	2.68	60	7100	13300
11 18 002C 0630	630	53	53	2.4	0.7	0.8	2.68	63	6100	14000	3.15	2.84	66	8500	16300

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact round or Compact Shape Conductor class-2 as per IS:8130

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded round class-2 as per IS:8130. 10 sq.mm conductor is stranded round or stranded compact conductor class-2 as per IS 8130

Above 10 sq.mm conductor are stranded round or compact round or compacted shaped class-2 as per IS:8130.

Insulation: Crosslinked Polyethylene (XLPE) (Core color - Red, Yellow, Blue, Black)

Inner Sheath : PVC / PVC tape as per IS: 7098 (P-1)

Armouring: Single armouring of Galvanized Steel Strip/Wire as per IS 3975.

Outer Sheath: PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal* Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capactiance							Current Rating	
Sectional	20 deg c in		90 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in							in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
4	—	4.61	—	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.090	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.080	0.18	78	61	70	94	78	85	1.5	2.29
25	1.2	0.727	1.54	0.931	0.080	0.20	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.080	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.070	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.070	0.34	481	405	624	580	480	750	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



RR KABEL-TWO CORE POWER CABLE

Technical Detail For 1.1 KV, 2 Cores AL/CU Conductor, PVC Insulated, Un- Armoured Cables

Type / Code Of Cable: A2XY/2XY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Nominal	Approx.	Approx. Net Wt.	
	Cross -	Strands in conductor		Thickness	Thickness Of	Thickness Of	Over all		
	Sectional			Of Insulation	Inner Sheath	Outer Sheath	Diameter	Of Cable (Kg/Km)	
	Area							AL Cable	CU Cable
	Sq.mm	AL	CU	mm	mm	mm	mm	A2XY	2XY
11 19 002C 0004	4	—	1/7	1	0.3	1.8	14	240	290
11 19 002C 0006	6	1	1/7	1	0.3	1.8	17	300	370
11 19 002C 0010	10	1	6	1	0.3	1.8	18	400	520
11 19 002C 0016	16	6	6	1	0.3	1.8	17	430	630
11 19 002C 0025	25	6	6	1.2	0.3	2.0	19	450	750
11 19 002C 0035	35	6	6	1.2	0.3	2.0	21	550	980
11 19 002C 0050	50	6	6	1.4	0.3	2.0	24	700	1300
11 19 002C 0070	70	12	12	1.4	0.3	2.0	26	850	1700
11 19 002C 0095	95	15	15	1.6	0.4	2.2	30	1150	2300
11 19 002C 0120	120	15	18	1.6	0.4	2.2	32	1300	2800
11 19 002C 0150	150	15	18	1.8	0.4	2.4	34	1600	3450
11 19 002C 0185	185	30	30	2	0.5	2.4	38	2000	4300
11 19 002C 0240	240	30	34	2.2	0.5	2.6	42	2500	5500
11 19 002C 0300	300	30	34	2.4	0.6	2.8	46	3000	6700
11 19 002C 0400	400	53	53	2.6	0.7	3.2	52	3800	8750
11 19 002C 0500	500	53	53	3	0.7	3.4	54	4800	11000
11 19 002C 0630	630	53	53	3.4	0.7	3.8	65	6000	13800

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact round or Compact Shape Conductor class-2 as per IS:8130

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded round class-2 as per IS:8130. 10 sq.mm conductor is stranded round or stranded compact conductor class-2 as per IS 8130

Above 10 sq.mm conductor are stranded round or compact round or compacted shaped class-2 as per IS:8130.

Insulation: PVC Type A or TYPE C (Core color - Red, Black)

Inner Sheath : PVC / PVC tape as per IS: 1554 P-1

Outer Sheath: PVC Type ST-1 as per IS:5831 (Option: ST-2 as per IS 8130/ FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal* Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capactiance							Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in							in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
4	—	4.61	—	5.53	0.098	0.23	34	28	30	44	37	39	0.304	0.46
6	4.61	3.08	5.53	3.7	0.096	0.28	43	37	40	55	47	50	0.456	0.69
10	3.08	1.83	3.7	2.2	0.091	0.34	57	48	53	74	61	67	0.76	1.15
16	1.91	1.15	2.29	1.38	0.085	0.40	78	61	70	94	78	85	1.22	1.84
25	1.2	0.727	1.44	0.87	0.083	0.42	95	80	99	120	100	125	1.9	2.88
35	0.868	0.524	1.04	0.63	0.082	0.48	116	94	117	145	120	155	2.66	4.03
50	0.641	0.387	0.769	0.464	0.082	0.49	140	110	140	170	145	190	3.8	5.75
70	0.443	0.268	0.532	0.322	0.076	0.56	170	140	176	210	175	235	5.32	8.05
95	0.32	0.193	0.384	0.232	0.076	0.58	200	165	221	250	210	290	7.22	10.90
120	0.253	0.153	0.304	0.184	0.075	0.63	225	185	258	285	240	330	9.12	13.80
150	0.206	0.124	0.247	0.1488	0.074	0.63	255	210	294	315	270	375	11.4	17.30
185	0.164	0.0991	0.197	0.1189	0.074	0.64	285	235	339	355	300	435	14.1	21.28
240	0.125	0.0754	0.151	0.0912	0.073	0.67	325	270	402	410	350	510	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.073	0.68	370	305	461	460	390	590	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.072	0.70	435	350	542	520	440	670	30.4	46.0
500	0.0605	0.0366	0.0759	0.0459	0.072	0.70	481	405	624	580	480	750	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.072	0.70	537	470	723	680	575	875	47.9	72.55



RR KABEL-TWO CORE POWER CABLE

Technical Detail For 1.1 KV, 2 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

AYFY/YFY, AYWY/YWY. As per IS: 1554 (P-1)

Type / Code Of Cable:

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Armouring with flat strip (AYFY/ YFY)					Armouring with round wire (AYWY/ YWY)				
	Cross -	Strands in conductor		Thickness	Thickness	Nominal	Minimum	Approx.	Approx Net Wt		Nominal	Minimum	Approx.	Approx Net Wt	
	Sectional			Of Insu.	of Inn.Sth.	Thick. Of	Thick. of	Overall	Of Cable (Kg/Km)		Diameter	Thick.of	Overall	Of Cable (Kg/Km)	
	Area					Arm.Strip	Out. Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	AYFY	YFY	mm	mm	mm	AYWY	YWY
11 20 002C 0004	4	—	1/7	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	600	650
11 20 002C 0006	6	1	1/7	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	660	730
11 20 002C 0010	10	1	6	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	20	750	870
11 20 002C 0016	16	6	6	1	0.3	0.8	1.4	18	580	780	1.6	1.4	20	750	950
11 20 002C 0025	25	6	6	1.2	0.3	0.8	1.4	20	700	1000	1.6	1.4	22	900	1200
11 20 002C 0035	35	6	6	1.2	0.3	0.8	1.4	22	800	1230	1.6	1.4	23	1030	1450
11 20 002C 0050	50	6	6	1.4	0.4	0.8	1.4	25	1000	1620	1.6	1.56	26	1300	1900
11 20 002C 0070	70	12	12	1.4	0.4	0.8	1.56	27	1200	2050	1.6	1.56	29	1500	2350
11 20 002C 0095	95	15	15	1.6	0.4	0.8	1.56	30	1550	2720	2	1.56	33	2050	3200
11 20 002C 0120	120	15	18	1.6	0.5	0.8	1.56	32	1800	3290	2	1.72	35	2400	3900
11 20 002C 0150	150	15	18	1.8	0.5	0.8	1.72	35	2100	3970	2	1.72	37	2760	4600
11 20 002C 0185	185	30	30	2	0.6	0.8	1.88	38	2500	4800	2	1.88	41	3200	5500
11 20 002C 0240	240	30	34	2.2	0.6	0.8	2.04	43	3100	6080	2.5	2.04	47	4200	7200
11 20 002C 0300	300	30	34	2.4	0.7	0.8	2.2	48	3700	7400	2.5	2.2	50	5000	8700
11 20 002C 0400	400	53	53	2.6	0.7	0.8	2.36	53	4500	9450	3.15	2.52	58	6600	11500
11 20 002C 0500	500	53	53	3	0.7	0.8	2.68	56	5600	11800	3.15	2.84	64	8000	14000
11 20 002C 0630	630	53	53	3.4	0.7	0.8	2.84	66	6900	14700	4	3	72	11000	18800

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded round or compact round or Compact Shape Conductor class-2 as per IS:8130

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded round class-2 as per IS:8130. 10 sq.mm conductor is stranded round or stranded compact conductor class-2 as per IS 8130

Above 10 sq.mm conductor are stranded round or compact round or compacted shaped class-2 as per IS:8130.

Insulation: PVC Type A or TYPE C (Core color - Red, Black)

Inner Sheath: PVC / PVC tape as per IS: 1554 P-1

Armouring: Single Armouring of G.I. Wire or G.I. Strip as per IS 3975

Outer Sheath: PVC Type ST-1 as per IS:5831 (Option: ST-2 as per IS 8130/ FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal* Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Reactance	capactiance							Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in							in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM	Ground	Duct	Air	Ground	Duct	Air	AL	CU
4	—	4.61	—	5.53	0.098	0.23	32	27	27	41	35	35	0.304	0.46
6	4.61	3.08	5.53	3.7	0.096	0.28	40	34	35	50	44	45	0.456	0.69
10	3.08	1.83	3.7	2.2	0.091	0.34	55	45	47	70	58	60	0.76	1.15
16	1.91	1.15	2.29	1.38	0.085	0.4	70	58	59	90	75	78	1.22	1.84
25	1.2	0.727	1.44	0.87	0.083	0.42	90	76	78	115	97	105	1.9	2.88
35	0.868	0.524	1.04	0.63	0.082	0.48	110	92	99	140	120	125	2.66	4.03
50	0.641	0.387	0.769	0.464	0.082	0.49	135	115	125	165	145	155	3.8	5.75
70	0.443	0.268	0.532	0.322	0.076	0.56	160	140	150	205	180	195	5.32	8.05
95	0.32	0.193	0.384	0.232	0.076	0.58	190	170	185	240	215	230	7.22	10.9
120	0.253	0.153	0.304	0.184	0.075	0.63	210	190	210	275	235	265	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.074	0.63	240	210	240	310	270	305	11.4	17.3
185	0.164	0.0991	0.197	0.1189	0.074	0.64	275	240	275	350	300	350	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.073	0.67	320	275	325	405	345	410	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.073	0.68	355	305	365	450	385	465	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.072	0.7	385	345	420	490	485	530	30.4	46
500	0.0605	0.0366	0.0759	0.0459	0.072	0.7	425	380	475	540	460	605	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.072	0.7	465	415	540	640	550	785	47.9	72.5



3 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Technical Detail For 1.1 KV, 3 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Type / Code Of Cable:

A2XY/2XY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Nominal	Approx.	Approx. Net Wt. Of Cable (Kg/Km)	
	Cross -	Strands in conductor		Thickness	Thickness Of	Thickness Of	Over all		
	Sectional			Of Insulation	Inner Sheath	Outer Sheath	Diameter		
	Area							AL Cable	CU Cable
	Sq.mm	AL	CU	mm	mm	mm	mm	A2XY	2XY
11 21 003C 0004	4	—	1/7	0.7	0.3	1.8	14	170	240
11 21 003C 0006	6	1	1/7	0.7	0.3	1.8	16	200	300
11 21 003C 0010	10	1	6	0.7	0.3	1.8	18	250	430
11 21 003C 0016	16	6	6	0.7	0.3	1.8	18	310	600
11 21 003C 0025	25	6	6	0.9	0.3	2.0	21	470	920
11 21 003C 0035	35	6	6	0.9	0.3	2.0	22	570	1210
11 21 003C 0050	50	6	6	1	0.3	2.0	25	720	1590
11 21 003C 0070	70	12	12	1.1	0.4	2.2	30	950	2200
11 21 003C 0095	95	15	15	1.1	0.4	2.2	32	1250	2980
11 21 003C 0120	120	15	18	1.2	0.4	2.2	35	1520	3720
11 21 003C 0150	150	15	18	1.4	0.5	2.4	39	1840	4550
11 21 003C 0185	185	30	30	1.6	0.5	2.6	43	2310	5700
11 21 003C 0240	240	30	34	1.7	0.6	2.8	49	3010	7390
11 21 003C 0300	300	30	34	1.8	0.6	3.0	53	3600	9190
11 21 003C 0400	400	53	53	2	0.7	3.2	59	4560	11700
11 21 003C 0500	500	53	53	2.2	0.7	3.6	66	5780	14940
11 21 003C 0630	630	53	53	2.4	0.7	3.8	73	7360	19230

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130.

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2 round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.

Insulation: Crosslinked Polyethylene (XLPE)(Core color - Red, Yellow, Blue)

Inner Sheath : PVC / PVC tape as per IS: 7098 (P-1)

Outer Sheath : PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

Color Of Outer Sheath: Black. (Options: Any other color as per requirement.)



3 Cores AL/CU Conductor, XLPE Insulated, Un- Armoured Cables

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Resistance	capectiance							Current Rating	
Sectional	20 deg c in		90 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in	Ground	Duct	Air	Ground	Duct	Air	in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM							AL	CU
4	—	4.61	—	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.09	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.08	0.18	78	61	70	94	78	85	1.5	2.29
25	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



3 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Technical Detail For 1.1 KV, 3 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Type / Code Of Cable:

A2XFY/2XFY, A2XWY/2XWY. As per IS: 7098 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Armouring with flat strip (A2XFY/ 2XFY)					Armouring with round wire (A2XWY/ 2XWY)				
	Cross -	Strands in conductor		Thickness	Thickness	Nominal	Minimum	Approx.	Approx Net Wt		Nominal	Minimum	Approx.	Approx Net Wt	
	Sectional			Of Insu.	of Inn. Sth.	Thick. Of	Thick. of	Overall	Of Cable (Kg/Km)		Diameter	Thick.of	Overall	Of Cable (Kg/Km)	
	Area					Arm. Strip	Out. Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	A2XFY	2XFY	mm	mm	mm	A2XWY	2XWY
11 22 003C 0004	4	—	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	430	510
11 22 003C 0006	6	1	1/7	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	470	600
11 22 003C 0010	10	1	6	0.7	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	20	520	750
11 22 003C 0016	16	6	6	0.7	0.3	0.8	1.24	19	590	890	1.6	1.40	20	730	1020
11 22 003C 0025	25	6	6	0.9	0.3	0.8	1.4	21	790	1190	1.6	1.40	23	940	1400
11 22 003C 0035	35	6	6	0.9	0.3	0.8	1.4	23	940	1490	1.6	1.40	25	1130	1750
11 22 003C 0050	50	6	6	1	0.3	0.8	1.4	26	1090	1990	1.6	1.56	29	1330	2180
11 22 003C 0070	70	12	12	1.1	0.4	0.8	1.56	29	1450	2690	2.0	1.56	32	1820	3070
11 22 003C 0095	95	15	15	1.1	0.4	0.8	1.56	32	1740	3490	2.0	1.56	35	2210	3950
11 22 003C 0120	120	15	18	1.2	0.4	0.8	1.56	35	2100	4190	2.0	1.72	39	2670	4840
11 22 003C 0150	150	15	18	1.4	0.5	0.8	1.72	42	2520	5200	2.0	1.88	43	3450	6150
11 22 003C 0185	185	30	30	1.6	0.5	0.8	1.88	44	2990	6300	2.5	2.04	48	3830	7160
11 22 003C 0240	240	30	34	1.7	0.6	0.8	2.04	49	3740	8190	2.5	2.20	53	4720	8870
11 22 003C 0300	300	30	34	1.8	0.6	0.8	2.2	54	4490	10000	2.5	2.36	58	6130	11380
11 22 003C 0400	400	53	53	2	0.7	0.8	2.52	60	5590	12990	3.2	2.68	65	7390	14410
11 22 003C 0500	500	53	53	2.2	0.7	0.8	2.68	66	6890	15990	3.2	2.84	72	9980	18490
11 22 003C 0630	630	53	53	2.4	0.7	0.8	2.84	74	8540	19990	4.0	3.00	81	11820	22560

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130.

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2, round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.

Insulation: Crosslinked Polyethylene (XLPE)(Core color - Red, Yellow, Blue)

Inner Sheath : PVC / PVC tape as per IS: 7098 (P-1)

Armouring : Single armouring of Galvanized Steel Strip/Wire.

Outer Sheath : PVC Type ST-2 as per IS:5831 (Option: FR Type/ FRLS Type)

Color Of Outer Sheath : Black. (Options: Any other color as per requirement.)



3 Cores AL/CU Conductor, XLPE Insulated, Galvanized Steel Strip/Wire Armoured Cables

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Resistance	capectiance							Current Rating	
Sectional	20 deg c in		90 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in	Ground	Duct	Air	Ground	Duct	Air	in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM							AL	CU
4	—	4.61	—	5.9	0.098	0.11	34	28	30	44	37	39	0.376	0.572
6	4.61	3.08	5.9	3.94	0.09	0.13	43	37	40	55	47	50	0.564	0.858
10	3.08	1.83	3.94	2.34	0.084	0.16	57	48	53	74	61	67	0.94	1.43
16	1.91	1.15	2.44	1.47	0.08	0.18	78	61	70	94	78	85	1.5	2.29
25	1.2	0.727	1.54	0.931	0.08	0.2	95	80	99	120	100	125	2.35	3.58
35	0.868	0.524	1.11	0.671	0.08	0.23	116	94	117	145	120	155	3.29	5.01
50	0.641	0.387	0.82	0.495	0.078	0.24	140	110	140	170	145	190	4.7	7.15
70	0.443	0.268	0.567	0.343	0.077	0.26	170	140	176	210	175	235	6.58	10.01
95	0.32	0.193	0.411	0.248	0.074	0.29	200	165	221	250	210	290	8.93	13.59
120	0.253	0.153	0.325	0.197	0.072	0.29	225	185	258	285	240	330	11.28	17.16
150	0.206	0.124	0.265	0.159	0.072	0.29	255	210	294	315	270	375	14.1	21.45
185	0.164	0.0991	0.211	0.127	0.072	0.29	285	235	339	355	300	435	17.39	26.46
240	0.125	0.0754	0.162	0.0976	0.072	0.31	325	270	402	410	350	510	22.56	34.32
300	0.1	0.0601	0.13	0.0778	0.071	0.33	370	305	461	460	390	590	28.2	42.9
400	0.0778	0.047	0.1023	0.0618	0.07	0.33	435	350	542	520	440	670	37.6	57.2
500	0.0605	0.0366	0.0808	0.0489	0.07	0.34	481	405	624	580	480	750	47	71.5
630	0.0469	0.0283	0.0648	0.0391	0.069	0.36	537	470	723	680	575	875	59.22	90.09



3 Cores AL/CU Conductor, PVC Insulated Un- Armoured Cables

Technical Detail For 1.1 KV, 3 Cores AL/CU Conductor, PVC Insulated Un- Armoured Cables

Type / Code Of Cable:

AYY/YY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Nominal	Approx.	Approx. Net Wt. Of Cable (Kg/Km)	
	Cross -	Strands in conductor		Thickness	Thickness Of	Thickness Of	Over all		
	Sectional			Of Insulation	Inner Sheath	Outer Sheath	Diameter		
	Area							AL Cable	CU Cable
	Sq.mm	AL	CU	mm	mm	mm	mm	A2XY	2XY
11 23 003C 0004	4	—	1/7	1.0	0.3	1.8	16	280	330
11 23 003C 0006	6	1	1/7	1.0	0.3	1.8	18	350	460
11 23 003C 0010	10	1	6	1.0	0.3	1.8	19	430	640
11 23 003C 0016	16	6	6	1.0	0.3	1.8	19	450	720
11 23 003C 0025	25	6	6	1.2	0.3	2.0	22	610	1070
11 23 003C 0035	35	6	6	1.2	0.3	2.0	24	730	1390
11 23 003C 0050	50	6	6	1.4	0.3	2.0	27	930	1860
11 23 003C 0070	70	12	12	1.4	0.4	2.2	30	1190	2490
11 23 003C 0095	95	15	15	1.6	0.4	2.2	34	1590	3340
11 23 003C 0120	120	15	18	1.6	0.4	2.2	37	1890	4090
11 23 003C 0150	150	15	18	1.8	0.5	2.4	40	2290	5090
11 23 003C 0185	185	30	30	2.0	0.5	2.6	44	2740	6190
11 23 003C 0240	240	30	34	2.2	0.6	2.8	50	3490	7940
11 23 003C 0300	300	30	34	2.4	0.6	3	55	4290	9890
11 23 003C 0400	400	53	53	2.6	0.7	3.4	62	5430	12790
11 23 003C 0500	500	53	53	3.0	0.7	3.6	69	6900	16190
11 23 003C 0630	630	53	53	3.4	0.7	4.0	77	8690	20390

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130.

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2 round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.

Insulation : PVC TYPE -A, as per IS:5831.(Option : HR PVC TYPE -C, as per IS:5831) (Core color - Red, Yellow, Blue)

Inner Sheath : PVC / PVC tape as per IS: 1554 (P-1)

Outer Sheath : PVC Type ST-1 as per IS:5831 (Option: PVC TYPE-ST-2 as per IS:5831, FR Type/ FRLS Type)

Color Of Outer Sheath : Black. (Options: Any other color as per requirement.)



3 Cores AL/CU Conductor, PVC Insulated Un- Armoured Cables

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Resistance	capectiance							Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in	Ground	Duct	Air	Ground	Duct	Air	in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM							AL	CU
4	—	4.61	—	5.53	0.098	0.23	28	23	23	36	30	30	0.304	0.46
6	4.61	3.08	5.53	3.7	0.096	0.28	35	30	30	45	38	39	0.456	0.69
10	3.08	1.83	3.7	2.2	0.091	0.34	46	39	40	60	50	52	0.76	1.15
16	1.91	1.15	2.29	1.38	0.085	0.4	60	50	51	77	64	66	1.22	1.84
25	1.2	0.727	1.44	0.87	0.083	0.42	76	63	70	99	81	90	1.9	2.88
35	0.868	0.524	1.04	0.63	0.082	0.48	92	77	86	120	99	110	2.66	4.03
50	0.641	0.387	0.769	0.464	0.082	0.49	110	95	105	145	125	135	3.8	5.75
70	0.443	0.268	0.532	0.322	0.076	0.56	135	115	130	175	150	165	5.32	8.05
95	0.32	0.193	0.384	0.232	0.076	0.58	165	140	155	210	175	200	7.22	10.9
120	0.253	0.153	0.304	0.184	0.075	0.63	185	155	180	240	195	230	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.074	0.63	210	175	205	270	225	265	11.4	17.3
185	0.164	0.0991	0.197	0.1189	0.074	0.64	235	200	240	300	255	305	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.073	0.67	275	235	280	345	295	355	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.073	0.68	305	260	315	385	335	400	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.072	0.7	335	290	375	425	360	435	30.4	46
500	0.0605	0.0366	0.0759	0.0459	0.072	0.7	370	320	425	470	390	520	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.072	0.7	405	350	480	555	470	675	47.9	72.5



3 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Technical Detail For 1.1 KV, 3 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Type / Code Of Cable:

AYFY/YFY, AYWY/YWY. As per IS: 1554 (P-1)

Cable Design Parameters

PART NUMBER	Size	Minimum No. Of		Nominal	Minimum	Armouring with flat strip (A2XFY/ 2XFY)					Armouring with round wire (A2XWY/ 2XWY)				
	Cross -	Strands in conductor		Thickness	Thickness	Nominal	Minimum	Approx.	Approx Net Wt		Nominal	Minimum	Approx.	Approx Net Wt	
	Sectional			Of Insu.	of Inn. Sth.	Thick. Of	Thick. of	Overall	Of Cable (Kg/Km)		Diameter	Thick.of	Overall	Of Cable (Kg/Km)	
	Area					Arm. Strip	Out. Sth.	Dia.	Al Cable.	Cu Cable.	Of Wire	Out. Sth.	Dia.	Al Cable.	Cu Cable.
	Sq.mm	AL	CU	mm	mm	mm	mm	mm	A2XFY	2XFY	mm	mm	mm	A2XWY	2XWY
11 24 003C 0004	4	—	1/7	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	18	570	620
11 24 003C 0006	6	1	1/7	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.24	19	670	780
11 24 003C 0010	10	1	6	1	0.3	N/A	N/A	N/A	N/A	N/A	1.4	1.4	21	870	1080
11 24 003C 0016	16	6	6	1	0.3	0.8	1.4	20	690	990	1.6	1.4	21	920	1230
11 24 003C 0025	25	6	6	1.2	0.3	0.8	1.4	23	890	1340	1.6	1.4	23	1070	1520
11 24 003C 0035	35	6	6	1.2	0.3	0.8	1.4	24	990	1640	1.6	1.56	26	1280	1930
11 24 003C 0050	50	6	6	1.4	0.3	0.8	1.56	27	1300	2220	1.6	1.56	29	1580	2510
11 24 003C 0070	70	12	12	1.4	0.4	0.8	1.56	31	1590	2900	2.0	1.56	33	2130	3430
11 24 003C 0095	95	15	15	1.6	0.4	0.8	1.56	35	1990	3740	2.0	1.72	37	2630	4380
11 24 003C 0120	120	15	18	1.6	0.4	0.8	1.72	37	2390	4620	2.0	1.88	39	2980	5180
11 24 003C 0150	150	15	18	1.8	0.5	0.8	1.88	41	2790	5600	2.0	2.04	43	3530	6280
11 24 003C 0185	185	30	30	2	0.5	0.8	1.88	46	3400	6830	2.5	2.2	49	4590	7980
11 24 003C 0240	240	30	34	2.2	0.6	0.8	2.20	51	4200	8640	2.5	2.36	54	5580	9980
11 24 003C 0300	300	30	34	2.4	0.6	0.8	2.36	56	5040	10620	2.5	2.68	59	6580	11980
11 24 003C 0400	400	53	53	2.6	0.7	0.8	2.68	63	6290	13730	3.2	2.84	68	8690	15990
11 24 003C 0500	500	53	53	3	0.7	0.8	3.00	70	7790	17090	3.2	3	75	10980	19980
11 24 003C 0630	630	53	53	3.4	0.7	0.8	3.00	78	9690	21410	4.0	3	84	15990	25480

Technical Data:

Conductor : AL up to 10 sq.mm conductor are solid class-1 as per IS:8130. And above 10 sq.mm conductor are stranded compacted shape class-2 as per IS:8130.

In CU 4 & 6 sq.mm conductor are solid class-1 or stranded class-2 as per IS:8130. 10 sq.mm conductor is stranded class-2 round as per IS:8130. Above 10 sq.mm conductor are stranded compacted shaped class-2 as per IS:8130.

Insulation : PVC TYPE-A as per IS:5831. (Option: PVC TYPE - C as per IS:5831) (Core color - Red, Yellow, Blue)

Inner Sheath : PVC / PVC tape as per IS: 1554 (P-1)

Armouring : Single armoring of Galvanized Steel Strip/Wire.

Outer Sheath : PVC Type ST-1 as per IS:5831 (Option: PVC TYPE - ST-2 as per IS:5831, FR Type, FRLS Type)

Color Of Outer Sheath : Black. (Options: Any other color as per requirement.)



3 Cores AL/CU Conductor, PVC Insulated, Galvanized Steel Strip/Wire Armoured Cables

Electrical Parameters

Size	Max. Cond. D.C.		Max. Cond. A.C.		App.	App.	Normal Current Rating In Amps						Short Circuit	
Cross -	Resistance at		Resistance at		Resistance	capectiance							Current Rating	
Sectional	20 deg c in		70 deg c in		at 50 hz	of cable	With AL Cond.			With CU Cond.			for 1sec. Duration	
Area	Ohm/km		Ohm/km		in	in	Ground	Duct	Air	Ground	Duct	Air	in K.Amps	
Sq.mm	AL	CU	AL	CU	Ohms/km	microF/KM							AL	CU
4	—	4.61	—	5.53	0.098	0.23	28	23	23	36	30	30	0.304	0.46
6	4.61	3.08	5.53	3.7	0.096	0.28	35	30	30	45	38	39	0.456	0.69
10	3.08	1.83	3.7	2.2	0.091	0.34	46	39	40	60	50	52	0.76	1.15
16	1.91	1.15	2.29	1.38	0.085	0.4	60	50	51	77	64	66	1.22	1.84
25	1.2	0.727	1.44	0.87	0.083	0.42	76	63	70	99	81	90	1.9	2.88
35	0.868	0.524	1.04	0.63	0.082	0.48	92	77	86	120	99	110	2.66	4.03
50	0.641	0.387	0.769	0.464	0.082	0.49	110	95	105	145	125	135	3.8	5.75
70	0.443	0.268	0.532	0.322	0.076	0.56	135	115	130	175	150	165	5.32	8.05
95	0.32	0.193	0.384	0.232	0.076	0.58	165	140	155	210	175	200	7.22	10.9
120	0.253	0.153	0.304	0.184	0.075	0.63	185	155	180	240	195	230	9.12	13.8
150	0.206	0.124	0.247	0.1488	0.074	0.63	210	175	205	270	225	265	11.4	17.3
185	0.164	0.0991	0.197	0.1189	0.074	0.64	235	200	240	300	255	305	14.1	21.3
240	0.125	0.0754	0.151	0.0912	0.073	0.67	275	235	280	345	295	355	18.2	27.6
300	0.1	0.0601	0.122	0.0733	0.073	0.68	305	260	315	385	335	400	22.8	34.5
400	0.0778	0.047	0.0961	0.058	0.072	0.7	335	290	375	425	360	435	30.4	46
500	0.0605	0.0366	0.0759	0.0459	0.072	0.7	370	320	425	470	390	520	38	57.5
630	0.0469	0.0283	0.061	0.0368	0.072	0.7	405	350	480	555	470	675	47.9	72.5



Table - No. 1-1

VDE 0293-308 / HD 308 S2

Core identification for colour-coded low-voltage cables

For making cores in multi- and several-core cables for use in electrical systems and distribution systems.

For the supply of permanently secured or portable supplies and for portable equipment cables.

Number of cores	Cables with protective conductor (code J or G)	Cables without protective conductor (code O or X)	Cables with concentric conductor
2	-	BU/BN	BU/BN
3	GNYE/BN/BU	BN/BK/GY	BN/BK/GY
3a	-	BU/BN/BK	BU/BN/BK
4	GNYE/BN/BK/GY	BU/BN/BK/GY	BU/BN/BK/GY
4a	GNYE/BU/BN/BK	-	-
5	GNYE/BU/BN/BK/GY	BU/BN/BK/GY/BK	BU/BN/BK/GY/BK
6 and above	GNYE/BK (with printed numbers)	BK (with printed numbers)	BK (with printed numbers)

Table - No. 1-2

Colour code for power cables as per VDE 0293 (old)-
(colour codes are listed in IEC 60757)

For marking cores in multi- and several-core cables for connecting portable consumers.

Number of cores	Cables with green/yellow core (hamonised)	Cables without green/yellow core (currently not yet harmonised)	Cables with concentric conductor
2	-	BU/BN	-
3	GNYE/BN/BU	BU/BN/BK	-
3	-	BU/BN/BK	-
4	GNYE/BK/BU/BN	BU/BN/BK/GY	-
5	GNYE/BK/BU/BN/BK	BU/BN/BK/GY/BK	-
6 and above	GNYE/ further core in BK with printed numbers, starting from the inside with 1 GNYE in the outer layer	BK (with printed numbers)	-

Table - No. 1-3

For marking cores in multi- and several-core cables and in multi-core cables for fixed installation.

Number of cores	Cables with green/yellow (code-J-)	Cables without green/yellow (code-O-)	Cables with concentric conductor
2	-	BK/BU	BK/BU
3	GNYE/BN/BU	BN/BU/BK	BK/BU/BN
3	-	BN/BK/BU	-
4	GNYE/BK/BU/BN	BK/BN/BU/BK	BK/BU/BN/BK
5	GNYE/BK/BU/BN/BK	BK/BN/BU/BK/BK	-
6 and above	GNYE/ further core in BK with printed numbers, starting from the inside with 1 GNYE in the outer layer	Cores in BK with printed numbers, starting from the inside with 1	Cores in BK with printed numbers, starting from the inside with 1



Table - No. 2-1

DIN 47100/ January 1988 - colour code for RR KABEL twisted pair

Each pair has an a-core and a b-core. The marking is repeated for the first time as from 23 pairs, and for the second time as from 45 pairs.The first colour is always the basic colour of the core, and the second colour is printed in rings.

Pair No.	Colour of a-core	Colour of b-core	Pair No.	Colour of a-core	Colour of b-core
1	white	brown	13	white/black	brown/black
2	green	yellow	14	grey/green	yellow/grey
3	grey	pink	15	pink/green	yellow/pink
4	blue	red	16	green/blue	yellow/blue
5	black	violet	17	green/red	yellow/red
6	grey/pink	red/blue	18	green/black	yellow/black
7	white/green	brown/green	19	grey/blue	pink/blue
8	white/yellow	yellow/brown	20	grey/red	pink/red
9	white/grey	grey/brown	21	grey/black	pink/black
10	white/pink	pink/brown	22	blue/black	red/black
11	white/blue	brown/blue	23-44	see 1 -22	see 1-22
12	white/red	brown/red	45-66	see 1 -22	see 1-22

Table - No. 2-2

DIN 47100 colour code

(but differs from DIN as core colours after 44th core shall be bicolour insulation with major colour being the first mentioned & ring colour being the last.)

Core no.	Colour	Core no.	Colour	Core no.	Colour	Core no.	Colour	Core no.	Colour
1	white	14	brown/green	27	grey/green	40	pink/red	53	white/grey/black
2	brown	15	white/yellow	28	yellow/grey	41	grey/black	54	grey/brown/black
3	green	16	yellow/brown	29	pink/green	42	pink/black	55	white/pink/black
4	yellow	17	white/grey	30	yellow/pink	43	blue/black	56	pink/brown/black
5	grey	18	grey/brown	31	green/blue	44	red/black	57	white/blue/black
6	pink	19	white/pink	32	yellow/blue	45	white/brown/black	58	brown/blue/black
7	blue	20	pink/brown	33	green/red	46	yellow/green/black	59	white/red/black
8	red	21	white/blue	34	yellow/red	47	grey/pink/black	60	brown/red/black
9	black	22	brown/blue	35	green/black	48	red/blue/black	61	black/white
10	violet	23	white/red	36	yellow/black	49	white/green/black		
11	grey/pink	24	brown/red	37	grey/blue	50	brown/green/black		
12	red/blue	25	white/black	38	pink/blue	51	white/yellow/black		
13	white/green	26	brown/black	39	grey/red	52	yellow/brown/black		



Table - No. 3-1

Conductor resistances and conductor stranding (metric)

Conductor resistances: from 0.5 mm² as per DIN EN 60228 (VDE 0295) for conductors made of soft-annealed copper and single and multi-core cables.

Nominal cross-section in mm ²	Conductor resistances at 20°C for 1km in Ω (max. value)			
	Made of wire with metal sheath		Made of bare wires	
	Class 2	Class 5 + 6	Class 2	Class 5 + 6
0.08		250.0		243.0
0.14		142.0		138.0
0.25		82.0		79.0
0.34		59.0		57.0
0.38		52.8		48.5
0.5	36.7	40.1	36.0	39.0
0.75	24.8	26.7	24.5	26.0
1	18.2	20.0	18.1	19.5
1.5	12.2	13.7	12.1	13.3
2.5	7.56	8.21	7.41	7.98
4	4.7	5.09	4.61	4.95
6	3.11	3.39	3.08	3.30
10	1.84	1.95	1.83	1.91
16	1.16	1.24	1.15	1.21
25	0.734	0.795	0.727	0.78
35	0.529	0.565	0.524	0.554
50	0.391	0.393	0.387	0.386
70	0.27	0.277	0.268	0.272
95	0.195	0.21	0.193	0.206
120	0.154	0.164	0.153	0.161
150	0.126	0.132	0.124	0.129
185	0.1	0.108	0.0991	0.106
240	0.0762	0.0817	0.0754	0.0801
300	0.0607	0.0654	0.0601	0.0641
400	0.0475		0.047	
500	0.0369		0.0366	
630	0.0286		0.0283	
800	0.0224		0.0221	
1000	0.0177		0.0176	

Table - No. 3-2

Example conductor stranding (metric)

Cross-section in mm ²	Multi-wire conductor	Several-wire conductor	Fine-wire conductor	Extra-fine wire conductor			
Class of Conductor	Class-2	Class-2	Class-5	Class-6	Class-6	Class-6	Class-6
0.14			8 x 0.15	18 x 0.10	18 x 0.1	36 x 0.07	72 x 0.05
0.25			14 x 0.15	32 x 0.10	32 x 0.1	65 x 0.07	128 x 0.05
0.34		7 x 0.25	19 x 0.15	42 x 0.10	42 x 0.1	88 x 0.07	174 x 0.05
0.38		7 x 0.27	19 x 0.16	19 x 0.16	64 x 0.1	100 x 0.07	194 x 0.05
0.5	7 x 0.30	7 x 0.30	16 x 0.20	28 x 0.15	96 x 0.1	131 x 0.07	256 x 0.05
0.75	7 x 0.37	7 x 0.37	24 x 0.20	42 x 0.15	128 x 0.1	195 x 0.07	384 x 0.05
1	7 x 0.43	7 x 0.43	32 x 0.20	56 x 0.15	192 x 0.1	260 x 0.07	512 x 0.05
1.5	7 x 0.52	7 x 0.52	30 x 0.25	84 x 0.15	320 x 0.1	392 x 0.07	768 x 0.05
2.5	7 x 0.67	19 x 0.41	50 x 0.25	140 x 0.15	512 x 0.1	651 x 0.07	1280 x 0.05
4	7 x 0.85	19 x 0.52	56 x 0.30	224 x 0.15	768 x 0.1	1040 x 0.07	
6	7 x 1.05	19 x 0.64	84 x 0.30	192 x 0.20	1280 x 0.1	1560 x 0.07	
10	7 x 1.35	49 x 0.51	140 x 0.30	320 x 0.20	2048 x 0.1	2600 x 0.07	
16	7 x 1.7	49 x 0.65	126 x 0.40	512 x 0.20	3200 x 0.1		
25	7 x 2.13	84 x 0.62	196 x 0.40	800 x 0.20			
35	7 x 2.52	133 x 0.58	276 x 0.40	1120 x 0.20			
50	19 x 1.83	133 x 0.69	396 x 0.40	705 x 0.30			
70	19 x 2.17	189 x 0.69	360 x 0.50	990 x 0.30			
95	19 x 2.52	259 x 0.69	480 x 0.50	1340 x 0.30			
120	37 x 2.03	336 x 0.67	608 x 0.50	1690 x 0.30			
150	37 x 2.27	392 x 0.69	750 x 0.50	2123 x 0.30			
185	37 x 2.52	494 x 0.69	931 x 0.50	1470 x 0.40			
240	37 x 2.87	627 x 0.70	1200 x 0.50	1905 x 0.40			
300	61 x 2.50	790 x 0.70	1500 x 0.50	2385 x 0.40			
400	61 x 2.89		2013 x 0.50				
500	61 x 3.23		2562 x 0.60				
630	91 x 2.97		3416 x 0.50				

Note on Standards

For single-wire conductors :- (Class 1), please see DIN EN 60228 (VDE 0295), table 1

For multi-wire conductors:- (Class 2), please see DIN EN 60228 (VDE 0295), table 2

For fine-wire conductors:- (Class 5), please see DIN EN 60228 (VDE 0295), table 3

For extra-fine wire conductors:- (Class 6), please see DIN EN 60228 (VDE 0295), table 4

Table - No. 4-1

Rating factors for ambient air temperatures other than 30 °C to be applied to the current - carrying capacities for cables in free air

Ambient temperature ^a °C	Insulation			
	70 °C thermoplastic	90 oC thermosetting	Mineral ^a	
			Thermoplastic covered or bare and exposed to touch 70 °C	Bare and not exposed to touch 105 °C
25	1.03	1.02	1.07	1.04
30	1.00	1.00	1.00	1.00
35	0.94	0.96	0.93	0.96
40	0.87	0.91	0.85	0.92
45	0.79	0.87	0.78	0.88
50	0.71	0.82	0.67	0.84
55	0.61	0.76	0.57	0.80
60	0.50	0.71	0.45	0.75
65	-	0.65	-	0.70
70	-	0.58	-	0.65
75	-	0.50	-	0.60
80	-	0.41	-	0.54
85	-	-	-	0.47
90	-	-	-	0.40
95	-	-	-	0.32

a For higher ambient temperatures, consult manufacturer

Table - No. 4-2

Rating factors for ambient ground temperatures other than 20 °C to be applied to the current - carrying capacities for cable buried direct in the ground or in an underground conduit system to BS EN 50086-2-4

Ground temperature °C	Insulation	
	70°C thermoplastic	90°C thermosetting
10	1.10	1.07
15	1.05	1.04
20	1.00	1.00
25	0.95	0.96
30	0.89	0.93
35	0.84	0.89
40	0.77	0.85
45	0.71	0.80
50	0.63	0.76
55	0.55	0.71
60	0.45	0.65
65	-	0.60
70	-	0.53
75	-	0.46
80	-	0.38

Table - No. 5

Rating Factors for one circuit or one multicore cable or for group of circuits, or group of multicore cables, to be used with current carrying capacities of tables 6-1 to 9-2

Arrangement (Cables touching)	Number of circuits or multicore Cables											
	1	2	3	4	5	6	7	8	9	12	16	20
Bunched in air, on a surface, embedded or enclosed	1.00	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.45	0.41	0.38
Single Layer on Wall or Floor	1.00	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70	0.70	0.70	0.70
Single Layer multicore on a perforated horizontal or vertical Cable tray system	1.00	0.88	0.82	0.77	0.75	0.73	0.73	0.72	0.72	0.72	0.72	0.72
Single Layer multicore on Cable Ladder system etc.	1.00	0.87	0.82	0.80	0.80	0.79	0.79	0.78	0.78	0.78	0.78	0.78

Note 1: These Factors are applicable to uniform groups of cables, equally loaded.

Note 2: Where horizontal clearances between adjacent cables exceeds twice their overall diameter, no rating factor need be applied.

Note 3: The same factors are applied to:

- group of two or three single-core cables:
- multicore cables.

Note 4: If a system consists of both two-and three-core cables. the total number of cables is taken as the number of circuits, and the corresponding factor is applied to the tables for two loaded conductors for the two -core cables, and to the Tables for three loaded conductors for the three -core cables.

Note 5: If a group consists of n single-core cables it may either be considered as n/2 circuits of two loaded conductors or n/3 circuits of three loaded conductors.

Note 6: The rating factors given have been averaged over the range of conductors sizes and types of installation included in. Tables the overall accuracy of tabulated values is within 5%.

Note 7: When cables having differing conductor operating temperature are grouped together, the current rating is to be based upon the lowest operating temperature of any cable in the group.

Note 8: If due to known operating conditions, a cable is expected to carry not more than 30% of its grouped rating, it may be ignored for the purpose of obtaining the rating factor for the rest of the group.

Table - No. 6-1

Single - Core 70 °C thermoplastic insulated cables, non - armoured, with or without sheath

(COPPER CONDUCTORS)

CURRENT - CARRYING CAPACITY (amperes) :

Ambient temperature : 30 °C

Conductor operating temperature : 70 °C

Conductor Cross- Sectional area	Reference Method A (enclosed in conduit in thermally insulating wall etc.)		Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (Clipped direct)		Reference Method F (In free air or on perforated cable tray horizontal a vertical)				
							Touching			Spaced by one diameter	
	2 Cables. Single - phase a.c . or d.c	3 or 4 cables. three- phase a.c.	2 Cables. Single - phase a.c . or d.c.	3 or 4 cables. three- phase a.c.	2 Cables Single - phase a.c . or d.c flat and touching	3 or 4 cables. three- phase a.c. flat and touching or trefoil	2 Cables. Single - phase a.c. or d.c flat	3 Cables. three- phase a.c flat	3 Cables. three- phase a.c. trefoil	2 Cables. Single-phase a.c. or d.c. or 3 cables three-phase a.c. flat	
										Horizontal	Vertical
1	2	3	4	5	6	7	8	9	10	11	12
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	11	10.5	13.5	12	15.5	14	-	-	-	-	-
1.5	14.5	13.5	17.5	15.5	20	18	-	-	-	-	-
2.5	20	18	24	21	27	25	-	-	-	-	-
4	26	24	32	28	37	33	-	-	-	-	-
6	34	31	41	36	47	43	-	-	-	-	-
10	46	42	57	50	65	59	-	-	-	-	-
16	61	56	76	68	87	79	-	-	-	-	-
25	80	73	101	89	114	104	131	114	110	146	130
35	99	89	125	110	141	129	162	143	137	181	162
50	119	108	151	134	182	167	196	174	167	219	197
70	151	136	192	171	234	214	251	225	216	281	254
95	182	164	232	207	284	261	304	275	264	341	311
120	210	188	269	239	330	303	352	321	308	396	362
150	240	216	300	262	381	349	406	372	356	456	419
185	273	245	341	296	436	400	463	427	409	521	480
240	321	286	400	346	515	472	546	507	485	615	569
300	367	328	458	394	594	545	629	587	561	709	659
400	-	-	546	467	694	634	754	689	656	852	795
500	-	-	626	533	792	723	868	789	749	982	920
630	-	-	720	611	904	826	1005	905	855	1138	1070
800	-	-	-	-	1030	943	1086	1020	971	1265	1188
1000	-	-	-	-	1154	1058	1216	1149	1079	1420	1337

Table - No. 6-2 VOLTAGE DROP (per ampere per metre):

Conductor operating temperature : 70 °C

Conductor cross- sectional area	2 Cables. d.c.	2 Cables, single - phase a.c.									3 or 4 Cables, three - phase a.c.											
		Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C & F (Clipped direct, on tray or in free air).						Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C & F (Clipped direct, on tray or in free air).								
1	2	3			4			5			6			7			8			9		
(mm²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
1	44	44			44			44			38			38			38			38		
1.5	29	29			29			29			25			25			25			25		
2.5	18	18			18			18			15			15			15			15		
4	11	11			11			11			9.5			9.5			9.5			9.5		
6	7.3	7.3			7.3			7.3			6.4			6.4			6.4			6.4		
10	4.4	4.4			4.4			4.4			3.8			3.8			3.8			3.8		
16	2.8	2.8			2.8			2.8			2.4			2.4			2.4			2.4		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
25	1.75	1.80	0.33	1.80	1.75	0.20	1.75	1.75	0.29	1.80	1.50	0.29	1.55	1.50	0.175	1.50	1.50	0.25	1.55	1.50	0.32	1.55
35	1.25	1.30	0.31	1.30	1.25	0.195	1.25	1.25	0.28	1.30	1.10	0.27	1.10	1.10	0.170	1.10	1.10	0.24	1.10	1.10	0.32	1.10
50	0.93	0.95	0.30	1.00	0.93	0.190	0.95	0.93	0.28	0.97	0.81	0.26	0.85	0.80	0.165	0.82	0.80	0.24	0.84	0.80	0.32	0.86
70	0.63	0.65	0.29	0.72	0.63	0.185	0.66	0.63	0.27	0.69	0.56	0.25	0.61	0.55	0.160	0.57	0.55	0.24	0.60	0.55	0.31	0.63
95	0.46	0.49	0.28	0.56	0.47	0.180	0.50	0.47	0.27	0.54	0.42	0.24	0.48	0.41	0.155	0.43	0.41	0.23	0.47	0.40	0.31	0.51
120	0.36	0.39	0.27	0.47	0.37	0.175	0.41	0.37	0.26	0.45	0.33	0.23	0.41	0.32	0.150	0.36	0.32	0.23	0.40	0.32	0.30	0.44
150	0.29	0.31	0.27	0.41	0.30	0.175	0.34	0.30	0.26	0.39	0.27	0.23	0.36	0.26	0.150	0.30	0.26	0.23	0.34	0.26	0.30	0.40
185	0.23	0.25	0.27	0.37	0.24	0.170	0.29	0.24	0.26	0.35	0.22	0.23	0.32	0.21	0.145	0.26	0.21	0.22	0.31	0.21	0.30	0.36
240	0.180	0.195	0.26	0.33	0.185	0.165	0.25	0.185	0.25	0.31	0.17	0.23	0.29	0.160	0.145	0.22	0.160	0.22	0.27	0.160	0.29	0.34
300	0.145	0.160	0.26	0.31	0.150	0.165	0.22	0.150	0.25	0.29	0.14	0.23	0.27	0.130	0.140	0.190	0.130	0.22	0.25	0.130	0.29	0.32
400	0.105	0.130	0.26	0.29	0.120	0.160	0.20	0.115	0.25	0.27	0.12	0.22	0.25	0.105	0.140	0.175	0.105	0.21	0.24	0.100	0.29	0.31
500	0.186	0.110	0.26	0.28	0.098	0.155	0.185	0.093	0.24	0.26	0.10	0.22	0.25	0.086	0.135	0.160	0.086	0.21	0.23	0.081	0.29	0.30
630	0.068	0.094	0.26	0.27	0.081	0.155	0.175	0.076	0.24	0.25	0.08	0.22	0.24	0.072	0.135	0.150	0.072	0.21	0.22	0.066	0.28	0.29
800	0.053	-			0.068	0.150	0.165	0.061	0.24	0.25	-			0.060	0.130	0.145	0.060	0.21	0.22	0.053	0.28	0.29
1000	0.042	-			0.059	0.150	0.160	0.050	0.24	0.24	-			0.052	0.130	0.140	0.052	0.20	0.21	0.044	0.28	0.28

Note :- *Spacings larger than one cable diameter will result in a larger voltage drop.

Table - No. 7-1

Multicore 70 °C thermoplastic insulated and thermoplastic sheathed cables, non - armoured

(COPPER CONDUCTORS)

CURRENT - CARRYING CAPACITY (amperes) :

Ambient temperature : 30 °C

Conductor operating temperature : 70 °C

Conductor cross-sectional area	Reference method A (enclosed in conduit in thermally insulating wall etc.)		Reference method B (enclosed in conduit on a wall or in trunking etc.)		Reference method C (clipped direct)		Reference method E (in free air or on a perforated cable tray etc. Horizontal or Vertical)	
	1 two-core cable*, Single-phase a.c or d.c.	1 three-core cable* or 1 four-core cable, three phase a.c.	1 two-core cable*, Single phase a.c or d.c.	1 three-core cable* or 1 four-core cable, three-phase a.c.	1 two-core cable*, Single phase a.c or d.c.	1 three-core cable* or 1 four-core cable, three-phase a.c.	1 two-core cable*, Single-phase a.c or d.c.	1 three-core cable* or 1 four-core cable, three phase a.c.
1	2	3	4	5	6	7	8	9
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	11	10	13	11.5	15	13.5	17	14.5
1.5	14	13	16.5	15	19.5	17.5	22	18.5
2.5	18.5	17.5	23	20	27	24	30	25
4	25	23	30	27	36	32	40	34
6	32	29	38	34	46	41	51	43
10	43	39	52	46	63	57	70	60
16	57	52	69	62	85	76	94	80
25	75	68	90	80	112	96	119	101
35	92	83	111	99	138	119	148	126
50	110	99	133	118	168	144	180	153
70	139	125	168	149	213	184	232	196
95	167	150	201	179	258	223	282	238
120	192	172	232	206	299	259	328	276
150	219	196	258	225	344	299	379	319
185	248	223	294	255	392	341	434	364
240	291	261	344	297	461	403	514	430
300	334	298	394	339	530	464	593	497
400	-	-	470	402	634	557	715	597

*with or without a protective conductor

Table - No. 7-2

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature : 70 °C

Conductor cross-sectional area	Two-Core Cables. d.c.	Two-Core Cable, Single-phase a.c.			Three or four-Core Cable, Three-phase a.c.		
1	2	3			4		
(mm ²)	(mV/A/m)	(mV/A/m)			(mV/A/m)		
1	44	44			44		
1.5	29	29			29		
2.5	18	18			18		
4	11	11			11		
6	7.3	7.3			7.3		
10	4.4	4.4			4.4		
16	2.8	2.8			2.8		
		r	x	z	r	x	z
25	1.75	1.75	0.170	1.75	1.50	0.145	1.50
35	1.25	1.25	0.165	1.25	1.10	0.145	1.10
50	0.93	0.93	0.165	0.94	0.80	0.140	0.81
70	0.63	0.63	0.160	0.65	0.55	0.140	0.57
95	0.46	0.47	0.155	0.50	0.41	0.135	0.43
120	0.36	0.38	0.155	0.41	0.33	0.135	0.35
150	0.29	0.30	0.155	0.34	0.26	0.130	0.29
185	0.23	0.25	0.150	0.29	0.21	0.130	0.25
240	0.180	0.190	0.150	0.24	0.165	0.130	0.21
300	0.145	0.155	0.145	0.21	0.135	0.130	0.185
400	0.105	0.115	0.145	0.185	0.100	0.125	0.160

Table - No. 8-1

Multicore 90 °C thermosetting insulated and thermoplastic sheathed cables, non - armoured

(COPPER CONDUCTORS)

CURRENT - CARRYING CAPACITY (amperes) :

Ambient temperature : 30 °C

Conductor operating temperature : 90 °C

Conductor cross-sectional area	Reference method A (enclosed in conduit in thermally insulating wall etc.)		Reference method B (enclosed in conduit on a wall or in trunking etc.)		Reference method C (Clipped direct)		Reference method E (free air or on a perforated cable tray etc. Horizontal or Vertical)	
	1 Two-core cable*, Single-phase a.c. or d.c.	1 Three-or four-core cable*, three-phase a.c.	1 Two-core cable*, Single-phase a.c. or d.c.	1 Three-or four-core cable*, three-phase a.c.	1 Two-core cable*, Single-phase a.c. or d.c.	1 Three-or four-core cable*, three-phase a.c.	1 Two-core cable*, Single-phase a.c. or d.c.	1 Three-or four core cable*, three-phase a.c.
1	2	3	4	5	6	7	8	9
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	14.5	13	17	15	19	17	21	18
1.5	18.5	16.5	22	19.5	24	22	26	23
2.5	25	22	30	26	33	30	36	32
4	33	30	40	35	45	40	49	42
6	42	38	51	44	58	52	63	54
10	57	51	69	60	80	71	86	75
16	76	68	91	80	107	96	115	100
25	99	89	119	105	138	119	149	127
35	121	109	146	128	171	147	185	158
50	145	130	175	154	209	179	225	192
70	183	164	221	194	269	229	289	246
95	220	197	265	233	328	278	352	298
120	253	227	305	268	382	322	410	346
150	290	259	334	300	441	371	473	399
185	329	295	384	340	506	424	542	456
240	386	346	459	398	599	500	641	538
300	442	396	532	455	693	576	741	621
400	-	-	625	536	803	667	865	741

Notes :

Where a conductor operates at a temperature exceeding 70 °C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2).

Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 7-1) must be used

Table - No. 8-2

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature : 90 °C

Conductor cross-sectional area	Two-Core Cables. d.c.	Two-Core Cable, Single-phase a.c.			Three or four-Core Cable, Three-phase a.c.		
1	2	3			4		
(mm ²)	(mV/A/m)	(mV/A/m)			(mV/A/m)		
1	46	46			40		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4.0		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
25	1.85	1.85	0.160	1.90	1.60	0.140	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.135	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.200	0.140	0.24	0.175	0.125	0.21
300	0.155	0.160	0.140	0.21	0.140	0.120	0.185
400	0.120	0.130	0.140	0.190	0.115	0.120	0.165

Table - No. 9-1

**Flexible cords, non-armoured
(COPPER CONDUCTORS)**

CURRENT - CARRYING CAPACITY (amperes) :

Conductor cross - sectional area	Current - carrying capacity	
	Single-phase a.c.	Three-phase a.c.
1	2	3
(mm ²)	(A)	(A)
0.5	3	3
0.75	6	6
1	10	10
1.25	13	-
1.5	16	16
2.5	25	20
4	32	25

RATING FACTOR FOR AMBIENT TEMPERATURE

60 °C thermoplastic or thermosetting insulated cords:

Ambient temperature	35 °C	40 °C	45 °C	50 °C	55 °C
Rating Factor	0.91	0.82	0.71	0.58	0.41

90 °C thermoplastic or thermosetting insulated cords:

Ambient temperature	35 to 50 °C	55 °C	60 °C	65 °C	70 °C
Rating factor	1.0	0.96	0.83	0.67	0.47

Table - No. 9-2

**Flexible cords, non-armoured
(COPPER CONDUCTORS)**

VOLTAGE DROP (per ampere per metre) :

Conductor cross - sectional area	Current - carrying capacity	
	Single-phase a.c.	Three-phase a.c.
1	2	3
(mm ²)	(mV/A/m)	(mV/A/m)
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

Note :

*The tabulated values above are for 60° C thermoplastic or thermosetting insulated flexible cords and for other types of flexible cords they are to be multiplied by the following factors:



Table - No. 10
Rating for180 Silicone heat-resistant cables
Table 10-1: Current Ratings

For cables with a nominal voltage of up to 1000 V and for heat-resistant cables at an ambient temperature of + 30°C.

Nominal cross-section in mm²	Current rating in A
0.50	12
0.75	15
1.0	19
1.5	24
2.5	32
4	42
6	54
10	73
16	98
25	129
35	158
50	198
70	245
Current rating from:	DIN VDE 0298-4, 2003-08 Table 11/column 2

Table 10-2: Applicable de rating

Ambient temperature in °C	upto 150	155	160	165	170	175
Conversion factors	1.00	0.91	0.82	0.71	0.58	0.41

TYPE OF ABBREVIATIONS

Table - No. 11

CONTROL CABLES	HARMONISED CABLES	TELEPHONE CABLES AND LEADS
1 □ 2 □ 3 □ 4 □ 5 □ 6 □ 7 □ x 8 □	1 □ 2 □ 3 □ 4 □ 5 □ - 6 □ 7 □ 8 □ 9 □	1 □ 2 □ - 3 □ 4 □ 5 □ 6 □ x 7 □ x 8 □ 9 □ 10 □
1. BASIC TYPE	1. BASIC TYPE	1. BASIC TYPE
N-VDE STANDARD	H- Harmonised Type	A- Outside Cable
(N) OR X - as per VDE Standard	A- National Type	G- Mine Cable
		J- Installation cable
2. INSULATION MATERIAL	2. RATED VOLTAGE	Li- Rubber Sheathed cable
Y- Thermoplastic Resins	01- 100/100 VOLTS	S- Jumper cable
X- Crosslinked thermoplastic resins	03- 300/300 VOLTS	2. ADDITIONAL INFORMATION
G- Elastomers	05- 300/500 VOLTS	B-Lightning protection make up
HX- Halogen Free Material	07- 450/750 VOLTS	J-Induction Protection
		E- Electronics
3. Cable Designation	3. INSULATION MATERIAL	3. INSULATION MATERIAL
A- Cored cable	V- PVC	Y-PVC
D-Solid wire	V2- PVC +90?	2Y- Polyethylene
AF- Fine wired cored cable	V3- PVC cold flexible	O2Y- Cellular PE
F- Socket core	B- Ethylenpropylen rubber	5Y- PTFE
L-Fluorescent tube cable	E- Polyethylene PE	6Y-FEP
LH- Connecting cable light mechanical load	X - XPE, crosslinked polyethylene	7Y-ETFE
MH- Connecting cable medium mechanical load	R - Rubber	P-Paper
SH- Connecting cable heavy mechanical load	S- Silicon Rubber	4. MAKE UP FEATURES
SSH- Connecting cable special load	4. Outer/ Inner Sheath Material	F- Petroleum Jelly Filling
SL- Control cable / welding cable	V- PVC	L-Aluminium Sheath
S- Control cable	V2- PVC +90?	LD- Corrugated AL Sheath
LS- Light control cables	V3- PVC cold flexible	(L)- Aluminium Strip
FL- Flat cable	V5- PVC with enhanced oil resistance	(ST)- Metal Foil Screen
Si- Silicon cable	R- RUBBER	(K)- Copper strip screen
Z- Twin cable	N- Chloroprene Rubber	(C)- Copper Braid Screen
GL- Glass filament	Q- Polyurethane	(Z)- Steel Wire Braid
Li- Stranded core to VDE 0812	J-Glass fibre braid	W- Corrugated Steel Sheath
LiF- Stranded core to VDE 0812 suerfined wire	T- Textile braid	M- Lead Sheath
	5. SPECIAL FEATURES	Mz- Special Lead Sheath
4. SPECIAL FEATURES	C4- Copper Screen Braiding	b- Armouring
T- Support wire	H- Flat cable, separable	c- Jute Sheath + ground
O- Enhanced Oil resistance	H2- Flat cable, Not separable	E- Ground Layer + Strip
U- Flame Retardant	H6- Flat cable, Not separable for Lifts	5. SHEATH MATERIAL
w- Heat Resitant, weather resistant	H8- Helical / Spiral Cable	Same as given in Insulation MATERIAL
FE- Insulation retained for limited time	6. CONDUCTOR TYPE	6. Number of Elements
C- Screen braiding	U- Single wire	... number of stranding elements / cores
D- Screening as envelope with copper wire	R-Multiwire	7. Stranding Elements Pairs
S- Steel wire Braid as Mechanical Protection	K- Fine wire (Static)	1- single core
	F-Fine wire (Flexible)	2- pair
5. SHEATH	H- Superfine wire	8. Conductor Diameter
Y- Thermoplastic Resins	Y-Tinsel wire	... in mm
X- Crosslinked thermoplastic resins	D- Fine wire core for welding cable	9. Stranding Element
G- Elastomers	E- Superfine core for welding cable	F- Star Quad (railway)
HX- Halogen Free Material	7. Number of Cores	St- Star Quad (phantom)
P-PUR (Polyurethane)	8. Protective Conductor	StI- Star Quad (trunk cable)
	X - Without Protective Conductor	StII- Star Quad (Local Cable)
6. PROTECTIVE CONDUCTOR	G- With Protective Conductor	TF- Star Quad for TF
O Without Protective Conductor		S- signal cable (railway)
J With Protective Conductor	9. Conductor Cross Section	PiMF- Screened Pair in Metal Foil
7. Number of Cores	.. mm2	10. Type of Stranding
8. Conductor Cross Section		Lg- twisted in layers
.. Mm2		Bd- twisted in bundles
Example- NHSTOU	Example- HO5 VV-F	Example- A2Y(L)2Y 6X2X0.8 Bd

Updated on : 28/11/2012

Sr. No.	Various special cables	Conductor Type	Conductor class	No. of cores/pairs		Size Range		Application area	PROPOSED			Datasheet		
				From	to	From	to		Silvassa	Waghodia				
1	Shielded Cable	ATC/ABC	1, 2, 5	2	24	0.5	2.5	Instrumentation cable is extensively used in process industries, petrochemicals, pulp industries. It is designed to minimize noise and signal interference to deliver clean signals in harsh environments and general manufacturing operations	upto 2.5 X 19C	4.0 x 2C and Above	With ATC 100%	Shielded cable PAS 5308 P2.pdf		
	Shielded armoured Cable	ATC/ABC	1, 2, 5	2	24	0.5	2.5			100%	With ATC 100%			
	Pair shielded cable	ATC/ABC	1, 2, 5	1P	30P	0.5	1.5		2.5 X 6Pair and other size only 12 Pairs	4 x 1P and above	With ATC 100%			
	Pair shielded armoured cable	ATC/ABC	1, 2, 5	1P	30P	0.5	1.5		2.5 X 6Pair and other size only 12 Pairs	100%	With ATC 100%			
	Triad shielded cable	ATC/ABC	1, 2, 5	1T	30T	0.5	1.5	Twisted shielded triad cables are used for proximity (eddy current) transducer systems, 3 wire accelerometers with temperature measurement, and RTD temperature sensors.	2.5 X 3T and other size only 10 triads	4 x 1T and above	With ATC 100%			
	Traid shielded armoured cable	ATC/ABC	1, 2, 5	1T	30T	0.5	1.5			100%	With ATC 100%			
2	Braided cable M/c and C/C	ATC/ABC	5	1	27	0.25	2.5	Braid screens are also a type of shield, they have the advantage where they can be flexed as against the foil screened cable	upto 2.5 X 12C, Depend on coverage	6 x 2C and above	With ATC 100%	YSLCY-JZ and OZ.pdf		
		ATC/ABC	5	1	7	4	10				With ATC 100%			
3	SY Braided cable	ATC/ABC	5	2	27	0.5	2.5	These are moreover also know as flexible armour as they provide a lower bending radius than the armoured cables	upto 2.5 X 19C	4 x 2C and above	With ATC 100%	RR Kabel SY.pdf		
4	CY Braided cable	ATC/ABC	5	2	27	0.5	2.5	These are used in all process industries for screened control cable	upto 2.5 X 19C	4 x 2C and above	With ATC 100%	RR Kabel CY Rev01.pdf		
5	Single core cables with ATC Conductor	ATC	1,2,5	1	1	0.25	630	All industries where exposure to chemicals and acids at large, where tin copper has excellent resistance to such atmospheric conditions, Single core widely used for electronic industry	NA	100%				
6	Multi core cables with ATC copper	ATC	5	2	27	0.25	2.5		NA	100%				
7	Welding cable	ABC	6	1	1	16	95	All Welding machine manufacturers	100% as range	NA		Welding cable IS 9857.pdf		
8	Tri rated cable	ABC	5	1	1	0.5	240	All panel industry working for export jobs with heat resistant PVC 105 Deg C	NA	100% as range		Tri rated cable Rev02.pdf		
9	Silicon Rubber cable – Glass fiber / Polyester braid up to 1100V	ATC	5	1	1	0.5	50	For all steel plant, foundries, Paper & Pulp, Breweries, Power plants for max temp application up to 200 Deg C	100% as range	NA		Silicon rubber Rev01.pdf		
10	Battery cable (Flex or Super flex)	ABC	6	1	1	16	120	For Battery component manufacturers, resistant to acids	NA	100% as range		Battery cable.pdf		
11	Flexible Cable (H05V-K & H07V-K)	ABC	5	1	1	0.5	240	For all panel industries working for export job	upto 2.5 X 19Core	upto 61 cores		H05V-K H07V-K.pdf		
12	UL /CSA Marked cables	ABC/ATC	5	1	1	0.5	240	For use in internal wiring of appliances with UL/CSA approved	NA	100% as range		UL 1007.pdf	UL1015.pdf	UL1569.pdf
13	FS Cable / Fire Alarm Cable	ABC/ATC	1, 2	2	24	1.5	4	For building premises of commercial/industrial along to wire up safety gadgets	100% as range	NA		Fire Alarm cable Rev02.pdf		
14	Ignition cable	ABC	5	1	1	1.3		For all 2 and 3 wheeler automobile connection lead to the ignition coil	100%	NA		Ignition cable Rev01.pdf		

15	Auto Cable	ABC	5	1	1	0.35	25	Wiring of all automotive passenger car, 2/3/4 wheel automobiles	NA	100%		FLRY-A.pdf	FLRY-B.pdf	
16	Power Cord / Harness	ABC	5	2 Pin 6A, 3 Pin 6 and 16A				For domestic appliances	100%			Cords.pdf		
17	Triple sheath cables	ABC	5		4	16	25	For mines, stone quarry	upto 16 x 4C	Above, and if longer lengths		Triple sheathed Rev01.pdf		
18	Uninyvin cable	ATC	5	1	1	10 (5.33 mm2)	,0000 (109mm2)	All UPS manufacturers	100%	NA		Uninyvin Cable Rev01.pdf		
19	UL 3321 150 Lead Wire (Conforming Product)	ATC	5	1	1	0.5	120	To all UL approved F class motor manufacturers as well as others.(UL certification under way)	NA	100%		UL3321 150DegC 600V.pdf		
20	Solar Cable	ATC	5	1	1	1.5	4	For solar power plant connection from Solar photo module to battery	100%	NA				
21	Multi core Power and Control FRLS/HFFR sheathed cable	ABC/ATC/AL	1, 2, 5	1	61	1.5	2.5	For all industrial and project requirements	upto 35X4C	above	With ATC & AL 100%	Refer Industrial catalogue		
22	FRLS ARMD	ABC/AL	1,2	1	4	1.6	630		NA	100%				
		ABC/AL	2	1	1	-	1000		NA	100%				