



# **HIS** Cable

Cable for electrical equipment of ship & mobile & offshore unit  
IEC 60092-350, 353, 354, 376



# ENTERPRISE WITH DREAM, HOPE, AND FUTURE

TMC Co., Ltd has been pursuing innovation in technology and products for the specialty industrial cable market.

For 23 years TMC has had a single-minded focus on delivering superior customer services with marine and offshore plant cable solutions.

The operational excellence of TMC is underpinned by its products with the best quality and outstanding service to meet specific requirements that makes us the world's most experienced marine and offshore cable manufacturer.

## Company History

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- 1991** Establishment of Seojin Industry Co.,Ltd.
- 1998** ISO 9001 Certification by LRQA
- 2004** ISO 14001 Certification by LRQA
- 2005** Changed the name of company to TMC Co.,Ltd.
- 2006** Won the 30 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2006** Earned recognition by Hyundai Mipo Dockyard Co., Ltd. as one of the excellent suppliers.
- 2007** Won the 70 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2007** Received the High quality supplier Certification from DSME
- 2007** Achieved Korean world-class product award 2007
- 2008** Won the 100 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2008** OHSAS 18001 Certification by LRQA
- 2009** Awarded the Q-Mark as a Silver grade for Offshore Cable supplier by Samsung Heavy Industries
- 2010** Awarded the Best Supplier for Offshore & Marine Cable by Ocean Rig
- 2010** Earned recognition by DSME as one of the excellent supplier
- 2011** Awarded the Best Supplier for Offshore & Marine Cable by Stena Sphere
- 2011** KEPIC Certification by KEA (Manufacture of Class 1E cable)
- 2012** Won the 200 million USD Export Tower Award granted by the Ministry of Knowledge Economy
- 2013** Designated as 'Korean Hidden Champion' by Korea Eximbank
- 2013** TL9000 certification by SGS (design & manufacture of optical fiber cable)
- 2014** Earned recognition by DSME Excellent supplier
- 2015** Minister Citation by the Ministry of Trade, Industry & Energy
- 2015** Acquisition of Zeepel
- 2016** Acquisition of Glow One (Formerly Posco LED)
- 2017** Awarded 'Certificate of Reliable marine equipment manufacturer&supplier' by KOSHIPA and KOMEA
- 2018** Selected as Best Quality Managed Supplier of Hyundai Heavy Industries(2017)
- 2019** Selected as Best Quality Managed Supplier of Hyundai Heavy Industries(2018)
- 2019** Selected as Best Partner of Samsung Heavy Industries

## Certificates

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- Type Approval Certification for shipboard cables : ABS, BV, DNV, GL, KR, LR, NK and RINA
- Type Approval Certification for NEK 606(2004) offshore cables : ABS, DNV and LR
- Type Approval Certification by ABS for offshore cables and listed on ETL
- Type Approval Certification for Passenger ships cables : ABS, DNV,LR, BV and CCS
- Obtained Patent of Paint Resistant Shipboard Cables (Patent NO. 10-0627241)
- Type Approval Certification for IEEE1580 Type P cables : ABS, DNV, CSA and listed on ETL
- Type Approval Certification for LNG Carrier cables : ABS, DNV, LR and BV
- Gost-R Certification for NEK 606(2004) offshore cables by GOSSTANDART
- Type Approval Certification for Marine Optical Fiber Cables : ABS and DNV
- Type Approval Certification for MIL 24643 Warship Cables : KR
- Type Approval Certification for VG 95218 Submarine Cables : KR







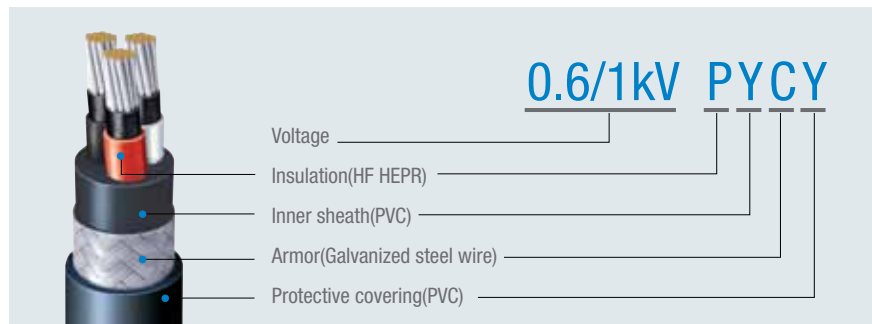
## Code Designation

Materials	Construction	Insulation	Inner sheath	Armor	Outer sheath
HEPR		P			
MGT + HEPR		E			
Flexible compound / Lapped					
Non-armoured				X	
Bronze wire braid				B	
Copper wire braid				O	
Galvanized steel wire braid				C	
PVC (ST2)			Y		Y
Halogen free thermoplastic compound (SHF1)			I		I

### Added abbreviation

(C)	AL/PS tape collective screen with drain wire
(I/C)	AL/PS tape individual & collective screen with drain wire
VFD	Variable Frequency AC motor Drive

### Example



### Advantage of His Cable

- Compact & light weight
- Flexibility
- Simplification
- Easy installation
- Enhanced cold resistant (-35℃)
- Flame retardant (IEC 60332-3 Cat. A)

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	Flame Retardant <sup>1)</sup>	0.6/1kV PXY, PCY, POY, PBY 0.6/1kV PXY(C), PCY(C), POY(C), PBY(C)	0.6/1kV PXI, PCI, POI, PBI 0.6/1kV PXI(C), PCI(C), POI(C), PBI(C)	11 ~ 15
Power & Lighting Cable	Flame Retardant <sup>2)</sup>	0.6/1kV PYCY, PYOY, PYBY 0.6/1kV PYCY(C), PYOY(C), PYBY(C)	0.6/1kV PICI, PIOI, PYBI 0.6/1kV PICI(C), PIOI(C), PIBI(C)	16 ~ 19
	Fire Resistance <sup>1)</sup>	0.6/1kV EXY, ECY, EOY, EBY 0.6/1kV EXY(C), ECY(C), EOY(C), EBY(C)	0.6/1kV EXI, ECI, EOI, EBI 0.6/1kV EXI(C), ECI(C), EOI(C), EBI(C)	20 ~ 24
	Fire Resistance <sup>2)</sup>	0.6/1kV EYCY, EYOY, EYBY 0.6/1kV EYCY(C), EYOY(C), EYBY(C)	0.6/1kV EICI, EIOI, EIBI 0.6/1kV EICI(C), EIOI(C), EIBI(C)	25 ~ 28
	Flame Retardant <sup>1)</sup>	250V PXY, POY, 250V PXY(C), POY(C)	250V PXI, POI, 250V PXI(C), POI(C)	30 ~ 31
Control Cable	Flame Retardant <sup>2)</sup>	250V PYOY, 250V PYOY(C)	250V PIOI, 250V PIOI(C)	32 ~ 33
	Fire Resistance <sup>1)</sup>	250V EXY, EOY, 250V EXY(C), EOY(C)	250V EXI, EOI, 250V EXI(C), EOI(C)	
	Fire Resistance <sup>2)</sup>	250V EYOY, 250V EYOY(C)	250V EIOI, 250V EIOI(C)	
	Flame Retardant <sup>1)</sup>	250V PXY(C), POY(C), 250V PXY(I/C), POY(I/C)	250V PXI(C), POI(C), 250V PXI(I/C), POI(I/C)	35 ~ 45
Instrumentation Cable	Flame Retardant <sup>2)</sup>	250V PYOY(C), 250V PYOY(I/C)	250V PIOI(C), 250V PIOI(I/C)	
	Fire Resistance <sup>1)</sup>	250V EXY(C), EOY(C), 250V EXY(I/C), EOY(I/C)	250V EXI(C), EOI(C), 250V EXI(I/C), EOI(I/C)	46 ~ 57
	Fire Resistance <sup>2)</sup>	250V EYOY(C), 250V EYOY(I/C)	250V EIOI(C), 250V EIOI(I/C)	
	Flame Retardant <sup>2)</sup>	0.6/1kV FX-PYOY(VFD), 1.8/3kV FX-PYOY(VFD)	0.6/1kV FX-PIOI(VFD), 1.8/3kV FX-PIOI(VFD)	59 ~ 61
VFD cable	Fire Resistance <sup>2)</sup>	1.8/3kV FX-EYOY(VFD)	1.8/3kV FX-EIOI(VFD)	
Technical data				63 ~ 77

<sup>1)</sup>Inner covering cable    <sup>2)</sup>Inner sheath cable





# HV Power Cable



## Flame Retardant

### Non-H/F TYPE

3.6/6kV PXY, PCY, POY, PBY  
 6/10kV PXY, PCY, POY, PBY  
 8.7/15kV PXY, PCY, POY, PBY  
 12/20kV PXY, PCY, POY, PBY

### H/F TYPE

3.6/6kV PXI, PCI, POI, PBI  
 6/10kV PXI, PCI, POI, PBI  
 8.7/15kV PXI, PCI, POI, PBI  
 12/20kV PXI, PCI, POI, PBI

Flame retardant

# High Voltage Power Cable



## Cable Designation

### Non-H/F TYPE

- 3.6/6kV PXY, PCY, POY, PBY
- 6/10kV PXY, PCY, POY, PBY
- 8.7/15kV PXY, PCY, POY, PBY
- 12/20kV PXY, PCY, POY, PBY

### H/F TYPE

- 3.6/6kV PXI, PCI, POI, PBI
- 6/10kV PXI, PCI, POI, PBI
- 8.7/15kV PXI, PCI, POI, PBI
- 12/20kV PXI, PCI, POI, PBI

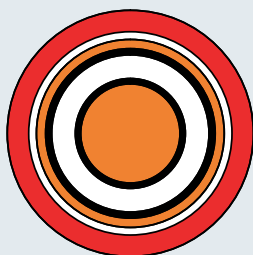
## Application Standard

- Design guide : IEC 60092-350 & IEC 60092-354
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓) (For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

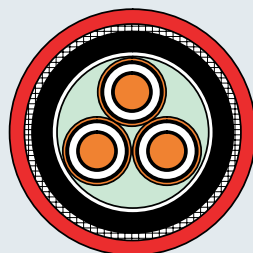
## Core Identification

- Colored tape shall be inserted under metallic screen.  
3C : Black, White, Red

## Construction



PXY (1C)



PCY (3C)

Classification	Code	Construction detail
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2
Conductor screen		- Semi-conducting layer (tape / compound)
Insulation	<b>P</b>	- EPR as per IEC 60092-360
Insulation screen		- Non-metallic part : Semi-conducting layer (tape / compound) - Metallic part : Copper tape with about 0.1mm thickness - A suitable separator tape(s) may be applied over the metallic part
Cabling		- Metallic wrapped conductors shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable
Inner sheath		- ST2 or SHF1 as per IEC 60092-360 - Applied to Armoured & Sheath cable
Armor	<b>C</b> <b>(O,B)</b>	- Braid of galvanized steel wire(C) / Plain annealed copper wire(O) / bronze wire(B) - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable
Outer sheath	<b>Y</b> <b>(I)</b>	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Red

**Note.** The other color of sheath and insulation may be applicable when purchaser require

## 3.6/6kV PXY, POY, PBY, PXI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
1	10	7	4.2	3.0	1.4	17.2	0.7	0.3	1.1	21.0	0.8	435	695
	16	7	5.3	3.0	1.4	18.2	0.7	0.3	1.1	22.0	0.9	580	795
	25	7	6.6	3.0	1.5	19.7	0.8	0.3	1.1	23.5	0.9	670	950
	35	7	7.9	3.0	1.5	20.9	0.8	0.3	1.2	24.9	1.0	765	1,105
	50	19	9.1	3.0	1.6	22.4	0.9	0.3	1.2	26.4	1.1	885	1,290
	70	19	11.0	3.0	1.6	24.2	1.0	0.3	1.2	28.2	1.1	1,045	1,560
	95	19	12.9	3.0	1.7	26.3	1.1	0.3	1.3	30.5	1.2	1,325	1,915
	120	37	14.5	3.0	1.8	28.1	1.1	0.3	1.3	32.3	1.3	1,550	2,235
	150	37	16.2	3.0	1.8	29.7	1.2	0.3	1.4	34.1	1.4	1,825	2,570
	185	37	18.0	3.0	1.9	31.7	1.3	0.4	1.4	36.5	1.5	2,435	3,100
	240	61	20.6	3.0	2.0	34.6	1.4	0.4	1.5	39.6	1.6	2,890	3,800
	300	61	23.1	3.0	2.1	37.2	1.5	0.4	1.6	42.4	1.7	3,410	4,525

## 3.6/6kV PXY, PCY, POY, PBY, PXI, PCI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
3	10	7	4.2	3.0	2.0	34.6	1.4	0.4	1.5	39.6	1.6	1,280	1,955
	16	7	5.3	3.0	2.1	36.9	1.5	0.4	1.6	42.1	1.7	2,065	2,295
	25	7	6.6	3.0	2.2	39.9	1.6	0.4	1.6	45.1	1.8	2,375	2,760
	35	7	7.9	3.0	2.3	42.7	1.7	0.4	1.7	48.1	1.9	2,705	3,250
	50	19	9.1	3.0	2.4	45.7	1.8	0.4	1.8	51.3	2.1	3,085	3,835
	70	19	11.0	3.0	2.6	50.0	2.0	0.4	1.9	55.8	2.2	3,660	4,775
	95	19	12.9	3.0	2.7	54.3	2.2	0.4	2.0	60.3	2.4	4,375	5,870
	120	37	14.5	3.0	2.9	58.1	2.3	0.4	2.1	64.3	2.6	5,010	6,915
	150	37	16.2	3.0	3.0	61.8	2.5	0.4	2.2	68.2	2.7	5,730	8,010
	185	37	18.0	3.0	3.2	66.1	2.6	0.4	2.3	72.7	2.9	6,795	9,465
	240	61	20.6	3.0	3.4	72.3	2.9	0.4	2.5	79.3	3.2	8,070	11,715
	300	61	23.1	3.0	3.6	77.9	3.1	0.4	2.6	85.1	3.4	9,395	14,000

## 6/10kV PXY, POY, PBY, PXI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
1	16	7	5.3	3.4	1.4	19.0	0.8	0.3	1.1	22.8	0.9	550	835
	25	7	6.6	3.4	1.5	20.5	0.8	0.3	1.1	24.3	1.0	710	995
	35	7	7.9	3.4	1.5	21.7	0.9	0.3	1.2	25.7	1.0	785	1,150
	50	19	9.1	3.4	1.6	23.2	0.9	0.3	1.2	27.2	1.1	905	1,340
	70	19	11.0	3.4	1.7	25.2	1.0	0.3	1.3	29.4	1.2	1,070	1,640
	95	19	12.9	3.4	1.7	27.1	1.1	0.3	1.3	31.3	1.3	1,245	1,970
	120	37	14.5	3.4	1.8	28.9	1.2	0.3	1.4	33.3	1.3	1,520	2,305
	150	37	16.2	3.4	1.9	30.7	1.2	0.4	1.4	35.5	1.4	1,830	2,735
	185	37	18.0	3.4	1.9	32.5	1.3	0.4	1.5	37.5	1.5	2,140	3,185
	240	61	20.6	3.4	2.0	35.4	1.4	0.4	1.5	40.4	1.6	2,770	3,875
	300	61	23.1	3.4	2.1	38.0	1.5	0.4	1.6	43.2	1.7	3,220	4,600

Flame retardant

## High Voltage Power Cable

6/10kV PXY, PCY, POY, PBY, PXI, PCI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
3	16	7	5.3	3.4	2.2	38.8	1.6	0.4	1.6	44.0	1.8	1,680	2,455
	25	7	6.6	3.4	2.3	41.9	1.7	0.4	1.7	47.3	1.9	2,585	2,955
	35	7	7.9	3.4	2.4	44.6	1.8	0.4	1.8	50.2	2.0	2,900	3,450
	50	19	9.1	3.4	2.5	47.6	1.9	0.4	1.8	53.2	2.1	3,285	4,025
	70	19	11.0	3.4	2.7	51.9	2.1	0.4	1.9	57.7	2.3	3,865	4,980
	95	19	12.9	3.4	2.8	56.2	2.2	0.4	2.1	62.4	2.5	4,505	6,115
	120	37	14.5	3.4	3.0	60.1	2.4	0.4	2.1	66.3	2.7	5,220	7,150
	150	37	16.2	3.4	3.1	63.7	2.5	0.4	2.2	70.1	2.8	5,880	8,255
	185	37	18.0	3.4	3.2	67.8	2.7	0.4	2.3	74.4	3.0	6,715	9,575
	240	61	20.6	3.4	3.5	74.2	3.0	0.4	2.5	81.2	3.2	8,225	11,875
	300	61	23.1	3.4	3.7	79.8	3.2	0.4	2.6	87.0	3.5	9,500	14,165

8.7/15kV PXY, POY, PBY, PXI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
1	25	7	6.6	4.5	1.6	22.9	0.9	0.3	1.2	26.9	1.1	800	1,155
	35	7	7.9	4.5	1.6	24.1	1.0	0.3	1.2	28.1	1.1	935	1,300
	50	19	9.1	4.5	1.7	25.6	1.0	0.3	1.3	29.8	1.2	1,040	1,510
	70	19	11.0	4.5	1.8	27.6	1.1	0.3	1.3	31.8	1.3	1,210	1,810
	95	19	12.9	4.5	1.8	29.5	1.2	0.3	1.4	33.9	1.4	1,385	2,165
	120	37	14.5	4.5	1.9	31.3	1.3	0.4	1.4	36.1	1.4	1,655	2,580
	150	37	16.2	4.5	2.0	33.1	1.3	0.4	1.5	38.1	1.5	1,950	2,955
	185	37	18.0	4.5	2.0	34.9	1.4	0.4	1.5	39.9	1.6	2,205	3,395
	240	61	20.6	4.5	2.1	37.8	1.5	0.4	1.6	43.0	1.7	2,640	4,120
	300	61	23.1	4.5	2.2	40.4	1.6	0.4	1.7	45.8	1.8	3,275	4,860

8.7/15kV PXY, PCY, POY, PBY, PXI, PCI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
3	25	7	6.6	4.5	2.5	47.0	1.9	0.4	1.8	52.6	2.1	2,480	3,460
	35	7	7.9	4.5	2.6	49.8	2.0	0.4	1.9	55.6	2.2	3,530	3,985
	50	19	9.1	4.5	2.7	52.8	2.1	0.4	2.0	58.8	2.4	3,935	4,615
	70	19	11.0	4.5	2.8	56.9	2.3	0.4	2.1	63.1	2.5	4,535	5,580
	95	19	12.9	4.5	3.0	61.4	2.5	0.4	2.2	67.8	2.7	5,245	6,760
	120	37	14.5	4.5	3.1	65.0	2.6	0.4	2.3	71.6	2.9	5,865	7,825
	150	37	16.2	4.5	3.3	68.8	2.8	0.4	2.4	75.6	3.0	6,645	9,000
	185	37	18.0	4.5	3.4	72.9	2.9	0.4	2.5	79.9	3.2	7,465	10,395
	240	61	20.6	4.5	3.7	79.3	3.2	0.4	2.6	86.5	3.5	8,840	12,715
	300	61	23.1	4.5	3.9	84.9	3.4	0.4	2.8	92.5	3.7	10,355	15,110



## 12/20kV PXY, POY, PBY, PXI, POI, PBI

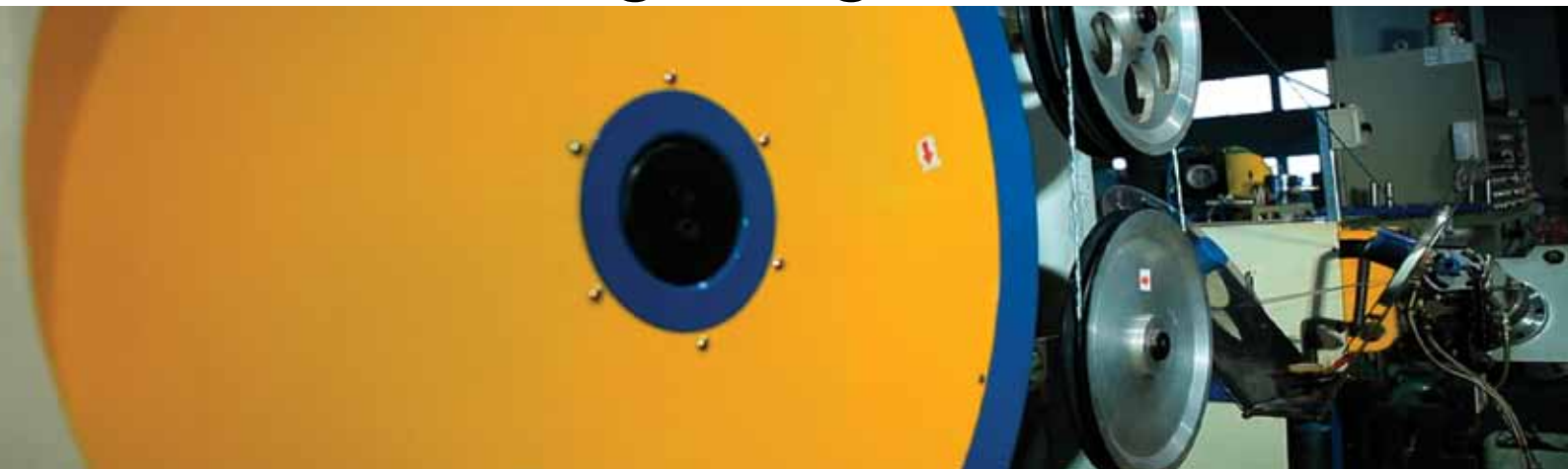
No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
1	35	7	7.9	5.5	1.7	26.3	1.1	0.3	1.3	30.5	1.2	1,015	1,500
	50	19	9.1	5.5	1.8	27.8	1.1	0.3	1.3	32.0	1.3	1,175	1,690
	70	19	11.0	5.5	1.8	29.6	1.2	0.3	1.4	34.0	1.4	1,450	2,030
	95	19	12.9	5.5	1.9	31.7	1.3	0.4	1.4	36.5	1.5	1,780	2,490
	120	37	14.5	5.5	2.0	33.5	1.3	0.4	1.5	38.5	1.5	2,075	2,860
	150	37	16.2	5.5	2.0	35.1	1.4	0.4	1.5	40.1	1.6	2,400	3,220
	185	37	18.0	5.5	2.1	37.1	1.5	0.4	1.6	42.3	1.7	2,830	3,720
	240	61	20.6	5.5	2.2	40.0	1.6	0.4	1.6	45.2	1.8	3,485	4,450
	300	61	23.1	5.5	2.3	42.6	1.7	0.4	1.7	48.0	1.9	4,160	5,220

## 12/20kV PXY, PCY, POY, PBY, PXI, PCI, POI, PBI

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Dia of wire for armour	Armoured			Cable Weight(Approx.)	
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of inner sheath	Nominal Dia.	Tolerance		Thickness of outer sheath	Nominal Dia.	Tolerance	Unarmoured	Armoured
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	±mm	mm	mm	mm	±mm	kg/km	kg/km
3	35	7	7.9	5.5	2.7	54.3	2.2	0.4	2.0	60.3	2.4	3,535	4,525
	50	19	9.1	5.5	2.9	57.5	2.3	0.4	2.1	63.7	2.5	4,100	5,225
	70	19	11.0	5.5	3.0	61.6	2.5	0.4	2.2	68.0	2.7	5,035	6,250
	95	19	12.9	5.5	3.2	66.1	2.6	0.4	2.3	72.7	2.9	6,120	7,485
	120	37	14.5	5.5	3.3	69.7	2.8	0.4	2.4	76.5	3.1	7,190	8,520
	150	37	16.2	5.5	3.5	73.6	2.9	0.4	2.5	80.6	3.2	8,270	9,740
	185	37	18.0	5.5	3.6	77.6	3.1	0.4	2.6	84.8	3.4	9,705	11,240
	240	61	20.6	5.5	3.8	83.9	3.4	0.4	2.7	91.3	3.7	11,950	13,615
	300	61	23.1	5.5	4.0	89.4	3.6	0.4	2.9	97.2	3.9	14,215	16,070



# Power & Lighting Cable



## Flame Retardant (Inner covering cable)

**Non-H/F TYPE** 0.6/1kV PXY, PCY, POY, PBY, PXY(C), PCY(C), POY(C), PBY(C)

**H/F TYPE** 0.6/1kV PXI, PCI, POI, PBI, PXI(C), PCI(C), POI(C), PBI(C) 11 ~ 15

## Flame Retardant (Inner sheath cable)

**Non-H/F TYPE** 0.6/1kV PYCY, PYOY, PYBY, PYCY(C), PYOY(C), PYBY(C)

**H/F TYPE** 0.6/1kV PICl, PIOl, PYBl, PICl(C), PIOl(C), PIBl(C) 16 ~ 19

## Fire Resistance (Inner covering cable)

**Non-H/F TYPE** 0.6/1kV EXY, ECY, EOY, EBY, EXY(C), ECY(C), EOY(C), EBY(C)

**H/F TYPE** 0.6/1kV EXl, ECl, EOl, EBl, EXl(C), ECl(C), EOl(C), EBl(C) 20 ~ 24

## Fire Resistance (Inner sheath cable)

**Non-H/F TYPE** 0.6/1kV EYCY, EYOY, EYBY, EYCY(C), EYOY(C), EYBY(C)

**H/F TYPE** 0.6/1kV EICl, EOl, EBl, EICl(C), EOl(C), EBl(C) 25 ~ 28

Flame retardant

# Power & Lighting Cable with / without collective screen

**HIS CABLE**

IEC 60092-350, 353, 354, 376



## Cable Designation

### Non-H/F TYPE

#### Inner covering

0.6/1kV PXY, PCY, POY, PBY, PXY(C), PCY(C), POY(C), PBY(C)

#### Inner sheath

0.6/1kV PYCY, PYOY, PYBY, PYCY(C), PYOY(C), PYBY(C)

### H/F TYPE

#### Inner covering

0.6/1kV PXI, PCI, POI, PBI, PXI(C), PCI(C), POI(C), PBI(C)

#### Inner sheath

0.6/1kV PICI, PIOI, PIBI, PICI(C), PIOI(C), PIBI(C)

## Application Standard

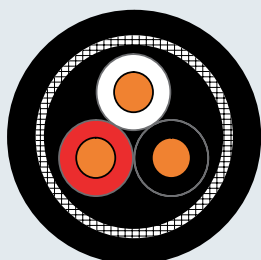
- Design guide : IEC 60092-350 & IEC 60092-353
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓) (For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

## Core Identification

- 1 Core : White
- 2 Core : White, Black
- 3 Core : White, Black, Red
- 4 Core : White, Black, Red, Blue
- Earth Wire : Green / Yellow stripe



PXI(C) (3C)



PCY (3C)

## Construction

Classification	Code	Construction detail
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2 - A suitable tape may be applied on the conductor
Insulation	<b>P</b>	- EPR as per IEC 60092-360
Cabling		- Insulated conductors shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable
Collective screen	<b>(C)</b>	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen - Applied to Screened cable
Inner covering or Inner sheath		<div> <b>Inner covering</b>                      - Flexible compound covering                      - Applied to Armoured &amp; Sheath cable                 </div> <div> <b>Inner sheath</b>                      - Non-H/F type : ST2(Y) as per IEC 60092-350                      - H/F type : SHF1(I) as per IEC 60092-350                 </div>
Armour	<b>C (O,B)</b>	- Braid of galvanized steel wire(C) / Plain annealed copper wire(O) / bronze wire(B) - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable
Sheath	<b>Y (I)</b>	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black

**Note.** The other color of sheath and insulation may be applicable when purchaser require

High Voltage Power Cable

Power & Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



## Flame retardant

## Power &amp; Lighting Cable with / without collective screen

## Inner covering type

0.6/1kV PXY, POY, PBX, PXY(C), POY(C), PBX(C), PXI, POI, PBI, PXI(C), POI(C), PBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
1	1.5	7	1.7	0.7	1.0	5.4±0.4	50	1.0	4.4±0.4	0.3	1.0	8.0±0.4	110
	2.5	7	2.2	0.7	1.0	5.8±0.4	60	1.0	4.8±0.4	0.3	1.0	8.4±0.4	130
	4	7	2.7	0.7	1.0	6.4±0.4	80	1.0	5.4±0.4	0.3	1.1	9.2±0.4	155
	6	7	3.3	0.7	1.0	6.9±0.4	100	1.0	5.9±0.4	0.3	1.1	9.7±0.4	185
	10	7	4.2	0.7	1.0	7.9±0.4	145	1.0	6.9±0.4	0.3	1.1	10.7±0.4	240
	16	7	5.3	0.7	1.1	9.1±0.4	215	1.0	7.9±0.4	0.3	1.2	11.9±0.5	325
	25	7	6.6	0.9	1.1	10.8±0.4	325	1.0	9.6±0.4	0.3	1.2	13.6±0.5	450
	35	7	7.9	0.9	1.2	12.4±0.5	435	1.0	11.0±0.4	0.3	1.3	15.2±0.6	575
	50	19	9.1	1.0	1.2	13.8±0.6	565	1.0	12.4±0.5	0.3	1.4	16.8±0.7	730
	70	19	11.0	1.1	1.3	16.0±0.6	790	1.0	14.4±0.6	0.3	1.4	18.8±0.8	980
	95	19	12.9	1.1	1.4	18.1±0.7	1,065	1.0	16.3±0.7	0.3	1.5	20.9±0.8	1,270
	120	37	14.5	1.2	1.5	20.1±0.8	1,325	1.0	18.1±0.7	0.3	1.6	22.9±0.9	1,555
	150	37	16.2	1.4	1.6	22.3±0.9	1,625	1.0	20.1±0.8	0.3	1.7	25.1±1.0	1,880
	185	37	18.0	1.6	1.6	24.5±1.0	2,015	1.0	22.3±0.9	0.3	1.7	27.3±1.1	2,290
	240	61	20.6	1.7	1.8	27.8±1.1	2,615	1.0	25.2±1.0	0.3	1.9	30.6±1.2	2,925
	300	61	23.1	1.8	1.9	30.6±1.2	3,245	1.2	28.0±1.1	0.3	2.0	33.6±1.3	3,600
	400	61	26.1	2.0	2.0	34.2±1.4	4,115	1.2	31.4±1.3	0.4	2.1	37.6±1.5	4,595
	500	61	29.2	2.2	2.1	37.9±1.5	5,145	1.2	34.9±1.4	0.4	2.3	41.5±1.7	5,690
	630	91	33.2	2.4	2.3	42.7±1.7	6,580	1.4	39.6±1.6	0.4	2.5	46.6±1.9	7,225

## Inner covering type

0.6/1kV PXY, PCY, POY, PBY, PXY(C), PCY(C), POY(C), PBY(C), PXI, PCI, POI, PBI, PXI(C), PCI(C), POI(C), PBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
2	1.5	7	1.7	0.7	1.1	9.0±0.4	100	1.0	7.8±0.4	0.3	1.2	11.8±0.5	200
	2.5	7	2.2	0.7	1.1	9.8±0.4	130	1.0	8.6±0.4	0.3	1.2	12.6±0.5	235
	4	7	2.7	0.7	1.1	11.0±0.4	175	1.0	9.8±0.4	0.3	1.2	13.8±0.6	295
	6	7	3.3	0.7	1.2	12.2±0.5	230	1.0	10.8±0.4	0.3	1.3	15.0±0.6	365
	10	7	4.2	0.7	1.3	14.4±0.6	345	1.0	12.8±0.5	0.3	1.4	17.2±0.7	500
	16	7	5.3	0.7	1.3	16.4±0.7	485	1.0	14.8±0.6	0.3	1.4	19.2±0.8	660
	25	7	6.6	0.9	1.5	20.2±0.8	750	1.0	18.2±0.7	0.3	1.6	23.0±0.9	970
	35	7	7.9	0.9	1.6	23.2±0.9	1,005	1.0	21.0±0.8	0.3	1.7	26.0±1.0	1,250
	50	19	9.1	1.0	1.7	26.2±1.0	1,320	1.0	23.8±1.0	0.3	1.8	29.0±1.2	1,590
	70	19	11.0	1.1	1.9	30.6±1.2	1,845	1.2	28.0±1.1	0.3	2.0	33.6±1.3	2,175
	95	19	12.9	1.1	2.0	34.6±1.4	2,465	1.2	31.8±1.3	0.4	2.1	38.0±1.5	2,915
	120	37	14.5	1.2	2.2	38.6±1.5	3,080	1.2	35.4±1.4	0.4	2.3	42.0±1.7	3,575
	150	37	16.2	1.4	2.3	42.8±1.7	3,775	1.4	39.7±1.6	0.4	2.5	46.7±1.9	4,370
	185	37	18.0	1.6	2.5	47.6±1.9	4,700	1.4	44.1±1.8	0.4	2.6	51.3±2.1	5,340
	240	61	20.6	1.7	2.7	53.8±2.2	6,085	1.6	50.1±2.0	0.4	2.9	57.9±2.3	6,855
	300	61	23.1	1.8	2.9	59.4±2.4	7,535	1.6	55.3±2.2	0.4	3.1	63.5±2.5	8,385
2C	25	7	6.6	0.9	1.5	21.2±0.8	935	1.0	19.6±0.8	0.3	1.6	24.4±1.0	1,175
Earth	16	7	5.3	0.7									
2C	35	7	7.9	0.9	1.6	24.4±1.0	1,285	1.0	22.6±0.9	0.3	1.8	27.8±1.1	1,570
Earth	25	7	6.6	0.7									
2C	50	19	9.1	1.0	1.8	27.6±1.1	1,605	1.0	25.4±1.0	0.3	1.9	30.8±1.2	1,915
Earth	25	7	6.6	0.9									
2C	70	19	11.0	1.1	1.9	32.0±1.3	2,225	1.2	29.9±1.2	0.3	2.1	35.7±1.4	2,620
Earth	35	7	7.9	0.9									
2C	95	19	12.9	1.1	2.1	36.4±1.5	2,985	1.2	33.9±1.4	0.4	2.2	40.3±1.6	3,495
Earth	50	19	9.1	1.0									
2C	120	37	14.5	1.2	2.2	40.5±1.6	3,795	1.4	38.1±1.5	0.4	2.4	44.9±1.8	4,410
Earth	70	19	11.0	1.1									
2C	150	37	16.2	1.4	2.4	45.2±1.8	4,765	1.4	42.4±1.7	0.4	2.6	49.6±2.0	5,445
Earth	95	19	12.9	1.1									
2C	185	37	18.0	1.6	2.6	49.9±2.0	5,695	1.4	46.7±1.9	0.4	2.7	54.1±2.2	6,420
Earth	95	19	12.9	1.1									
2C	240	61	20.6	1.7	2.8	56.4±2.3	7,330	1.6	53.2±2.1	0.4	3.0	61.2±2.4	8,220
Earth	120	37	14.5	1.2									
2C	300	61	23.1	1.8	3.0	62.2±2.5	9,070	1.6	58.6±2.3	0.4	3.2	67.0±2.7	10,045
Earth	150	37	16.2	1.4									

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Flame retardant

## Power &amp; Lighting Cable with / without collective screen

## Inner covering type

0.6/1kV PXY, PCY, POY, PBY, PXY(C), PCY(C), POY(C), PBY(C), PXI, PCI, POI, PBI, PXI(C), PCI(C), POI(C), PBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
3	1.5	7	1.7	0.7	1.1	9.5±0.4	125	1.0	8.3±0.4	0.3	1.2	12.3±0.5	230
	2.5	7	2.2	0.7	1.1	10.4±0.4	165	1.0	9.2±0.4	0.3	1.2	13.2±0.5	275
	4	7	2.7	0.7	1.2	11.9±0.5	230	1.0	10.5±0.4	0.3	1.3	14.7±0.6	360
	6	7	3.3	0.7	1.2	12.9±0.5	300	1.0	11.5±0.5	0.3	1.3	15.7±0.6	440
	10	7	4.2	0.7	1.3	15.3±0.6	460	1.0	13.7±0.5	0.3	1.4	18.1±0.7	620
	16	7	5.3	0.7	1.4	17.6±0.7	665	1.0	15.8±0.6	0.3	1.5	20.4±0.8	850
	25	7	6.6	0.9	1.5	21.5±0.9	1,025	1.0	19.5±0.8	0.3	1.6	24.3±1.0	1,250
	35	7	7.9	0.9	1.7	24.9±1.0	1,385	1.0	22.5±0.9	0.3	1.8	27.7±1.1	1,640
	50	19	9.1	1.0	1.8	28.1±1.1	1,820	1.0	25.5±1.0	0.3	1.9	30.9±1.2	2,110
	70	19	11.0	1.1	1.9	32.6±1.3	2,545	1.2	30.0±1.2	0.3	2.1	35.8±1.4	2,910
	95	19	12.9	1.1	2.1	37.1±1.5	3,430	1.2	34.1±1.4	0.4	2.2	40.5±1.6	3,910
	120	37	14.5	1.2	2.3	41.4±1.7	4,290	1.4	38.3±1.5	0.4	2.4	45.1±1.8	4,850
	150	37	16.2	1.4	2.4	45.9±1.8	5,260	1.4	42.6±1.7	0.4	2.6	49.8±2.0	5,900
	185	37	18.0	1.6	2.6	51.1±2.0	6,555	1.6	47.6±1.9	0.4	2.8	55.2±2.2	7,290
	240	61	20.6	1.7	2.9	57.9±2.3	8,525	1.6	53.8±2.2	0.4	3.0	61.8±2.5	9,325
	300	61	23.1	1.8	3.1	63.9±2.6	10,575	1.6	59.4±2.4	0.4	3.2	67.8±2.7	11,455
3C	25	7	6.6	0.9	1.6	23.0±0.9	1,215	1.0	21.2±0.8	0.3	1.7	26.2±1.0	1,475
Earth	16	7	5.3	0.7									
3C	35	7	7.9	0.9	1.7	26.8±1.1	1,665	1.0	24.8±1.0	0.3	1.8	30.0±1.2	1,970
Earth	25	7	6.6	0.7									
3C	50	19	9.1	1.0	1.8	29.6±1.2	2,100	1.2	27.7±1.1	0.3	2.0	33.3±1.3	2,465
Earth	25	7	6.6	0.9									
3C	70	19	11.0	1.1	2.0	34.6±1.4	2,940	1.2	32.3±1.3	0.4	2.2	38.7±1.5	3,440
Earth	35	7	7.9	0.9									
3C	95	19	12.9	1.1	2.2	39.3±1.6	3,955	1.2	36.6±1.5	0.4	2.3	43.2±1.7	4,505
Earth	50	19	9.1	1.0									
3C	120	37	14.5	1.2	2.4	44.1±1.8	5,030	1.4	41.3±1.7	0.4	2.5	48.3±1.9	5,670
Earth	70	19	11.0	1.1									
3C	150	37	16.2	1.4	2.6	49.3±2.0	6,280	1.4	46.1±1.8	0.4	2.7	53.5±2.1	7,000
Earth	95	19	12.9	1.1									
3C	185	37	18.0	1.6	2.7	53.7±2.1	7,555	1.6	50.7±2.0	0.4	2.9	58.5±2.3	8,405
Earth	95	19	12.9	1.1									
3C	240	61	20.6	1.7	3.0	60.8±2.4	9,780	1.6	57.2±2.3	0.4	3.2	65.6±2.6	10,735
Earth	120	37	14.5	1.2									
3C	300	61	23.1	1.8	3.2	67.2±2.7	12,115	1.8	63.5±2.5	0.4	3.4	72.3±2.9	13,210
Earth	150	37	16.2	1.4									



## Inner covering type

0.6/1kV PXY, PCY, POY, PBY, PXY(C), PCY(C), POY(C), PBY(C), PXI, PCI, POI, PBI, PXI(C), PCI(C), POI(C), PBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
4	1.5	7	1.7	0.7	1.1	10.3±0.4	155	1.0	9.1±0.4	0.3	1.2	13.1±0.5	265
	2.5	7	2.2	0.7	1.2	11.5±0.5	205	1.0	10.1±0.4	0.3	1.3	14.3±0.6	335
	4	7	2.7	0.7	1.2	12.9±0.5	285	1.0	11.5±0.5	0.3	1.3	15.7±0.6	430
	6	7	3.3	0.7	1.3	14.3±0.6	385	1.0	12.7±0.5	0.3	1.4	17.1±0.7	540
	10	7	4.2	0.7	1.4	17.0±0.7	590	1.0	15.2±0.6	0.3	1.5	19.8±0.8	770
	16	7	5.3	0.7	1.5	19.6±0.8	860	1.0	17.6±0.7	0.3	1.6	22.4±0.9	1,070
	25	7	6.6	0.9	1.6	23.9±1.0	1,330	1.0	21.7±0.9	0.3	1.7	26.7±1.1	1,580
	35	7	7.9	0.9	1.8	27.7±1.1	1,795	1.0	25.1±1.0	0.3	1.9	30.5±1.2	2,080
	50	19	9.1	1.0	1.9	31.2±1.2	2,365	1.2	28.6±1.1	0.3	2.0	34.2±1.4	2,700
	70	19	11.0	1.1	2.1	36.5±1.5	3,330	1.2	33.5±1.3	0.4	2.2	39.9±1.6	3,805
	95	19	12.9	1.1	2.3	41.5±1.7	4,495	1.4	38.4±1.5	0.4	2.4	45.2±1.8	5,055
	120	37	14.5	1.2	2.4	46.0±1.8	5,595	1.4	42.7±1.7	0.4	2.6	49.9±2.0	6,235
	150	37	16.2	1.4	2.6	51.2±2.0	6,890	1.6	47.7±1.9	0.4	2.8	55.3±2.2	7,620
	185	37	18.0	1.6	2.8	56.9±2.3	8,585	1.6	53.0±2.1	0.4	3.0	61.0±2.4	9,395
	240	61	20.6	1.7	3.1	64.5±2.6	11,165	1.6	60.0±2.4	0.4	3.3	68.6±2.7	12,080
	300	61	23.1	1.8	3.4	71.4±2.9	13,875	1.8	66.6±2.7	0.4	3.5	75.6±3.0	14,905
4C	25	7	6.6	0.9	1.7	26.1±1.0	1,525	1.0	24.1±1.0	0.3	1.8	29.3±1.2	1,820
Earth	16	7	5.3	0.7									
4C	35	7	7.9	0.9	1.9	30.4±1.2	2,095	1.2	28.3±1.1	0.3	2.0	33.9±1.4	2,455
Earth	25	7	6.6	0.7									
4C	50	19	9.1	1.0	2.0	34.0±1.4	2,665	1.2	31.7±1.3	0.4	2.1	37.9±1.5	3,145
Earth	25	7	6.6	0.9									
4C	70	19	11.0	1.1	2.2	39.7±1.6	3,740	1.4	37.3±1.5	0.4	2.4	44.4±1.8	4,340
Earth	35	7	7.9	0.9									
4C	95	19	12.9	1.1	2.4	45.1±1.8	5,030	1.4	42.3±1.7	0.4	2.6	49.5±2.0	5,710
Earth	50	19	9.1	1.0									
4C	120	37	14.5	1.2	2.6	50.5±2.0	6,375	1.6	47.7±1.9	0.4	2.8	55.3±2.2	7,175
Earth	70	19	11.0	1.1									
4C	150	37	16.2	1.4	2.8	56.3±2.3	7,935	1.6	53.1±2.1	0.4	3.0	61.1±2.4	8,820
Earth	95	19	12.9	1.1									
4C	185	37	18.0	1.6	3.0	62.0±2.5	9,640	1.6	58.4±2.3	0.4	3.2	66.8±2.7	10,615
Earth	95	19	12.9	1.1									
4C	240	61	20.6	1.7	3.3	70.2±2.8	12,480	1.8	66.3±2.7	0.4	3.5	75.3±3.0	13,625
Earth	120	37	14.5	1.2									
4C	300	61	23.1	1.8	3.6	77.7±3.1	15,495	1.8	73.2±2.9	0.4	3.8	82.8±3.3	16,755
Earth	150	37	16.2	1.4									
5	1.5	7	1.7	0.7	1.1	10.9±0.6	180	1.0	9.9±0.6	0.3	1.3	14.1±0.7	320
	2.5	7	2.2	0.7	1.2	12.2±0.7	250	1.0	11.0±0.6	0.3	1.3	15.2±0.8	390
	4	7	2.7	0.7	1.2	13.8±0.7	350	1.0	12.6±0.7	0.3	1.4	17.0±0.8	510
	6	7	3.3	0.7	1.3	15.3±0.8	470	1.0	13.9±0.7	0.3	1.4	18.3±0.8	640
6	1.5	7	1.7	0.7	1.2	12.0±0.7	220	1.0	10.8±0.6	0.3	1.3	15.0±0.8	360
	2.5	7	2.2	0.7	1.2	13.2±0.7	290	1.0	12.0±0.7	0.3	1.3	16.2±0.8	440
	4	7	2.7	0.7	1.3	15.2±0.8	420	1.0	13.8±0.7	0.3	1.4	18.2±0.8	590
	6	7	3.3	0.7	1.4	16.9±0.8	560	1.0	15.3±0.8	0.3	1.5	19.9±0.9	750
10	1.5	7	1.7	0.7	1.3	15.3±0.8	350	1.0	13.9±0.7	0.3	1.4	18.3±0.8	520
	2.5	7	2.2	0.7	1.4	17.1±0.8	480	1.0	15.5±0.8	0.3	1.5	20.1±0.9	670
	4	7	2.7	0.7	1.5	19.7±0.9	680	1.0	17.9±0.8	0.3	1.6	22.7±1.0	900
	6	7	3.3	0.7	1.5	21.7±1.0	910	1.0	19.9±0.9	0.3	1.7	24.9±1.0	1,160

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Flame retardant

## Power &amp; Lighting Cable with / without collective screen

## Inner sheath type

0.6/1kV PYOY, PYBY, PYOY(C), PYBY(C), PLOI, PIBI, PLOI(C), PIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1	1.5	7	1.7	0.7	1.0	5.6	0.3	0.8	8.7	0.6	130
1	2.5	7	2.2	0.7	1.0	6.0	0.3	0.8	9.1	0.6	150
1	4	7	2.7	0.7	1.0	6.5	0.3	0.8	9.6	0.6	180
1	6	7	3.3	0.7	1.0	7.1	0.3	0.8	10.2	0.6	210
1	10	7	4.2	0.7	1.0	8.0	0.3	0.8	11.1	0.6	260
1	16	7	5.3	0.7	1.1	9.2	0.3	0.9	12.5	0.7	350
1	25	7	6.6	0.9	1.1	11.0	0.3	0.9	14.3	0.7	480
1	35	7	7.9	0.9	1.2	12.3	0.3	0.9	15.6	0.8	600
1	50	19	9.1	1.0	1.3	14.1	0.3	1.0	17.6	0.8	770
1	70	19	11.0	1.1	1.3	16.0	0.3	1.0	19.5	0.9	1,010
1	95	19	12.9	1.1	1.4	18.1	0.3	1.1	21.8	1.0	1,310
1	120	37	14.5	1.2	1.5	20.0	0.3	1.1	23.7	1.0	1,600
1	150	37	16.2	1.4	1.6	22.2	0.3	1.2	26.1	1.1	1,940
1	185	37	18.0	1.6	1.6	24.4	0.3	1.2	28.3	1.1	2,340
1	240	61	20.6	1.7	1.8	27.6	0.3	1.3	31.7	1.3	3,000
1	300	61	23.1	1.8	1.9	30.3	0.4	1.4	35.0	1.4	3,740
1	400	61	26.1	2.0	2.0	34.8	0.4	1.5	39.7	1.5	4,980
1	500	61	29.2	2.2	2.1	38.1	0.4	1.6	43.2	1.6	5,970
1	630	91	33.2	2.4	2.3	43.1	0.4	1.7	48.4	1.8	7,650

## Inner sheath type

0.6/1kV PYCY, PYOY, PYBY, PYCY(C), PYOY(C), PYBY(C), PICI, PIOC, PIBI, PICI(C), PIOC(C), PIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
2	1.5	7	1.7	0.7	1.1	8.9	0.3	0.9	12.2	0.7	220
2	2.5	7	2.2	0.7	1.1	9.7	0.3	0.9	13.0	0.7	260
2	4	7	2.7	0.7	1.1	10.7	0.3	0.9	14.0	0.7	310
2	6	7	3.3	0.7	1.2	12.1	0.3	0.9	15.4	0.8	380
2	10	7	4.2	0.7	1.3	14.1	0.3	1.0	17.6	0.8	520
2	16	7	5.3	0.7	1.3	16.1	0.3	1.0	19.6	0.9	680
2	25	7	6.6	0.9	1.5	20.1	0.3	1.1	23.8	1.0	1,000
2	35	7	7.9	0.9	1.6	22.5	0.3	1.2	26.4	1.1	1,270
2	50	19	9.1	1.0	1.7	25.9	0.3	1.3	30.0	1.2	1,640
2	70	19	11.0	1.1	1.8	29.9	0.3	1.4	34.2	1.3	2,190
2	95	19	12.9	1.1	2.0	34.1	0.4	1.5	39.0	1.5	2,940
2	120	37	14.5	1.2	2.1	37.7	0.4	1.6	42.8	1.6	3,590
2	150	37	16.2	1.4	2.3	42.1	0.4	1.7	47.4	1.7	4,370
2	185	37	18.0	1.6	2.5	46.9	0.4	1.8	52.4	1.9	5,360
2	240	61	20.6	1.7	2.7	52.9	0.4	2.0	58.8	2.1	6,840
2	300	61	23.1	1.8	2.9	58.3	0.4	2.1	64.4	2.2	8,320
2C+E	1.5	7	1.7	0.7	1.1	9.4	0.3	0.9	12.7	0.7	250
2C+E	2.5	7	2.2	0.7	1.1	10.2	0.3	0.9	13.5	0.7	300
2C+E	4	7	2.7	0.7	1.2	11.5	0.3	0.9	14.8	0.7	370
2C+E	6	7	3.3	0.7	1.2	12.8	0.3	1.0	16.3	0.8	470
2C+E	10	7	4.2	0.7	1.3	15.0	0.3	1.0	18.5	0.9	640
2C+E	16	7	5.3	0.7	1.4	17.3	0.3	1.1	21.0	0.9	880
2C	25	7	6.6	0.9	1.5	20.7	0.3	1.2	24.6	1.0	1,180
Earth	16	7	5.3	0.7							
2C	35	7	7.9	0.9	1.6	23.5	0.3	1.2	27.4	1.1	1,540
Earth	25	7	6.6	0.9							
2C	50	19	9.1	1.0	1.7	26.6	0.3	1.3	30.7	1.2	1,900
Earth	25	7	6.6	0.9							
2C	70	19	11.0	1.1	1.9	30.8	0.4	1.4	35.5	1.4	2,630
Earth	35	7	7.9	0.9							
2C	95	19	12.9	1.1	2.0	34.9	0.4	1.5	39.8	1.5	3,410
Earth	50	19	9.1	1.0							
2C	120	37	14.5	1.2	2.2	39.1	0.4	1.6	44.2	1.6	4,290
Earth	70	19	11.0	1.1							
2C	150	37	16.2	1.4	2.3	43.5	0.4	1.7	48.8	1.8	5,290
Earth	95	19	12.9	1.1							
2C	185	37	18.0	1.6	2.5	47.8	0.4	1.8	53.3	1.9	6,250
Earth	95	19	12.9	1.1							
2C	240	61	20.6	1.7	2.7	53.8	0.4	2.0	59.7	2.1	7,950
Earth	120	37	14.5	1.2							
2C	300	61	23.1	1.8	2.9	59.4	0.4	2.1	65.5	2.3	9,700
Earth	150	37	16.2	1.4							

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



## Flame retardant

## Power &amp; Lighting Cable with / without collective screen

## Inner sheath type

0.6/1kV PYCY, PYOY, PYBY, PYCY(C), PYOY(C), PYBY(C), PICI, PIOI, PIBI, PICI(C), PIOI(C), PIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
3	1.5	7	1.7	0.7	1.1	9.4	0.3	0.9	12.7	0.7	250
3	2.5	7	2.2	0.7	1.1	10.2	0.3	0.9	13.5	0.7	300
3	4	7	2.7	0.7	1.2	11.5	0.3	0.9	14.8	0.7	370
3	6	7	3.3	0.7	1.2	12.8	0.3	1.0	16.3	0.8	470
3	10	7	4.2	0.7	1.3	15.0	0.3	1.0	18.5	0.9	640
3	16	7	5.3	0.7	1.4	17.3	0.3	1.1	21.0	0.9	880
3	25	7	6.6	0.9	1.5	21.4	0.3	1.2	25.3	1.1	1,290
3	35	7	7.9	0.9	1.6	24.0	0.3	1.2	27.9	1.1	1,640
3	50	19	9.1	1.0	1.8	27.8	0.3	1.3	31.9	1.3	2,150
3	70	19	11.0	1.1	1.9	32.1	0.4	1.4	36.8	1.4	2,980
3	95	19	12.9	1.1	2.1	36.6	0.4	1.6	41.7	1.6	3,940
3	120	37	14.5	1.2	2.2	40.5	0.4	1.7	45.8	1.7	4,830
3	150	37	16.2	1.4	2.4	45.2	0.4	1.8	50.7	1.8	5,890
3	185	37	18.0	1.6	2.6	50.3	0.4	1.9	56.0	2.0	7,240
3	240	61	20.6	1.7	2.8	56.7	0.4	2.1	62.8	2.2	9,270
3	300	61	23.1	1.8	3.1	62.7	0.4	2.2	69.0	2.4	11,370
3C	50	19	9.1	1.0	1.8	29.7	0.3	1.4	34.0	1.3	2,480
Earth	25	7	6.6	0.9							
3C	70	19	11.0	1.1	2.0	34.4	0.4	1.5	39.3	1.5	3,440
Earth	35	7	7.9	0.9							
3C	95	19	12.9	1.1	2.2	39.3	0.4	1.6	44.4	1.6	4,520
Earth	50	19	9.1	1.0							
3C	120	37	14.5	1.2	2.4	43.9	0.4	1.7	49.2	1.8	5,660
Earth	70	19	11.0	1.1							
3C	150	37	16.2	1.4	2.5	48.9	0.4	1.9	54.6	1.9	7,000
Earth	95	19	12.9	1.1							
3C	185	37	18.0	1.6	2.7	53.8	0.4	2.0	59.7	2.1	8,350
Earth	95	19	12.9	1.1							
3C	240	61	20.6	1.7	3.0	60.8	0.4	2.2	67.1	2.3	10,690
Earth	120	37	14.5	1.2							
3C	300	61	23.1	1.8	3.2	67.0	0.4	2.3	73.5	2.5	13,060
Earth	150	37	16.2	1.4							

## Inner sheath type

0.6/1kV PYCY, PYOY, PYBY, PYCY(C), PYOY(C), PYBY(C), PICI, PIOI, PIBI, PICI(C), PIOI(C), PIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
4	1.5	7	1.7	0.7	1.1	10.2	0.3	0.9	13.5	0.7	290
4	2.5	7	2.2	0.7	1.1	11.1	0.3	0.9	14.4	0.7	350
4	4	7	2.7	0.7	1.2	12.6	0.3	0.9	15.9	0.8	440
4	6	7	3.3	0.7	1.3	14.2	0.3	1.0	17.7	0.8	570
4	10	7	4.2	0.7	1.3	16.4	0.3	1.0	19.9	0.9	770
4	16	7	5.3	0.7	1.4	19.0	0.3	1.1	22.7	1.0	1,080
4	25	7	6.6	0.9	1.6	23.7	0.3	1.2	27.6	1.1	1,610
4	35	7	7.9	0.9	1.7	26.6	0.3	1.3	30.7	1.2	2,080
4	50	19	9.1	1.0	1.9	30.9	0.4	1.4	35.6	1.4	2,810
4	70	19	11.0	1.1	2.1	35.8	0.4	1.5	40.7	1.5	3,810
4	95	19	12.9	1.1	2.2	40.6	0.4	1.7	45.9	1.7	5,020
4	120	37	14.5	1.2	2.4	45.1	0.4	1.8	50.6	1.8	6,200
4	150	37	16.2	1.4	2.6	50.4	0.4	1.9	56.1	2.0	7,570
4	185	37	18.0	1.6	2.8	56.1	0.4	2.0	62.0	2.2	9,320
4	240	61	20.6	1.7	3.1	63.4	0.4	2.2	69.7	2.4	11,990
4	300	61	23.1	1.8	3.3	69.9	0.4	2.4	76.6	2.6	14,710
4C+E	1.5	7	1.7	0.7	1.1	11.1	0.3	0.9	14.4	0.7	330
4C+E	2.5	7	2.2	0.7	1.2	12.4	0.3	0.9	15.7	0.8	410
4C+E	4	7	2.7	0.7	1.2	13.7	0.3	1.0	17.2	0.8	520
4C+E	6	7	3.3	0.7	1.3	15.5	0.3	1.0	19.0	0.9	660
4C+E	10	7	4.2	0.7	1.4	18.2	0.3	1.1	21.9	1.0	930
4C+E	16	7	5.3	0.7	1.5	21.1	0.3	1.2	25.0	1.1	1,320
4C	25	7	6.6	0.9	1.7	25.7	0.3	1.3	29.8	1.2	1,850
Earth	16	7	5.3	0.7							
4C	35	7	7.9	0.9	1.8	29.1	0.3	1.4	33.4	1.3	2,440
Earth	25	7	6.6	0.9							
4C	50	19	9.1	1.0	2.0	33.3	0.4	1.5	38.2	1.4	3,180
Earth	25	7	6.6	0.9							
4C	70	19	11.0	1.1	2.2	38.6	0.4	1.6	43.7	1.6	4,310
Earth	35	7	7.9	0.9							
4C	95	19	12.9	1.1	2.4	44.0	0.4	1.7	49.3	1.8	5,670
Earth	50	19	9.1	1.0							
4C	120	37	14.5	1.2	2.5	48.8	0.4	1.9	54.5	1.9	7,080
Earth	70	19	11.0	1.1							
4C	150	37	16.2	1.4	2.8	54.8	0.4	2.0	60.7	2.1	8,760
Earth	95	19	12.9	1.1							
4C	185	37	18.0	1.6	3.0	60.4	0.4	2.2	66.7	2.3	10,560
Earth	95	19	12.9	1.1							
4C	240	61	20.6	1.7	3.3	68.2	0.4	2.3	74.7	2.5	13,500
Earth	120	37	14.5	1.2							
4C	300	61	23.1	1.8	3.5	75.2	0.4	2.5	82.1	2.8	16,550
Earth	150	37	16.2	1.4							
5	1.5	7	1.7	0.7	1.1	11.1	0.3	0.9	14.4	0.7	330
5	2.5	7	2.2	0.7	1.2	12.4	0.3	0.9	15.7	0.8	410
5	4	7	2.7	0.7	1.2	13.7	0.3	1.0	17.2	0.8	520
5	6	7	3.3	0.7	1.3	15.5	0.3	1.0	19.0	0.9	660
6	1.5	7	1.7	0.7	1.2	12.2	0.3	0.9	15.5	0.8	380
6	2.5	7	2.2	0.7	1.2	13.4	0.3	1.0	16.9	0.8	470
6	4	7	2.7	0.7	1.3	15.1	0.3	1.0	18.6	0.9	600
6	6	7	3.3	0.7	1.4	17.1	0.3	1.1	20.8	0.9	780
10	1.5	7	1.7	0.7	1.3	15.5	0.3	1.0	19.0	0.9	550
10	2.5	7	2.2	0.7	1.4	17.3	0.3	1.1	21.0	0.9	700
10	4	7	2.7	0.7	1.5	19.5	0.3	1.1	23.2	1.0	910
10	6	7	3.3	0.7	1.5	21.9	0.3	1.2	25.8	1.1	1,190

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

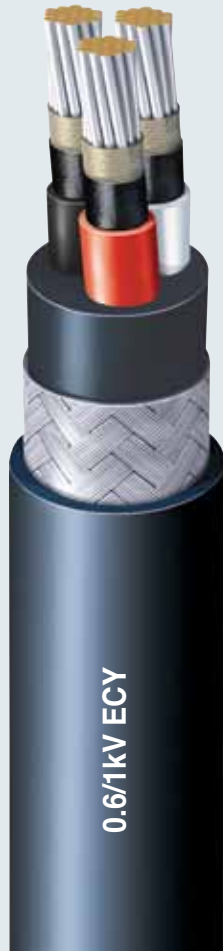
Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Power &amp; Lighting Cable with / without collective screen



## Cable Designation

## Non-H/F TYPE

## Inner covering

0.6/1kV EXY, EGY, EOY, EBY, EGY(C),  
ECY(C), EOY(C), EBY(C)

## Inner sheath

0.6/1kV EGY, EYOY, EYBY, EGY(C),  
EYOY(C), EYBY(C)

## H/F TYPE

## Inner covering

0.6/1kV EXI, ECI, EOI, EBI, EXI(C), ECI(C),  
EOI(C), EBI(C)

## Inner sheath

0.6/1kV EICI, EIOI, EIBI, EICI(C), EIOI(C),  
EIBI(C)

## Application Standard

- Design guide : IEC 60092-350 & IEC 60092-353
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Fire resistance : IEC 60331-21(90min)  
IEC 60331-1,-2(120min)
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓)  
(For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h  
(For PVC sheath material only)
- Max. rated conductor temperature : 90°C

## Core Identification

1 Core : White

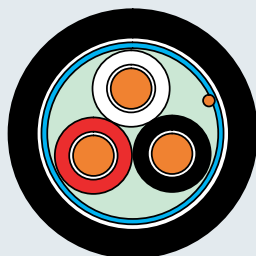
2 Core : White, Black

3 Core : White, Black, Red

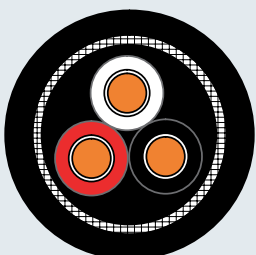
4 Core : White, Black, Red, Blue

Earth Wire : Green / Yellow stripe

## Construction



EXI(C) (3C)



EGY (3C)

Classification	Code	Construction detail
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2 - A suitable tape may be applied on the conductor
Fire resisting layer	<b>E</b>	- Mica/glass tape
Insulation		- EPR as per IEC 60092-360
Cabling		- Insulated conductors shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable
Collective screen	<b>(C)</b>	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen - Applied to Screened cable
Inner covering or Inner sheath		<div> <b>Inner covering</b>            - Flexible compound covering            - Applied to Armoured &amp; Sheath cable         </div> <div> <b>Inner sheath</b>            - Non-H/F type : ST2(Y) as per IEC 60092-350            - H/F type : SHF1(I) as per IEC 60092-350         </div>
Armour	<b>C (O,B)</b>	- Braid of galvanized steel wire(C) / Plain annealed copper wire(O) / bronze wire(B) - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable
Sheath	<b>Y (I)</b>	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black

**Note.** The other color of sheath and insulation may be applicable when purchaser require

**Inner covering type****0.6/1kV EXY, EOY, EBY, EXY(C), EOY(C), EBY(C), EXI, EOI, EBI, EXI(C), EOI(C), EBI(C)**

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
1	1.5	7	1.7	0.7	1.0	6.2±0.4	60	1.0	5.2±0.4	0.3	1.1	9.0±0.4	135
	2.5	7	2.2	0.7	1.0	6.6±0.4	70	1.0	5.6±0.4	0.3	1.1	9.4±0.4	150
	4	7	2.7	0.7	1.0	7.2±0.4	90	1.0	6.2±0.4	0.3	1.1	10.0±0.4	180
	6	7	3.3	0.7	1.0	7.7±0.4	115	1.0	6.7±0.4	0.3	1.1	10.5±0.4	205
	10	7	4.2	0.7	1.1	8.9±0.4	165	1.0	7.7±0.4	0.3	1.2	11.7±0.5	270
	16	7	5.3	0.7	1.1	9.9±0.4	230	1.0	8.7±0.4	0.3	1.2	12.7±0.5	350
	25	7	6.6	0.9	1.2	11.8±0.5	350	1.0	10.4±0.4	0.3	1.3	14.6±0.6	485
	35	7	7.9	0.9	1.2	13.2±0.5	455	1.0	11.8±0.5	0.3	1.3	16.0±0.6	610
	50	19	9.1	1.0	1.3	14.8±0.6	595	1.0	13.2±0.5	0.3	1.4	17.6±0.7	765
	70	19	11.0	1.1	1.4	17.0±0.7	825	1.0	15.2±0.6	0.3	1.5	19.8±0.8	1,020
	95	19	12.9	1.1	1.4	18.9±0.8	1,095	1.0	17.1±0.7	0.3	1.5	21.7±0.9	1,310
	120	37	14.5	1.2	1.5	20.9±0.8	1,360	1.0	18.9±0.8	0.3	1.6	23.7±0.9	1,600
	150	37	16.2	1.4	1.6	23.1±0.9	1,665	1.0	20.9±0.8	0.3	1.7	25.9±1.0	1,925
	185	37	18.0	1.6	1.7	25.5±1.0	2,060	1.0	23.1±0.9	0.3	1.8	28.3±1.1	2,345
	240	61	20.6	1.7	1.8	28.6±1.1	2,665	1.0	26.0±1.0	0.3	1.9	31.4±1.3	2,985
	300	61	23.1	1.8	1.9	31.4±1.3	3,290	1.2	28.8±1.2	0.3	2.0	34.4±1.4	3,655
	400	61	26.1	2.0	2.0	35.0±1.4	4,165	1.2	32.2±1.3	0.4	2.2	38.6±1.5	4,670
	500	61	29.2	2.2	2.2	38.9±1.6	5,210	1.2	35.7±1.4	0.4	2.3	42.3±1.7	5,755
	630	91	33.2	2.4	2.3	43.5±1.7	6,660	1.4	40.4±1.6	0.4	2.5	47.4±1.9	7,310

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



## Fire resistance

## Power &amp; Lighting Cable with / without collective screen

## Inner covering type

0.6/1kV EXY, ECY, EOY, EBY, EXY(C), ECY(C), EOY(C), EBY(C), EXI, EOI, EBI, EXI(C), ECI(C), EOI(C), EBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
2	1.5	7	1.7	0.7	1.1	10.6±0.4	130	1.0	9.4±0.4	0.3	1.2	13.4±0.5	245
	2.5	7	2.2	0.7	1.2	11.6±0.5	165	1.0	10.2±0.4	0.3	1.3	14.4±0.6	290
	4	7	2.7	0.7	1.2	12.8±0.5	210	1.0	11.4±0.5	0.3	1.3	15.6±0.6	355
	6	7	3.3	0.7	1.2	13.8±0.6	265	1.0	12.4±0.5	0.3	1.4	16.8±0.7	425
	10	7	4.2	0.7	1.3	16.0±0.6	385	1.0	14.4±0.6	0.3	1.4	18.8±0.8	555
	16	7	5.3	0.7	1.4	18.2±0.7	540	1.0	16.4±0.7	0.3	1.5	21.0±0.8	730
	25	7	6.6	0.9	1.5	21.8±0.9	805	1.0	19.8±0.8	0.3	1.6	24.6±1.0	1,040
	35	7	7.9	0.9	1.7	25.0±1.0	1,085	1.0	22.6±0.9	0.3	1.8	27.8±1.1	1,340
	50	19	9.1	1.0	1.8	28.0±1.1	1,400	1.0	25.4±1.0	0.3	1.9	30.8±1.2	1,690
	70	19	11.0	1.1	1.9	32.2±1.3	1,930	1.2	29.6±1.2	0.3	2.0	35.2±1.4	2,275
	95	19	12.9	1.1	2.1	36.4±1.5	2,565	1.2	33.4±1.3	0.4	2.2	39.8±1.6	3,035
	120	37	14.5	1.2	2.2	40.2±1.6	3,180	1.4	37.3±1.5	0.4	2.4	44.1±1.8	3,745
	150	37	16.2	1.4	2.4	44.6±1.8	3,900	1.4	41.3±1.7	0.4	2.5	48.3±1.9	4,505
	185	37	18.0	1.6	2.6	49.4±2.0	4,835	1.4	45.7±1.8	0.4	2.7	53.1±2.1	5,505
	240	61	20.6	1.7	2.8	55.6±2.2	6,245	1.6	51.7±2.1	0.4	2.9	59.5±2.4	7,015
	300	61	23.1	1.8	3.0	61.2±2.4	7,710	1.6	56.9±2.3	0.4	3.1	65.1±2.6	8,555
2C	25	7	6.6	0.9	1.6	23.1±0.9	1,005	1.0	21.3±0.9	0.3	1.7	26.3±1.1	1,270
Earth	16	7	5.3	0.7									
2C	35	7	7.9	0.9	1.7	26.4±1.1	1,375	1.0	24.±1.0	0.3	1.8	29.6±1.2	1,675
Earth	25	7	6.6	0.7									
2C	50	19	9.1	1.0	1.8	29.3±1.2	1,695	1.2	27.4±1.1	0.3	2.0	33.0±1.3	2,055
Earth	25	7	6.6	0.9									
2C	70	19	11.0	1.1	2.0	33.9±1.4	2,340	1.2	31.6±1.3	0.4	2.1	37.8±1.5	2,815
Earth	35	7	7.9	0.9									
2C	95	19	12.9	1.1	2.1	38.1±1.5	3,090	1.2	35.6±1.4	0.4	2.3	42.2±1.7	3,645
Earth	50	19	9.1	1.0									
2C	120	37	14.5	1.2	2.3	42.4±1.7	3,940	1.4	39.8±1.6	0.4	2.5	46.8±1.9	4,580
Earth	70	19	11.0	1.1									
2C	150	37	16.2	1.4	2.5	47.1±1.9	4,920	1.4	44.1±1.8	0.4	2.6	51.3±2.1	5,610
Earth	95	19	12.9	1.1									
2C	185	37	18.0	1.6	2.6	51.6±2.1	5,840	1.6	48.8±2.0	0.4	2.8	56.4±2.3	6,655
Earth	95	19	12.9	1.1									
2C	240	61	20.6	1.7	2.9	58.3±2.3	7,525	1.6	54.9±2.2	0.4	3.1	63.1±2.5	8,440
Earth	120	37	14.5	1.2									
2C	300	61	23.1	1.8	3.1	64.2±2.6	9,275	1.6	60.4±2.4	0.4	3.3	69.0±2.8	10,285
Earth	150	37	16.2	1.4									

## Inner covering type

0.6/1kV EXY, ECY, EOY, EBY, EXY(C), ECY(C), EOY(C), EXI, ECI, EOI, EBI, EXI(C), ECI(C), EOI(C), EBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
3	1.5	7	1.7	0.7	1.2	11.4±0.5	165	1.0	10.0±0.4	0.3	1.3	14.2±0.6	290
	2.5	7	2.2	0.7	1.2	12.3±0.5	205	1.0	10.9±0.4	0.3	1.3	15.±0.6	345
	4	7	2.7	0.7	1.2	13.6±0.5	270	1.0	12.2±0.5	0.3	1.3	16.4±0.7	420
	6	7	3.3	0.7	1.3	14.9±0.6	355	1.0	13.3±0.5	0.3	1.4	17.7±0.7	515
	10	7	4.2	0.7	1.4	17.2±0.7	515	1.0	15.4±0.6	0.3	1.5	20.0±0.8	695
	16	7	5.3	0.7	1.5	19.0±0.8	730	1.0	17.6±0.7	0.3	1.6	22.4±0.9	940
	25	7	6.6	0.9	1.6	23.4±0.9	1,100	1.0	21.2±0.8	0.3	1.7	26.2±1.0	1,345
	35	7	7.9	0.9	1.7	26.6±1.1	1,465	1.0	24.2±1.0	0.3	1.8	29.4±1.2	1,740
	50	19	9.1	1.0	1.8	29.9±1.2	1,910	1.2	27.5±1.1	0.3	2.0	33.1±1.3	2,245
	70	19	11.0	1.1	2.0	34.6±1.4	2,660	1.2	31.8±1.3	0.4	2.1	38.0±1.5	3,110
	95	19	12.9	1.1	2.2	39.1±1.6	3,555	1.2	35.9±1.4	0.4	2.3	42.5±1.7	4,060
	120	37	14.5	1.2	2.3	43.1±1.7	4,420	1.4	40.0±1.6	0.4	2.5	47.0±1.9	5,020
	150	37	16.2	1.4	2.5	47.9±1.9	5,420	1.4	44.4±1.8	0.4	2.6	51.6±2.1	6,065
	185	37	18.0	1.6	2.7	53.0±2.1	6,725	1.6	49.3±2.0	0.4	2.8	56.9±2.3	7,460
	240	61	20.6	1.7	2.9	59.6±2.4	8,700	1.6	55.5±2.2	0.4	3.1	63.7±2.5	9,550
	300	61	23.1	1.8	3.2	65.8±2.6	10,785	1.6	61.1±2.4	0.4	3.3	69.7±2.8	11,695
3C	25	7	6.6	0.9	1.7	25.2±1.0	1,305	1.0	23.2±0.9	0.3	1.8	28.4±1.1	1,590
Earth	16	7	5.3	0.7									
3C	35	7	7.9	0.9	1.8	28.9±1.2	1,775	1.2	27.0±1.1	0.3	1.9	32.4±1.3	2,120
Earth	25	7	6.6	0.7									
3C	50	19	9.1	1.0	1.9	31.8±1.3	2,220	1.2	29.7±1.2	0.3	2.0	35.3±1.4	2,595
Earth	25	7	6.6	0.9									
3C	70	19	11.0	1.1	2.1	36.7±1.5	3,075	1.2	34.2±1.4	0.4	2.2	40.6±1.6	3,590
Earth	35	7	7.9	0.9									
3C	95	19	12.9	1.1	2.3	41.4±1.7	4,100	1.4	38.8±1.6	0.4	2.4	45.6±1.8	4,705
Earth	50	19	9.1	1.0									
3C	120	37	14.5	1.2	2.4	46.1±1.8	5,185	1.4	43.3±1.7	0.4	2.6	50.5±2.0	5,875
Earth	70	19	11.0	1.1									
3C	150	37	16.2	1.4	2.6	51.2±2.0	6,450	1.6	48.4±1.9	0.4	2.8	56.0±2.2	7,260
Earth	95	19	12.9	1.1									
3C	185	37	18.0	1.6	2.8	55.8±2.2	7,755	1.6	52.6±2.1	0.4	3.0	60.6±2.4	8,635
Earth	95	19	12.9	1.1									
3C	240	61	20.6	1.7	3.1	62.9±2.5	10,010	1.6	59.1±2.4	0.4	3.2	67.5±2.7	10,970
Earth	120	37	14.5	1.2									
3C	300	61	23.1	1.8	3.3	69.3±2.8	12,365	1.8	65.4±2.6	0.4	3.5	74.4±3.0	13,490
Earth	150	37	16.2	1.4									

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Power &amp; Lighting Cable with / without collective screen

## Inner covering type

0.6/1kV EXY, ECY, EOY, EBY, EXY(C), ECY(C), EOY(C), EBY(C), EXI, ECI, EOI, EBI, EXI(C), ECI(C), EOI(C), EBI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured					
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Thickness of inner covering	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	mm	kg/km
4	1.5	7	1.7	0.7	1.2	12.5±0.5	205	1.0	11.1±0.4	0.3	1.3	15.3±0.6	345
	2.5	7	2.2	0.7	1.2	13.4±0.5	255	1.0	12.0±0.5	0.3	1.3	16.2±0.6	405
	4	7	2.7	0.7	1.3	15.1±0.6	350	1.0	13.5±0.5	0.3	1.4	17.9±0.7	510
	6	7	3.3	0.7	1.3	16.3±0.7	445	1.0	14.7±0.6	0.3	1.4	19.1±0.8	620
	10	7	4.2	0.7	1.4	18.9±0.8	655	1.0	17.1±0.7	0.3	1.5	21.7±0.9	855
	16	7	5.3	0.7	1.5	21.5±0.9	935	1.0	19.5±0.8	0.3	1.6	24.3±1.0	1,160
	25	7	6.6	0.9	1.7	26.0±1.0	1,425	1.0	23.6±0.9	0.3	1.8	28.8±1.2	1,695
	35	7	7.9	0.9	1.8	29.6±1.2	1,900	1.2	27.2±1.1	0.3	1.9	32.6±1.3	2,220
	50	19	9.1	1.0	2.0	33.4±1.3	2,495	1.2	30.6±1.2	0.4	2.1	36.8±1.5	2,925
	70	19	11.0	1.1	2.2	38.6±1.5	3,475	1.2	35.4±1.4	0.4	2.3	42.0±1.7	3,975
	95	19	12.9	1.1	2.3	43.4±1.7	4,630	1.4	40.3±1.6	0.4	2.5	47.3±1.9	5,235
	120	37	14.5	1.2	2.5	48.1±1.9	5,780	1.4	44.6±1.8	0.4	2.7	52.0±2.1	6,450
	150	37	16.2	1.4	2.7	53.4±2.1	7,085	1.6	49.7±2.0	0.4	2.9	57.5±2.3	7,850
	185	37	18.0	1.6	2.9	59.1±2.4	8,800	1.6	55.0±2.2	0.4	3.1	63.2±2.5	9,640
	240	61	20.6	1.7	3.2	66.7±2.7	11,415	1.8	62.3±2.5	0.4	3.4	71.1±2.8	12,405
	300	61	23.1	1.8	3.5	73.5±2.9	14,145	1.8	68.5±2.7	0.4	3.6	77.7±3.1	15,200
4C	25	7	6.6	0.9	1.8	28.5±1.1	1,635	1.0	26.3±1.1	0.3	1.9	31.7±1.3	1,955
Earth	16	7	5.3	0.7									
4C	35	7	7.9	0.9	1.9	32.6±1.3	2,220	1.2	30.5±1.2	0.4	2.1	36.7±1.5	2,695
Earth	25	7	6.6	0.7									
4C	50	19	9.1	1.0	2.1	36.4±1.5	2,815	1.2	33.9±1.4	0.4	2.2	40.3±1.6	3,325
Earth	25	7	6.6	0.9									
4C	70	19	11.0	1.1	2.3	42.1±1.7	3,905	1.4	39.5±1.6	0.4	2.5	46.5±1.9	4,540
Earth	35	7	7.9	0.9									
4C	95	19	12.9	1.1	2.5	47.5±1.9	5,210	1.4	44.5±1.8	0.4	2.7	51.9±2.1	5,925
Earth	50	19	9.1	1.0									
4C	120	37	14.5	1.2	2.7	52.8±2.1	6,585	1.6	49.8±2.0	0.4	2.9	57.6±2.3	7,420
Earth	70	19	11.0	1.1									
4C	150	37	16.2	1.4	2.9	58.7±2.3	8,165	1.6	55.3±2.2	0.4	3.1	63.5±2.5	9,090
Earth	95	19	12.9	1.1									
4C	185	37	18.0	1.6	3.1	64.4±2.6	9,880	1.6	60.6±2.4	0.4	3.3	69.2±2.8	10,895
Earth	95	19	12.9	1.1									
4C	240	61	20.6	1.7	3.4	72.5±2.9	12,765	1.8	68.4±2.7	0.4	3.6	77.6±3.1	13,945
Earth	120	37	14.5	1.2									
4C	300	61	23.1	1.8	3.7	80.1±3.2	15,800	1.8	75.4±3.0	0.4	3.9	85.2±3.4	17,100
Earth	150	37	16.2	1.4									
5	1.5	7	1.7	0.7	1.2	12.7±0.7	220	1.0	11.5±0.6	0.3	1.3	15.7±0.8	370
	2.5	7	2.2	0.7	1.2	13.8±0.7	290	1.0	12.6±0.7	0.3	1.4	17.0±0.8	460
	4	7	2.7	0.7	1.3	15.6±0.8	400	1.0	14.2±0.7	0.3	1.4	18.6±0.9	580
	6	7	3.3	0.7	1.4	17.1±0.8	520	1.0	15.5±0.8	0.3	1.5	20.1±0.9	720
6	1.5	7	1.7	0.7	1.2	13.8±0.7	260	1.0	12.6±0.7	0.3	1.4	17.0±0.8	430
	2.5	7	2.2	0.7	1.3	15.2±0.8	350	1.0	13.8±0.7	0.3	1.4	18.2±0.8	520
	4	7	2.7	0.7	1.4	17.2±0.8	480	1.0	15.6±0.8	0.3	1.5	20.2±0.9	670
	6	7	3.3	0.7	1.4	18.7±0.9	620	1.0	17.1±0.8	0.3	1.5	21.7±1.0	830
10	1.5	7	1.7	0.7	1.4	17.9±0.8	430	1.0	16.3±0.8	0.3	1.5	20.9±0.9	630
	2.5	7	2.2	0.7	1.5	19.7±0.9	560	1.0	17.9±0.8	0.3	1.6	22.7±1.0	780
	4	7	2.7	0.7	1.6	22.3±1.0	780	1.0	20.3±0.9	0.3	1.7	25.3±1.1	1,030
	6	7	3.3	0.7	1.6	24.3±1.0	1,010	1.0	22.3±1.0	0.3	1.7	27.3±1.1	1,280

## Inner sheath type

## 0.6/1kV EYOY, EYBY, EYOY(C), EYBY(C), EIOI, EIBI, EIOI(C), EIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1	1.5	7	1.7	0.7	1.0	6.2	0.3	0.8	9.3	0.6	150
1	2.5	7	2.2	0.7	1.0	6.6	0.3	0.8	9.7	0.6	170
1	4	7	2.7	0.7	1.0	7.1	0.3	0.8	10.2	0.6	200
1	6	7	3.3	0.7	1.0	7.7	0.3	0.8	10.8	0.6	230
1	10	7	4.2	0.7	1.1	8.8	0.3	0.9	12.1	0.7	300
1	16	7	5.3	0.7	1.1	9.8	0.3	0.9	13.1	0.7	370
1	25	7	6.6	0.9	1.2	11.7	0.3	0.9	15.0	0.8	510
1	35	7	7.9	0.9	1.2	12.8	0.3	1.0	16.3	0.8	630
1	50	19	9.1	1.0	1.3	14.6	0.3	1.0	18.1	0.8	800
1	70	19	11.0	1.1	1.3	16.5	0.3	1.0	20.0	0.9	1,040
1	95	19	12.9	1.1	1.4	18.6	0.3	1.1	22.3	1.0	1,350
1	120	37	14.5	1.2	1.5	20.5	0.3	1.1	24.2	1.0	1,640
1	150	37	16.2	1.4	1.6	22.7	0.3	1.2	26.6	1.1	1,980
1	185	37	18.0	1.6	1.7	25.1	0.3	1.3	29.2	1.2	2,420
1	240	61	20.6	1.7	1.8	28.1	0.3	1.3	32.2	1.3	3,060
1	300	61	23.1	1.8	1.9	30.8	0.4	1.4	35.5	1.4	3,800
1	400	61	26.1	2.0	2.0	35.3	0.4	1.5	40.2	1.5	5,050
1	500	61	29.2	2.2	2.2	38.8	0.4	1.6	43.9	1.6	6,060
1	630	91	33.2	2.4	2.4	43.8	0.4	1.7	49.1	1.8	7,760

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



## Fire resistance

## Power &amp; Lighting Cable with / without collective screen

## Inner sheath type

0.6/1kV EYCY, EYOY, EYBY, EYCY(C), EYOY(C), EYBY(C), EICI, EIOI, EIBI, EICI(C), EIOI(C), EIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
2	1.5	7	1.7	0.7	1.1	10.1	0.3	0.9	13.4	0.7	260
2	2.5	7	2.2	0.7	1.1	10.9	0.3	0.9	14.2	0.7	300
2	4	7	2.7	0.7	1.2	12.1	0.3	0.9	15.4	0.8	360
2	6	7	3.3	0.7	1.2	13.3	0.3	1.0	16.8	0.8	440
2	10	7	4.2	0.7	1.3	15.3	0.3	1.0	18.8	0.9	570
2	16	7	5.3	0.7	1.4	17.5	0.3	1.1	21.2	0.9	760
2	25	7	6.6	0.9	1.5	21.1	0.3	1.2	25.0	1.1	1,070
2	35	7	7.9	0.9	1.6	23.5	0.3	1.2	27.4	1.1	1,330
2	50	19	9.1	1.0	1.7	26.9	0.3	1.3	31.0	1.2	1,710
2	70	19	11.0	1.1	1.9	31.1	0.4	1.4	35.8	1.4	2,360
2	95	19	12.9	1.1	2.0	35.1	0.4	1.5	40.0	1.5	3,040
2	120	37	14.5	1.2	2.2	38.9	0.4	1.6	44.0	1.6	3,720
2	150	37	16.2	1.4	2.3	43.1	0.4	1.7	48.4	1.8	4,480
2	185	37	18.0	1.6	2.5	47.9	0.4	1.8	53.4	1.9	5,480
2	240	61	20.6	1.7	2.7	53.9	0.4	2.0	59.8	2.1	6,970
2	300	61	23.1	1.8	2.9	59.3	0.4	2.1	65.4	2.3	8,470
2C+E	1.5	7	1.7	0.7	1.1	10.7	0.3	0.9	14.0	0.7	300
2C+E	2.5	7	2.2	0.7	1.2	11.7	0.3	0.9	15.0	0.8	360
2C+E	4	7	2.7	0.7	1.2	12.8	0.3	1.0	16.3	0.8	430
2C+E	6	7	3.3	0.7	1.3	14.3	0.3	1.0	17.8	0.8	540
2C+E	10	7	4.2	0.7	1.3	16.2	0.3	1.0	19.7	0.9	700
2C+E	16	7	5.3	0.7	1.4	18.6	0.3	1.1	22.3	1.0	950
2C	25	7	6.6	0.9	1.5	21.8	0.3	1.2	25.7	1.1	1,250
Earth	16	7	5.3	0.7							
2C	35	7	7.9	0.9	1.6	24.6	0.3	1.2	28.5	1.2	1,620
Earth	25	7	6.6	0.9							
2C	50	19	9.1	1.0	1.8	27.8	0.3	1.3	31.9	1.3	2,000
Earth	25	7	6.6	0.9							
2C	70	19	11.0	1.1	1.9	31.8	0.4	1.4	36.5	1.4	2,730
Earth	35	7	7.9	0.9							
2C	95	19	12.9	1.1	2.1	36.2	0.4	1.5	41.1	1.5	3,550
Earth	50	19	9.1	1.0							
2C	120	37	14.5	1.2	2.2	40.1	0.4	1.6	45.2	1.7	4,410
Earth	70	19	11.0	1.1							
2C	150	37	16.2	1.4	2.4	44.8	0.4	1.8	50.3	1.8	5,480
Earth	95	19	12.9	1.1							
2C	185	37	18.0	1.6	2.5	48.9	0.4	1.9	54.6	1.9	6,430
Earth	95	19	12.9	1.1							
2C	240	61	20.6	1.7	2.8	55.1	0.4	2.0	61.0	2.1	8,150
Earth	120	37	14.5	1.2							
2C	300	61	23.1	1.8	3.0	60.7	0.4	2.2	67.0	2.3	9,950
Earth	150	37	16.2	1.4							

## Inner sheath type

0.6/1kV EYCY, EYOY, EYBY, EYCY(C), EYOY(C), EYBY(C), EICI, EIOI, EIBI, EICI(C), EIOI(C), EIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
3	1.5	7	1.7	0.7	1.1	10.7	0.3	0.9	14.0	0.7	300
3	2.5	7	2.2	0.7	1.2	11.7	0.3	0.9	15.0	0.8	360
3	4	7	2.7	0.7	1.2	12.8	0.3	1.0	16.3	0.8	430
3	6	7	3.3	0.7	1.3	14.3	0.3	1.0	17.8	0.8	540
3	10	7	4.2	0.7	1.3	16.2	0.3	1.0	19.7	0.9	700
3	16	7	5.3	0.7	1.4	18.6	0.3	1.1	22.3	1.0	950
3	25	7	6.6	0.9	1.6	22.7	0.3	1.2	26.6	1.1	1,370
3	35	7	7.9	0.9	1.7	25.2	0.3	1.3	29.3	1.2	1,750
3	50	19	9.1	1.0	1.8	28.9	0.3	1.4	33.2	1.3	2,260
3	70	19	11.0	1.1	2.0	33.4	0.4	1.5	38.3	1.4	3,130
3	95	19	12.9	1.1	2.1	37.7	0.4	1.6	42.8	1.6	4,060
3	120	37	14.5	1.2	2.3	41.7	0.4	1.7	47.0	1.7	4,980
3	150	37	16.2	1.4	2.4	46.2	0.4	1.8	51.7	1.9	6,030
3	185	37	18.0	1.6	2.6	51.4	0.4	1.9	57.1	2.0	7,400
3	240	61	20.6	1.7	2.9	58.0	0.4	2.1	64.1	2.2	9,490
3	300	61	23.1	1.8	3.1	63.8	0.4	2.2	70.1	2.4	11,570
3C+E	1.5	7	1.7	0.7	1.2	11.8	0.3	0.9	15.1	0.8	350
3C+E	2.5	7	2.2	0.7	1.2	12.8	0.3	1.0	16.3	0.8	420
3C+E	4	7	2.7	0.7	1.3	14.2	0.3	1.0	17.7	0.8	520
3C+E	6	7	3.3	0.7	1.3	15.7	0.3	1.0	19.2	0.9	640
3C+E	10	7	4.2	0.7	1.4	18.0	0.3	1.1	21.7	1.0	880
3C+E	16	7	5.3	0.7	1.5	20.6	0.3	1.1	24.3	1.0	1,180
3C	25	7	6.6	0.9	1.6	24.3	0.3	1.2	28.2	1.1	1,590
Earth	16	7	5.3	0.7							
3C	35	7	7.9	0.9	1.8	27.6	0.3	1.3	31.7	1.3	2,090
Earth	25	7	6.6	0.9							
3C	50	19	9.1	1.0	1.9	31.1	0.4	1.4	35.8	1.4	2,680
Earth	25	7	6.6	0.9							
3C	70	19	11.0	1.1	2.1	35.8	0.4	1.5	40.7	1.5	3,590
Earth	35	7	7.9	0.9							
3C	95	19	12.9	1.1	2.2	40.5	0.4	1.7	45.8	1.7	4,690
Earth	50	19	9.1	1.0							
3C	120	37	14.5	1.2	2.4	45.1	0.4	1.8	50.6	1.8	5,850
Earth	70	19	11.0	1.1							
3C	150	37	16.2	1.4	2.6	50.3	0.4	1.9	56.0	2.0	7,200
Earth	95	19	12.9	1.1							
3C	185	37	18.0	1.6	2.8	55.2	0.4	2.0	61.1	2.1	8,580
Earth	95	19	12.9	1.1							
3C	240	61	20.6	1.7	3.0	62.0	0.4	2.2	68.3	2.3	10,910
Earth	120	37	14.5	1.2							
3C	300	61	23.1	1.8	3.3	68.4	0.4	2.4	75.1	2.6	13,380
Earth	150	37	16.2	1.4							

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

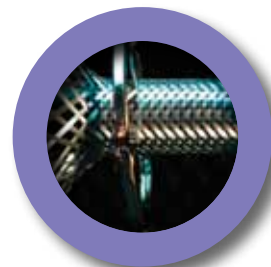
## Fire resistance

## Power &amp; Lighting Cable with / without collective screen

## Inner sheath type

0.6/1kV EYCY, EYOY, EYBY, EYCY(C), EYOY(C), EYBY(C), EICI, EIOI, EIBI, EICI(C), EIOI(C), EIBI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
4	1.5	7	1.7	0.7	1.2	11.8	0.3	0.9	15.1	0.8	350
4	2.5	7	2.2	0.7	1.2	12.8	0.3	1.0	16.3	0.8	420
4	4	7	2.7	0.7	1.3	14.2	0.3	1.0	17.7	0.8	520
4	6	7	3.3	0.7	1.3	15.7	0.3	1.0	19.2	0.9	640
4	10	7	4.2	0.7	1.4	18.0	0.3	1.1	21.7	1.0	880
4	16	7	5.3	0.7	1.5	20.6	0.3	1.1	24.3	1.0	1,180
4	25	7	6.6	0.9	1.7	25.1	0.3	1.3	29.2	1.2	1,730
4	35	7	7.9	0.9	1.8	28.0	0.3	1.3	32.1	1.3	2,200
4	50	19	9.1	1.0	1.9	32.1	0.4	1.4	36.8	1.4	2,930
4	70	19	11.0	1.1	2.1	37.0	0.4	1.6	42.1	1.6	3,970
4	95	19	12.9	1.1	2.3	42.0	0.4	1.7	47.3	1.7	5,200
4	120	37	14.5	1.2	2.5	46.5	0.4	1.8	52.0	1.9	6,390
4	150	37	16.2	1.4	2.6	51.6	0.4	1.9	57.3	2.0	7,760
4	185	37	18.0	1.6	2.9	57.5	0.4	2.1	63.6	2.2	9,580
4	240	61	20.6	1.7	3.1	64.6	0.4	2.3	71.1	2.4	12,250
4	300	61	23.1	1.8	3.4	71.3	0.4	2.4	78.0	2.6	15,000
4C+E	1.5	7	1.7	0.7	1.2	12.9	0.3	1.0	16.4	0.8	410
4C+E	2.5	7	2.2	0.7	1.3	14.2	0.3	1.0	17.7	0.8	500
4C+E	4	7	2.7	0.7	1.3	15.5	0.3	1.0	19.0	0.9	610
4C+E	6	7	3.3	0.7	1.4	17.3	0.3	1.1	21.0	0.9	770
4C+E	10	7	4.2	0.7	1.5	20.0	0.3	1.1	23.7	1.0	1,050
4C+E	16	7	5.3	0.7	1.6	22.9	0.3	1.2	26.8	1.1	1,430
4C	25	7	6.6	0.9	1.7	27.1	0.3	1.3	31.2	1.2	1,960
Earth	16	7	5.3	0.7							
4C	35	7	7.9	0.9	1.9	30.7	0.4	1.4	35.4	1.4	2,650
Earth	25	7	6.6	0.9							
4C	50	19	9.1	1.0	2.0	34.6	0.4	1.5	39.5	1.5	3,320
Earth	25	7	6.6	0.9							
4C	70	19	11.0	1.1	2.2	39.9	0.4	1.6	45.0	1.7	4,470
Earth	35	7	7.9	0.9							
4C	95	19	12.9	1.1	2.4	45.3	0.4	1.8	50.8	1.8	5,870
Earth	50	19	9.1	1.0							
4C	120	37	14.5	1.2	2.6	50.4	0.4	1.9	56.1	2.0	7,310
Earth	70	19	11.0	1.1							
4C	150	37	16.2	1.4	2.8	56.2	0.4	2.0	62.1	2.2	8,990
Earth	95	19	12.9	1.1							
4C	185	37	18.0	1.6	3.0	61.8	0.4	2.2	68.1	2.3	10,810
Earth	95	19	12.9	1.1							
4C	240	61	20.6	1.7	3.3	69.5	0.4	2.4	76.2	2.6	13,810
Earth	120	37	14.5	1.2							
4C	300	61	23.1	1.8	3.6	76.7	0.4	2.6	83.8	2.8	16,930
Earth	150	37	16.2	1.4							
5	1.5	7	1.7	0.7	1.2	12.9	0.3	1.0	16.4	0.8	410
5	2.5	7	2.2	0.7	1.3	14.2	0.3	1.0	17.7	0.8	500
5	4	7	2.7	0.7	1.3	15.5	0.3	1.0	19.0	0.9	610
5	6	7	3.3	0.7	1.4	17.3	0.3	1.1	21.0	0.9	770
6	1.5	7	1.7	0.7	1.3	14.2	0.3	1.0	17.7	0.8	470
6	2.5	7	2.2	0.7	1.3	15.4	0.3	1.0	18.9	0.9	570
6	4	7	2.7	0.7	1.4	17.1	0.3	1.1	20.8	0.9	720
6	6	7	3.3	0.7	1.4	18.9	0.3	1.1	22.6	1.0	890
10	1.5	7	1.7	0.7	1.4	18.1	0.3	1.1	21.8	1.0	700
10	2.5	7	2.2	0.7	1.5	19.9	0.3	1.1	23.6	1.0	860
10	4	7	2.7	0.7	1.5	21.9	0.3	1.2	25.8	1.1	1,080
10	6	7	3.3	0.7	1.6	24.5	0.3	1.2	28.4	1.2	1,370



# Control Cable



## Flame Retardant (Inner covering cable)

Non-H/F TYPE 250V PXY, POY, 250V PXY(C), POY(C)

H/F TYPE 250V PXI, POI, 250V PXI(C), POI(C)

30 ~ 31

## Flame Retardant (Inner sheath cable)

Non-H/F TYPE 250V PYOY, 250V PYOY(C)

H/F TYPE 250V PIOI, 250V PIOI(C)

30 ~ 31

## Fire Resistance (Inner covering cable)

Non-H/F TYPE 250V EXY, EOY, 250V EXY(C), EOY(C)

H/F TYPE 250V EXI, EOI, 250V EXI(C), EOI(C)

32 ~ 33

## Fire Resistance (Inner sheath cable)

Non-H/F TYPE 250V EYOY, 250V EYOY(C)

H/F TYPE 250V EOI, 250V EOI(C)

32 ~ 33



Flame retardant

# Control Cable with / without collective screen



## Cable Designation

### Non-H/F TYPE

#### Inner covering

250V PXY, POY, PXY(C), POY(C)

#### Inner sheath

250V PYOY, PYOY(C)

### H/F TYPE

#### Inner covering

250V PXI, POI, PXI(C), POI(C)

#### Inner sheath

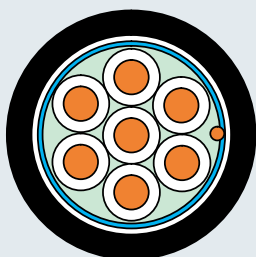
250V PIOI, PIOI(C)

## Application Standard

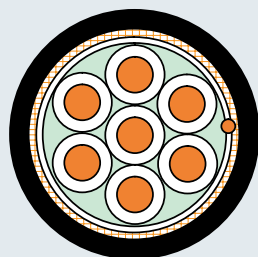
- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓) (For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

## Core Identification

- Black number on white insulation



PXI(C) (7C)



POY (7C)

## Construction

Classification	Code	Construction detail	
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2	
Insulation	<b>P</b>	- EPR as per IEC 60092-360	
Cabling		- Insulated conductors shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable	
Collective screen	<b>(C)</b>	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen - Applied to Screened cable	
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable	<b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	<b>O</b>	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable	
Sheath	<b>Y</b> <b>(I)</b>	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black	

**Note.** The other color of sheath and insulation may be applicable when purchaser require

## Inner covering type

250V PXY, POY, PXY(C), POY(C), PXI, POI, PXI(C), POI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
2	1.0	7	1.4	0.5	1.0	7.6±0.4	80	5.6±0.4	0.2	1.1	9.1±0.4	130
3	1.0	7	1.4	0.5	1.0	8.0±0.4	100	6.0±0.4	0.2	1.1	9.5±0.4	150
4	1.0	7	1.4	0.5	1.1	8.9±0.4	120	6.7±0.4	0.2	1.1	10.2±0.4	175
5	1.0	7	1.4	0.5	1.1	9.6±0.4	145	7.4±0.4	0.2	1.1	10.9±0.4	200
7	1.0	7	1.4	0.5	1.1	10.4±0.4	180	8.2±0.4	0.2	1.2	11.9±0.5	245
9	1.0	7	1.4	0.5	1.2	12.2±0.5	230	9.8±0.4	0.2	1.2	13.5±0.5	305
12	1.0	7	1.4	0.5	1.2	13.6±0.5	280	11.2±0.4	0.3	1.3	15.6±0.6	420
16	1.0	7	1.4	0.5	1.3	15.2±0.6	365	12.6±0.5	0.3	1.4	17.2±0.7	515
19	1.0	7	1.4	0.5	1.3	16.0±0.6	410	13.4±0.5	0.3	1.4	18.0±0.7	565
23	1.0	7	1.4	0.5	1.4	17.8±0.7	505	15.0±0.6	0.3	1.5	19.8±0.8	675
27	1.0	7	1.4	0.5	1.4	19.2±0.8	575	16.4±0.7	0.3	1.5	21.2±0.8	760
33	1.0	7	1.4	0.5	1.5	20.8±0.8	690	17.8±0.7	0.3	1.6	22.8±0.9	890
37	1.0	7	1.4	0.5	1.5	21.6±0.9	750	18.6±0.7	0.3	1.6	23.6±0.9	965
44	1.0	7	1.4	0.5	1.6	24.4±1.0	900	21.2±0.8	0.3	1.7	26.4±1.1	1,140
77	1.0	7	1.4	0.5	1.9	30.6±1.2	1,515	26.8±1.1	0.3	1.9	32.4±1.3	1,795

## Inner sheath type

250V PYOY, PYOY(C), PIOI, PIOI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
2	1.0	7	1.4	0.5	1.0	7.3	0.2	0.8	10.1	0.6	160
3	1.0	7	1.4	0.5	1.0	7.7	0.2	0.8	10.5	0.6	180
4	1.0	7	1.4	0.5	1.0	8.3	0.2	0.8	11.1	0.6	200
5	1.0	7	1.4	0.5	1.1	9.2	0.2	0.9	12.2	0.7	240
7	1.0	7	1.4	0.5	1.1	9.9	0.2	0.9	12.9	0.7	270
9	1.0	7	1.4	0.5	1.2	11.5	0.3	0.9	14.8	0.7	370
12	1.0	7	1.4	0.5	1.2	12.8	0.3	1.0	16.3	0.8	450
16	1.0	7	1.4	0.5	1.3	14.4	0.3	1.0	17.9	0.8	540
19	1.0	7	1.4	0.5	1.3	15.1	0.3	1.0	18.6	0.9	600
23	1.0	7	1.4	0.5	1.3	16.5	0.3	1.0	20.0	0.9	690
27	1.0	7	1.4	0.5	1.4	18.0	0.3	1.1	21.7	1.0	790
33	1.0	7	1.4	0.5	1.5	19.5	0.3	1.1	23.2	1.0	920
37	1.0	7	1.4	0.5	1.5	20.2	0.3	1.1	23.9	1.0	990
44	1.0	7	1.4	0.5	1.6	22.8	0.3	1.2	26.7	1.1	1,180
77	1.0	7	1.4	0.5	1.8	28.4	0.3	1.3	32.5	1.3	1,820

## Fire resistance

## Control Cable with / without collective screen



## Cable Designation

## Non-H/F TYPE

## Inner covering

250V EXY, EOY, EXY(C), EOY(C)

## Inner sheath

250V EYOY, EYOY(C)

## H/F TYPE

## Inner covering

250V EXI, EOI, EXI(C), EOI(C)

## Inner sheath

250V EIOI, EIOI(C)

## Application Standard

- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Fire resistance : IEC 60331-21(90min)  
IEC 60331-1,-2(120min)
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓)  
(For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h  
(For PVC sheath material only)
- Max. rated conductor temperature : 90°C

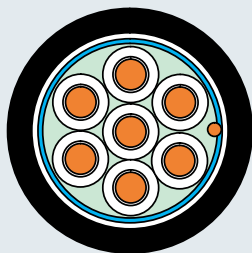
## Core Identification

- Black number on white insulation

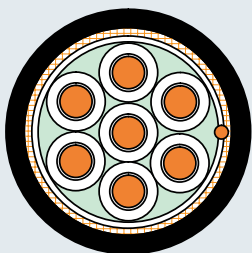
## Construction

Classification	Code	Construction detail
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2
Fire resisting layer	E	- Mica/glass tape
Insulation		- EPR as per IEC 60092-360
Cabling		- Insulated conductors shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable
Collective screen	(C)	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen - Applied to Screened cable
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable <b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	O	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable
Sheath	Y (I)	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black

**Note.** The other color of sheath and insulation may be applicable when purchaser require



EXI(C) (7C)



EOY (7C)

## Inner covering type

## 250V EXY, EOY, EXY(C), EOY(C), EXI, EOI, EXI(C), EOI(C)

No. of Cores	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
2	1.0	7	1.4	0.5	1.0	8.4±0.4	95	6.6±0.4	0.2	1.1	9.9±0.4	150
3	1.0	7	1.4	0.5	1.1	9.1±0.4	115	7.1±0.4	0.2	1.1	10.4±0.4	170
4	1.0	7	1.4	0.5	1.1	9.8±0.4	140	7.8±0.4	0.2	1.1	11.1±0.4	200
5	1.0	7	1.4	0.5	1.1	10.7±0.5	165	8.7±0.4	0.2	1.2	12.2±0.5	235
7	1.0	7	1.4	0.5	1.2	11.8±0.5	210	9.6±0.4	0.2	1.2	13.1±0.5	285
9	1.0	7	1.4	0.5	1.2	13.6±0.6	270	11.4±0.5	0.3	1.3	15.6±0.6	405
12	1.0	7	1.4	0.5	1.3	15.5±0.6	340	13.1±0.5	0.3	1.4	17.5±0.7	490
16	1.0	7	1.4	0.5	1.4	17.3±0.7	435	14.7±0.6	0.3	1.4	19.1±0.8	595
19	1.0	7	1.4	0.5	1.4	18.2±0.8	490	15.6±0.6	0.3	1.5	20.2±0.8	665
23	1.0	7	1.4	0.5	1.5	20.2±0.8	595	17.4±0.7	0.3	1.6	22.2±0.9	790
27	1.0	7	1.4	0.5	1.5	21.9±0.9	680	19.1±0.8	0.3	1.6	23.9±1.0	890
33	1.0	7	1.4	0.5	1.6	23.7±1.0	820	20.7±0.8	0.3	1.7	25.7±1.0	1,050
37	1.0	7	1.4	0.5	1.6	24.6±1.0	890	21.6±0.9	0.3	1.7	26.6±1.1	1,130
44	1.0	7	1.4	0.5	1.8	28.0±1.2	1,085	24.6±1.0	0.3	1.8	29.8±1.2	1,340
77	1.0	7	1.4	0.5	2.0	34.9±1.4	1,790	31.1±1.2	0.4	2.1	37.3±1.5	2,210

## Inner sheath type

## 250V EYOY, EYOY(C), EIOI, EIOI(C)

No. of Cores	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
2	1.0	7	1.4	0.5	1.1	8.7	0.2	0.8	11.5	0.6	190
3	1.0	7	1.4	0.5	1.1	9.2	0.2	0.9	12.2	0.7	220
4	1.0	7	1.4	0.5	1.1	9.9	0.2	0.9	12.9	0.7	250
5	1.0	7	1.4	0.5	1.1	10.8	0.3	0.9	14.1	0.7	320
7	1.0	7	1.4	0.5	1.2	11.9	0.3	0.9	15.2	0.8	380
9	1.0	7	1.4	0.5	1.2	13.7	0.3	1.0	17.2	0.8	460
12	1.0	7	1.4	0.5	1.3	15.6	0.3	1.0	19.1	0.9	560
16	1.0	7	1.4	0.5	1.4	17.4	0.3	1.1	21.1	0.9	690
19	1.0	7	1.4	0.5	1.4	18.3	0.3	1.1	22.0	1.0	760
23	1.0	7	1.4	0.5	1.5	20.3	0.3	1.1	24.0	1.0	890
27	1.0	7	1.4	0.5	1.6	22.2	0.3	1.2	26.1	1.1	1,040
33	1.0	7	1.4	0.5	1.6	23.8	0.3	1.2	27.7	1.1	1,190
37	1.0	7	1.4	0.5	1.7	24.9	0.3	1.3	29.0	1.2	1,310
44	1.0	7	1.4	0.5	1.8	28.1	0.3	1.3	32.2	1.3	1,550
77	1.0	7	1.4	0.5	2.0	35.0	0.4	1.5	39.9	1.5	2,490





# Instrumentation Cable



## Flame Retardant (Inner covering cable)

Non-H/F TYPE 250V PXY(C), POY(C), 250V PXY(I/C), POY(I/C)

H/F TYPE 250V PXI(C), POI(C), 250V PXI(I/C), POI(I/C)

35 ~ 45

## Flame Retardant (Inner sheath cable)

Non-H/F TYPE 250V PYOY(C), 250V PYOY(I/C)

H/F TYPE 250V PIOI(C), 250V PIOI(I/C)

35 ~ 45

## Fire Resistance (Inner covering cable)

Non-H/F TYPE 250V EXY(C), EOY(C), 250V EXY(I/C), EOY(I/C)

H/F TYPE 250V EXI(C), EOI(C), 250V EXI(I/C), EOI(I/C)

46 ~ 57

## Fire Resistance (Inner sheath cable)

Non-H/F TYPE 250V EYOY(C), 250V EYOY(I/C)

H/F TYPE 250V EIOI(C), 250V EIOI(I/C)

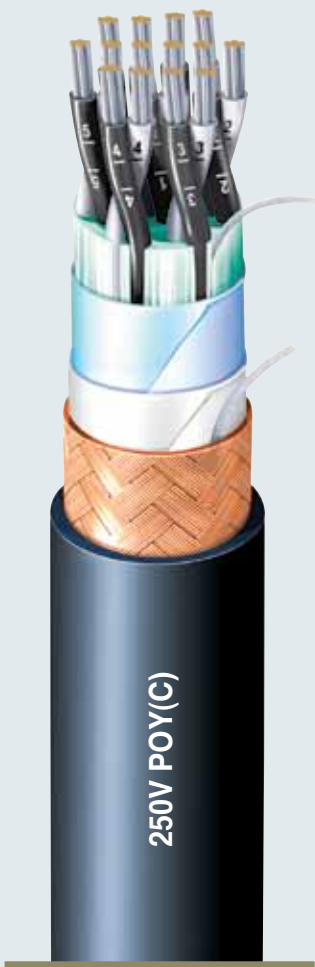
46 ~ 57



# Flame retardant Instrumentation Cable with collective screen

**HIS CABLE**

IEC 60092-350, 353, 354, 376



## Cable Designation

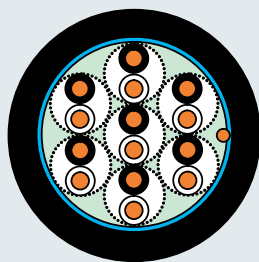
Non-H/F TYPE	H/F TYPE
<b>Inner covering</b> 250V PXY(C), POY(C)	<b>Inner covering</b> 250V PXI(C), POI(C)
<b>Inner sheath</b> 250V PYOY(C)	<b>Inner sheath</b> 250V PIOI(C)

## Application Standard

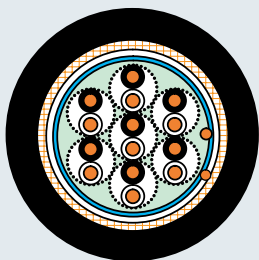
- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓) (For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

## Core Identification

- Colored insulation plus Arabic number printing on the insulation
- Pair : White, Black
- Triad : White, Black , Red



PXI(C) (7P)



POY(C) (7P)

## Construction

Classification	Code	Construction detail
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2
Insulation	P	- EPR as per IEC 60092-360
Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/triad
Cabling		- Twisted pairs/triads shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable
Collective screen	(C)	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable <b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	0	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable
Sheath	Y (I)	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black

**Note.** The other color of sheath and insulation may be applicable when purchaser require

High Voltage Power Cable

Power & Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Flame retardant

## Instrumentation Cable with collective screen

## Inner covering type

250V PXY(C), POY(C), PXI(C), POI(C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	0.75	7	1.2	0.5	1.0	7.2±0.4	70	5.4±0.4	0.2	1.1	8.7±0.4	120
2P	0.75	7	1.2	0.5	1.2	10.9±0.4	140	8.9±0.4	0.2	1.2	12.4±0.5	210
3P	0.75	7	1.2	0.5	1.2	11.7±0.5	170	9.5±0.4	0.2	1.2	13.0±0.5	240
4P	0.75	7	1.2	0.5	1.2	12.7±0.5	205	10.5±0.4	0.3	1.3	14.7±0.6	330
5P	0.75	7	1.2	0.5	1.3	14.1±0.6	245	11.7±0.5	0.3	1.3	15.9±0.6	380
7P	0.75	7	1.2	0.5	1.3	15.3±0.6	300	12.9±0.5	0.3	1.4	17.3±0.7	455
10P	0.75	7	1.2	0.5	1.5	18.7±0.7	415	16.1±0.6	0.3	1.5	20.7±0.8	595
12P	0.75	7	1.2	0.5	1.5	19.7±0.8	480	16.9±0.7	0.3	1.5	21.5±0.9	660
14P	0.75	7	1.2	0.5	1.5	21.0±0.8	540	18.2±0.7	0.3	1.6	23.0±0.9	745
15P	0.75	7	1.2	0.5	1.6	21.6±0.9	580	18.8±0.8	0.3	1.6	23.6±0.9	790
19P	0.75	7	1.2	0.5	1.7	24.1±1.0	690	21.1±0.8	0.3	1.7	26.1±1.0	925
20P	0.75	7	1.2	0.5	1.7	24.6±1.0	740	21.6±0.9	0.3	1.7	26.6±1.1	980
24P	0.75	7	1.2	0.5	1.8	26.8±1.1	860	23.6±0.9	0.3	1.8	28.8±1.2	1,125
27P	0.75	7	1.2	0.5	1.8	28.4±1.1	965	25.0±1.0	0.3	1.9	30.4±1.2	1,240
30P	0.75	7	1.2	0.5	1.9	29.7±1.2	1,055	26.3±1.1	0.3	1.9	31.7±1.3	1,340
33P	0.75	7	1.2	0.5	1.9	31.2±1.2	1,160	27.6±1.1	0.3	2.0	33.2±1.3	1,460
37P	0.75	7	1.2	0.5	2.0	33.0±1.3	1,275	29.2±1.2	0.3	2.0	34.8±1.4	1,575
48P	0.75	7	1.2	0.5	2.2	37.1±1.5	1,620	33.1±1.3	0.4	2.2	39.5±1.6	2,065
1P	1.0	7	1.4	0.5	1.0	7.6±0.4	85	5.8±0.4	0.2	1.1	9.1±0.4	135
2P	1.0	7	1.4	0.5	1.2	11.7±0.5	165	9.5±0.4	0.2	1.2	13.0±0.5	240
3P	1.0	7	1.4	0.5	1.2	12.4±0.5	200	10.2±0.4	0.3	1.3	14.4±0.6	325
4P	1.0	7	1.4	0.5	1.2	13.6±0.5	245	11.4±0.5	0.3	1.3	15.6±0.6	380
5P	1.0	7	1.4	0.5	1.3	15.1±0.6	295	12.7±0.5	0.3	1.4	17.1±0.7	445
7P	1.0	7	1.4	0.5	1.3	16.4±0.7	370	14.0±0.6	0.3	1.4	18.4±0.7	530
10P	1.0	7	1.4	0.5	1.5	20.1±0.8	510	17.3±0.7	0.3	1.5	21.9±0.9	695
12P	1.0	7	1.4	0.5	1.5	21.1±0.8	580	18.3±0.7	0.3	1.6	23.1±0.9	785
14P	1.0	7	1.4	0.5	1.6	22.7±0.9	670	19.7±0.8	0.3	1.6	24.5±1.0	875
15P	1.0	7	1.4	0.5	1.6	23.3±0.9	720	20.3±0.8	0.3	1.7	25.3±1.0	945
19P	1.0	7	1.4	0.5	1.7	26.0±1.0	855	22.8±0.9	0.3	1.8	28.0±1.1	1,110
20P	1.0	7	1.4	0.5	1.7	26.6±1.1	925	23.4±0.9	0.3	1.8	28.6±1.1	1,180
24P	1.0	7	1.4	0.5	1.8	28.9±1.2	1,075	25.5±1.0	0.3	1.9	30.9±1.2	1,355
27P	1.0	7	1.4	0.5	1.9	30.6±1.2	1,200	27.0±1.1	0.3	1.9	32.4±1.3	1,475
30P	1.0	7	1.4	0.5	1.9	32.1±1.3	1,310	28.5±1.1	0.3	2.0	34.1±1.4	1,620
33P	1.0	7	1.4	0.5	2.0	33.6±1.3	1,440	29.8±1.2	0.3	2.0	35.4±1.4	1,745
37P	1.0	7	1.4	0.5	2.0	35.3±1.4	1,570	31.5±1.3	0.4	2.1	37.7±1.5	1,995
48P	1.0	7	1.4	0.5	2.2	40.0±1.6	2,020	35.8±1.4	0.4	2.3	42.4±1.7	2,500

Flame retardant

# Instrumentation Cable with individual & collective screen

HIS CABLE

IEC 60092-350, 353, 354, 376

## Inner covering type

250V PXY(C), POY(C), PXI(C), POI(C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	1.5	7	1.7	0.6	1.1	8.8±0.4	110	6.8±0.4	0.2	1.1	10.1±0.4	160
2P	1.5	7	1.7	0.6	1.2	13.4±0.5	215	11.2±0.4	0.3	1.3	15.4±0.6	350
3P	1.5	7	1.7	0.6	1.3	14.4±0.6	270	12.0±0.5	0.3	1.3	16.2±0.6	405
4P	1.5	7	1.7	0.6	1.3	15.8±0.6	330	13.4±0.5	0.3	1.4	17.8±0.7	485
5P	1.5	7	1.7	0.6	1.4	17.6±0.7	405	15.0±0.6	0.3	1.5	19.6±0.8	575
7P	1.5	7	1.7	0.6	1.4	19.1±0.8	500	16.5±0.7	0.3	1.5	21.1±0.8	685
10P	1.5	7	1.7	0.6	1.6	23.5±0.9	695	20.5±0.8	0.3	1.7	25.5±1.0	925
12P	1.5	7	1.7	0.6	1.6	24.6±1.0	795	21.6±0.9	0.3	1.7	26.6±1.1	1,035
14P	1.5	7	1.7	0.6	1.7	26.5±1.1	920	23.3±0.9	0.3	1.8	28.5±1.1	1,175
15P	1.5	7	1.7	0.6	1.7	27.3±1.1	990	24.1±1.0	0.3	1.8	29.3±1.2	1,255
19P	1.5	7	1.7	0.6	1.9	30.7±1.2	1,195	27.1±1.1	0.3	1.9	32.5±1.3	1,470
20P	1.5	7	1.7	0.6	1.9	31.3±1.3	1,285	27.7±1.1	0.3	2.0	33.3±1.3	1,585
24P	1.5	7	1.7	0.6	2.0	34.1±1.4	1,500	30.3±1.2	0.4	2.1	36.5±1.5	1,905
27P	1.5	7	1.7	0.6	2.1	36.1±1.4	1,670	32.1±1.3	0.4	2.2	38.5±1.5	2,100
30P	1.5	7	1.7	0.6	2.1	37.8±1.5	1,830	33.8±1.4	0.4	2.2	40.2±1.6	2,280
33P	1.5	7	1.7	0.6	2.2	39.6±1.6	2,010	35.4±1.4	0.4	2.3	42.0±1.7	2,485
37P	1.5	7	1.7	0.6	2.3	41.9±1.7	2,210	37.5±1.5	0.4	2.4	44.3±1.8	2,710
48P	1.5	7	1.7	0.6	2.5	47.4±1.9	2,845	42.6±1.7	0.4	2.6	49.8±2.0	3,410
1T	0.75	7	1.2	0.5	1.0	7.6±0.4	85	5.8±0.4	0.2	1.1	9.1±0.4	135
2T	0.75	7	1.2	0.5	1.2	12.0±0.5	180	9.8±0.4	0.2	1.2	13.3±0.5	250
3T	0.75	7	1.2	0.5	1.2	12.7±0.5	215	10.5±0.4	0.3	1.3	14.7±0.6	345
4T	0.75	7	1.2	0.5	1.3	14.1±0.6	270	11.7±0.5	0.3	1.3	15.9±0.6	405
5T	0.75	7	1.2	0.5	1.3	15.6±0.6	330	13.2±0.5	0.3	1.4	17.6±0.7	480
7T	0.75	7	1.2	0.5	1.4	17.7±0.7	420	15.1±0.6	0.3	1.5	19.7±0.8	590
10T	0.75	7	1.2	0.5	1.5	21.5±0.9	575	18.7±0.7	0.3	1.6	23.5±0.9	780
12T	0.75	7	1.2	0.5	1.6	22.4±0.9	660	19.4±0.8	0.3	1.6	24.2±1.0	865
14T	0.75	7	1.2	0.5	1.6	23.9±1.0	750	20.9±0.8	0.3	1.7	25.9±1.0	985
15T	0.75	7	1.2	0.5	1.6	24.6±1.0	805	21.6±0.9	0.3	1.7	26.6±1.1	1,050
19T	0.75	7	1.2	0.5	1.8	27.6±1.1	985	24.2±1.0	0.3	1.8	29.4±1.2	1,235
20T	0.75	7	1.2	0.5	1.8	28.2±1.1	1,055	24.8±1.0	0.3	1.8	30.0±1.2	1,310
24T	0.75	7	1.2	0.5	1.9	30.8±1.2	1,230	27.2±1.1	0.3	1.9	32.6±1.3	1,510
27T	0.75	7	1.2	0.5	1.9	32.4±1.3	1,360	28.8±1.2	0.3	2.0	34.4±1.4	1,670
30T	0.75	7	1.2	0.5	2.0	34.1±1.4	1,505	30.3±1.2	0.4	2.1	36.5±1.5	1,915
33T	0.75	7	1.2	0.5	2.1	35.7±1.4	1,650	31.7±1.3	0.4	2.1	37.9±1.5	2,060
37T	0.75	7	1.2	0.5	2.1	37.6±1.5	1,805	33.6±1.3	0.4	2.2	40.0±1.6	2,255
48T	0.75	7	1.2	0.5	2.3	42.5±1.7	2,320	38.1±1.5	0.4	2.4	44.9±1.8	2,830

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Flame retardant

## Instrumentation Cable with collective screen

## Inner sheath type

250V PYOY(C), PLOI(C)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1P	0.75	7	1.2	0.5	1.0	6.9	0.2	0.8	9.7	0.6	140
2P	0.75	7	1.2	0.5	1.1	10.2	0.3	0.9	13.5	0.7	260
3P	0.75	7	1.2	0.5	1.1	10.9	0.3	0.9	14.2	0.7	290
4P	0.75	7	1.2	0.5	1.2	11.7	0.3	0.9	15.0	0.8	330
5P	0.75	7	1.2	0.5	1.2	13.1	0.3	1.0	16.6	0.8	390
7P	0.75	7	1.2	0.5	1.3	14.2	0.3	1.0	17.7	0.8	460
10P	0.75	7	1.2	0.5	1.4	17.0	0.3	1.1	20.7	0.9	600
12P	0.75	7	1.2	0.5	1.4	17.7	0.3	1.1	21.4	0.9	660
14P	0.75	7	1.2	0.5	1.4	18.3	0.3	1.1	22.0	1.0	710
15P	0.75	7	1.2	0.5	1.4	19.0	0.3	1.1	22.7	1.0	750
19P	0.75	7	1.2	0.5	1.5	20.7	0.3	1.2	24.6	1.0	890
20P	0.75	7	1.2	0.5	1.5	21.2	0.3	1.2	25.1	1.1	920
24P	0.75	7	1.2	0.5	1.6	23.6	0.3	1.2	27.5	1.1	1,080
27P	0.75	7	1.2	0.5	1.7	25.1	0.3	1.3	29.2	1.2	1,200
30P	0.75	7	1.2	0.5	1.7	26.4	0.3	1.3	30.5	1.2	1,300
33P	0.75	7	1.2	0.5	1.7	27.3	0.3	1.3	31.4	1.2	1,390
37P	0.75	7	1.2	0.5	1.8	28.4	0.3	1.3	32.5	1.3	1,510
48P	0.75	7	1.2	0.5	2.0	33.0	0.4	1.5	37.9	1.4	2,030
1P	1.0	7	1.4	0.5	1.0	7.3	0.2	0.8	10.1	0.6	150
2P	1.0	7	1.4	0.5	1.1	10.8	0.3	0.9	14.1	0.7	280
3P	1.0	7	1.4	0.5	1.2	11.7	0.3	0.9	15.0	0.8	330
4P	1.0	7	1.4	0.5	1.2	12.5	0.3	0.9	15.8	0.8	370
5P	1.0	7	1.4	0.5	1.3	14.1	0.3	1.0	17.6	0.8	450
7P	1.0	7	1.4	0.5	1.3	15.1	0.3	1.0	18.6	0.9	520
10P	1.0	7	1.4	0.5	1.4	18.1	0.3	1.1	21.8	1.0	690
12P	1.0	7	1.4	0.5	1.4	18.8	0.3	1.1	22.5	1.0	750
14P	1.0	7	1.4	0.5	1.5	19.8	0.3	1.1	23.5	1.0	830
15P	1.0	7	1.4	0.5	1.5	20.5	0.3	1.1	24.2	1.0	880
19P	1.0	7	1.4	0.5	1.6	22.3	0.3	1.2	26.2	1.1	1,040
20P	1.0	7	1.4	0.5	1.6	22.8	0.3	1.2	26.7	1.1	1,080
24P	1.0	7	1.4	0.5	1.7	25.4	0.3	1.3	29.5	1.2	1,280
27P	1.0	7	1.4	0.5	1.7	26.8	0.3	1.3	30.9	1.2	1,400
30P	1.0	7	1.4	0.5	1.8	28.5	0.3	1.3	32.6	1.3	1,540
33P	1.0	7	1.4	0.5	1.8	29.4	0.3	1.4	33.7	1.3	1,660
37P	1.0	7	1.4	0.5	1.9	30.6	0.4	1.4	35.3	1.4	1,890
48P	1.0	7	1.4	0.5	2.0	35.3	0.4	1.5	40.2	1.5	2,380
1P	1.5	7	1.7	0.6	1.0	8.2	0.2	0.8	11.0	0.6	180
2P	1.5	7	1.7	0.6	1.2	12.6	0.3	0.9	15.9	0.8	350
3P	1.5	7	1.7	0.6	1.2	13.5	0.3	1.0	17.0	0.8	410
4P	1.5	7	1.7	0.6	1.3	14.5	0.3	1.0	18.0	0.8	480
5P	1.5	7	1.7	0.6	1.3	16.3	0.3	1.0	19.8	0.9	560
7P	1.5	7	1.7	0.6	1.4	17.6	0.3	1.1	21.3	0.9	670
10P	1.5	7	1.7	0.6	1.5	21.2	0.3	1.2	25.1	1.1	900
12P	1.5	7	1.7	0.6	1.6	22.3	0.3	1.2	26.2	1.1	1,010
14P	1.5	7	1.7	0.6	1.6	23.1	0.3	1.2	27.0	1.1	1,100
15P	1.5	7	1.7	0.6	1.6	24.0	0.3	1.2	27.9	1.1	1,160
19P	1.5	7	1.7	0.6	1.7	26.2	0.3	1.3	30.3	1.2	1,390
20P	1.5	7	1.7	0.6	1.7	26.8	0.3	1.3	30.9	1.2	1,450
24P	1.5	7	1.7	0.6	1.8	29.8	0.3	1.4	34.1	1.3	1,720
27P	1.5	7	1.7	0.6	1.9	31.8	0.4	1.4	36.5	1.4	1,990
30P	1.5	7	1.7	0.6	2.0	33.7	0.4	1.5	38.6	1.5	2,200
33P	1.5	7	1.7	0.6	2.0	34.8	0.4	1.5	39.7	1.5	2,350
37P	1.5	7	1.7	0.6	2.1	36.2	0.4	1.5	41.1	1.5	2,560
48P	1.5	7	1.7	0.6	2.3	42.0	0.4	1.7	47.3	1.7	3,270



## Inner sheath type

## 250V PYOY(C), PLOI(C)

No. of Triads	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1T	0.75	7	1.2	0.5	1.0	7.3	0.2	0.8	10.1	0.6	160
2T	0.75	7	1.2	0.5	1.1	11.1	0.3	0.9	14.4	0.7	300
3T	0.75	7	1.2	0.5	1.2	12.0	0.3	0.9	15.3	0.8	350
4T	0.75	7	1.2	0.5	1.2	13.1	0.3	1.0	16.6	0.8	420
5T	0.75	7	1.2	0.5	1.3	14.6	0.3	1.0	18.1	0.8	490
7T	0.75	7	1.2	0.5	1.3	16.4	0.3	1.0	19.9	0.9	590
10T	0.75	7	1.2	0.5	1.5	20.1	0.3	1.1	23.8	1.0	810
12T	0.75	7	1.2	0.5	1.5	21.2	0.3	1.2	25.1	1.1	910
14T	0.75	7	1.2	0.5	1.6	22.3	0.3	1.2	26.2	1.1	1,010
15T	0.75	7	1.2	0.5	1.6	22.9	0.3	1.2	26.8	1.1	1,060
19T	0.75	7	1.2	0.5	1.7	25.6	0.3	1.3	29.7	1.2	1,290
20T	0.75	7	1.2	0.5	1.7	26.0	0.3	1.3	30.1	1.2	1,330
24T	0.75	7	1.2	0.5	1.8	28.4	0.3	1.3	32.5	1.3	1,540
27T	0.75	7	1.2	0.5	1.9	30.8	0.4	1.4	35.5	1.4	1,830
30T	0.75	7	1.2	0.5	1.9	31.5	0.4	1.4	36.2	1.4	1,940
33T	0.75	7	1.2	0.5	2.0	33.2	0.4	1.5	38.1	1.4	2,130
37T	0.75	7	1.2	0.5	2.0	34.3	0.4	1.5	39.2	1.5	2,290
48T	0.75	7	1.2	0.5	2.2	39.8	0.4	1.6	44.9	1.6	2,920
1T	1.0	7	1.4	0.5	1.0	7.7	0.2	0.8	10.5	0.6	170
2T	1.0	7	1.4	0.5	1.2	12.0	0.3	0.9	15.3	0.8	340
3T	1.0	7	1.4	0.5	1.2	12.7	0.3	1.0	16.2	0.8	400
4T	1.0	7	1.4	0.5	1.3	14.1	0.3	1.0	17.6	0.8	480
5T	1.0	7	1.4	0.5	1.3	15.5	0.3	1.0	19.0	0.9	550
7T	1.0	7	1.4	0.5	1.4	17.6	0.3	1.1	21.3	0.9	700
10T	1.0	7	1.4	0.5	1.5	21.4	0.3	1.2	25.3	1.1	940
12T	1.0	7	1.4	0.5	1.6	22.8	0.3	1.2	26.7	1.1	1,070
14T	1.0	7	1.4	0.5	1.6	23.8	0.3	1.2	27.7	1.1	1,170
15T	1.0	7	1.4	0.5	1.6	24.5	0.3	1.2	28.4	1.2	1,230
19T	1.0	7	1.4	0.5	1.7	27.3	0.3	1.3	31.4	1.2	1,500
20T	1.0	7	1.4	0.5	1.8	28.0	0.3	1.3	32.1	1.3	1,570
24T	1.0	7	1.4	0.5	1.9	30.6	0.4	1.4	35.3	1.4	1,930
27T	1.0	7	1.4	0.5	2.0	33.2	0.4	1.5	38.1	1.4	2,180
30T	1.0	7	1.4	0.5	2.0	33.9	0.4	1.5	38.8	1.5	2,320
33T	1.0	7	1.4	0.5	2.1	35.8	0.4	1.5	40.7	1.5	2,530
37T	1.0	7	1.4	0.5	2.1	37.0	0.4	1.6	42.1	1.6	2,740
48T	1.0	7	1.4	0.5	2.3	42.9	0.4	1.7	48.2	1.7	3,490
1T	1.5	7	1.7	0.6	1.1	8.9	0.2	0.8	11.7	0.7	210
2T	1.5	7	1.7	0.6	1.2	13.8	0.3	1.0	17.3	0.8	430
3T	1.5	7	1.7	0.6	1.3	14.8	0.3	1.0	18.3	0.8	510
4T	1.5	7	1.7	0.6	1.3	16.3	0.3	1.0	19.8	0.9	600
5T	1.5	7	1.7	0.6	1.4	18.2	0.3	1.1	21.9	1.0	730
7T	1.5	7	1.7	0.6	1.5	20.7	0.3	1.2	24.6	1.0	920
10T	1.5	7	1.7	0.6	1.7	25.4	0.3	1.3	29.5	1.2	1,270
12T	1.5	7	1.7	0.6	1.7	26.8	0.3	1.3	30.9	1.2	1,430
14T	1.5	7	1.7	0.6	1.8	28.1	0.3	1.3	32.2	1.3	1,590
15T	1.5	7	1.7	0.6	1.8	29.0	0.3	1.4	33.3	1.3	1,690
19T	1.5	7	1.7	0.6	1.9	32.3	0.4	1.5	37.2	1.4	2,150
20T	1.5	7	1.7	0.6	2.0	33.1	0.4	1.5	38.0	1.4	2,240
24T	1.5	7	1.7	0.6	2.1	36.2	0.4	1.5	41.1	1.5	2,610
27T	1.5	7	1.7	0.6	2.2	39.2	0.4	1.6	44.3	1.6	2,950
30T	1.5	7	1.7	0.6	2.2	40.1	0.4	1.6	45.2	1.7	3,150
33T	1.5	7	1.7	0.6	2.3	42.3	0.4	1.7	47.6	1.7	3,450
37T	1.5	7	1.7	0.6	2.4	43.9	0.4	1.7	49.2	1.8	3,760
48T	1.5	7	1.7	0.6	2.6	50.9	0.4	1.9	56.6	2.0	4,820

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

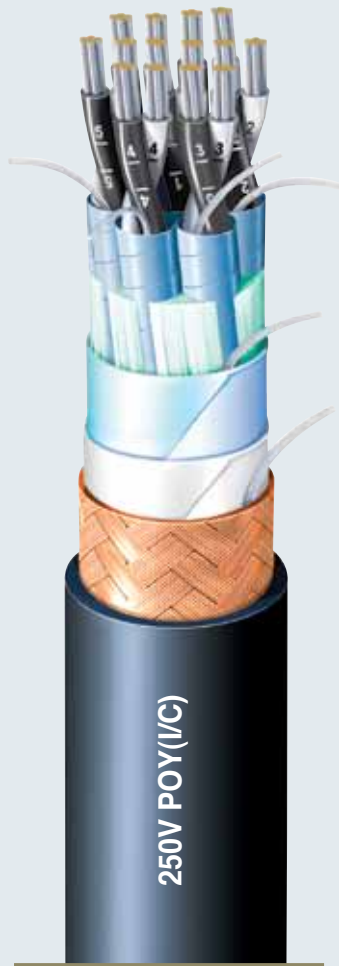
Instrumentation Cable

VFD Cable

Technical data

Flame retardant

# Instrumentation Cable with individual & collective screen



## Cable Designation

### Non-H/F TYPE

#### Inner covering

250V PXY(I/C)

250V POY(I/C)

#### Inner sheath

250V PYOY(I/C)

### H/F TYPE

#### Inner covering

250V PXI(I/C)

250V POI(I/C)

#### Inner sheath

250V PIOI(I/C)

## Application Standard

- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓) (For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

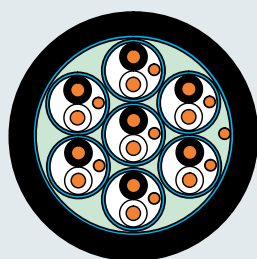
## Core Identification

- Colored insulation plus Arabic number printing on the insulation
- Pair : White, Black
- Triad : White, Black, Red

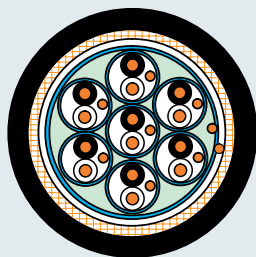
## Construction

Classification	Code	Construction detail	
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2	
Insulation	P	- EPR as per IEC 60092-360	
Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/triad	
Individual screen	(I)	- AL/PS tape with drain wire - Each pair/triad is wrapped with polyester tape to prevent electrical contact with adjacent pairs/triads	
Cabling		- Screened pairs/triads shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable	
Collective screen	(C)	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen	
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable	<b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	O	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable	
Sheath	Y (I)	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black	

**Note.** The other color of sheath and insulation may be applicable when purchaser require



PXI(I/C) (7P)



POY(I/C) (7P)

## Inner covering type

## 250V PXY(I/C), POY(I/C), PXI(I/C), POI(I/C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	0.75	7	1.2	0.5	1.0	7.3±0.4	75	5.5±0.4	0.2	1.1	8.8±0.4	125
2P	0.75	7	1.2	0.5	1.2	11.4±0.5	165	9.2±0.4	0.2	1.2	12.7±0.5	235
3P	0.75	7	1.2	0.5	1.2	12.0±0.5	200	9.8±0.4	0.2	1.2	13.3±0.5	275
4P	0.75	7	1.2	0.5	1.2	13.2±0.5	245	11.0±0.4	0.3	1.3	15.2±0.6	375
5P	0.75	7	1.2	0.5	1.3	14.6±0.6	295	12.2±0.5	0.3	1.3	16.4±0.7	435
7P	0.75	7	1.2	0.5	1.3	15.9±0.6	375	13.5±0.5	0.3	1.4	17.9±0.7	530
10P	0.75	7	1.2	0.5	1.5	19.5±0.8	520	16.7±0.7	0.3	1.5	21.3±0.9	700
12P	0.75	7	1.2	0.5	1.5	20.4±0.8	595	17.6±0.7	0.3	1.6	22.4±0.9	790
14P	0.75	7	1.2	0.5	1.5	21.8±0.9	675	19.0±0.8	0.3	1.6	23.8±1.0	885
15P	0.75	7	1.2	0.5	1.6	22.6±0.9	735	19.6±0.8	0.3	1.6	24.4±1.0	945
19P	0.75	7	1.2	0.5	1.7	25.2±1.0	880	22.0±0.9	0.3	1.7	27.0±1.1	1,115
20P	0.75	7	1.2	0.5	1.7	25.7±1.0	950	22.5±0.9	0.3	1.8	27.7±1.1	1,195
24P	0.75	7	1.2	0.5	1.8	28.0±1.1	1,110	24.6±1.0	0.3	1.8	29.8±1.2	1,360
27P	0.75	7	1.2	0.5	1.8	29.4±1.2	1,220	26.0±1.0	0.3	1.9	31.4±1.3	1,505
30P	0.75	7	1.2	0.5	1.9	31.0±1.2	1,355	27.4±1.1	0.3	2.0	33.0±1.3	1,650
33P	0.75	7	1.2	0.5	1.9	32.3±1.3	1,470	28.7±1.1	0.3	2.0	34.3±1.4	1,780
37P	0.75	7	1.2	0.5	2.0	34.2±1.4	1,625	30.4±1.2	0.4	2.1	36.6±1.5	2,035
48P	0.75	7	1.2	0.5	2.2	38.7±1.5	2,090	34.5±1.4	0.4	2.3	41.1±1.6	2,555
1P	1.0	7	1.4	0.5	1.0	7.7±0.4	85	5.9±0.4	0.2	1.1	9.2±0.4	135
2P	1.0	7	1.4	0.5	1.2	12.1±0.5	195	9.9±0.4	0.2	1.2	13.4±0.5	265
3P	1.0	7	1.4	0.5	1.2	12.8±0.5	240	10.6±0.4	0.3	1.3	14.8±0.6	370
4P	1.0	7	1.4	0.5	1.3	14.2±0.6	300	11.8±0.5	0.3	1.3	16.0±0.6	435
5P	1.0	7	1.4	0.5	1.3	15.5±0.6	360	13.1±0.5	0.3	1.4	17.5±0.7	510
7P	1.0	7	1.4	0.5	1.4	17.1±0.7	460	14.5±0.6	0.3	1.4	18.9±0.8	620
10P	1.0	7	1.4	0.5	1.5	20.8±0.8	635	18.0±0.7	0.3	1.6	22.8±0.9	835
12P	1.0	7	1.4	0.5	1.5	21.7±0.9	725	18.9±0.8	0.3	1.6	23.7±0.9	940
14P	1.0	7	1.4	0.5	1.6	23.4±0.9	840	20.4±0.8	0.3	1.7	25.4±1.0	1,065
15P	1.0	7	1.4	0.5	1.6	24.1±1.0	900	21.1±0.8	0.3	1.7	26.1±1.0	1,135
19P	1.0	7	1.4	0.5	1.7	26.9±1.1	1,085	23.7±0.9	0.3	1.8	28.9±1.2	1,345
20P	1.0	7	1.4	0.5	1.8	27.6±1.1	1,175	24.2±1.0	0.3	1.8	29.4±1.2	1,425
24P	1.0	7	1.4	0.5	1.8	29.9±1.2	1,360	26.5±1.1	0.3	1.9	31.9±1.3	1,650
27P	1.0	7	1.4	0.5	1.9	31.7±1.3	1,520	28.1±1.1	0.3	2.0	33.7±1.3	1,825
30P	1.0	7	1.4	0.5	2.0	33.3±1.3	1,685	29.5±1.2	0.3	2.0	35.1±1.4	1,985
33P	1.0	7	1.4	0.5	2.0	34.7±1.4	1,835	30.9±1.2	0.4	2.1	37.1±1.5	2,250
37P	1.0	7	1.4	0.5	2.1	36.7±1.5	2,025	32.7±1.3	0.4	2.2	39.1±1.6	2,465
48P	1.0	7	1.4	0.5	2.3	41.6±1.7	2,610	37.2±1.5	0.4	2.4	44.0±1.8	3,105

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Flame retardant

## Instrumentation Cable with individual &amp; collective screen

## Inner covering type

250V PXY(I/C), POY(I/C), PXI(I/C), POI(I/C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	1.5	7	1.7	0.6	1.1	8.9±0.4	110	6.9±0.4	0.2	1.1	10.2±0.4	165
2P	1.5	7	1.7	0.6	1.2	13.8±0.6	245	11.6±0.5	0.3	1.3	15.8±0.6	380
3P	1.5	7	1.7	0.6	1.3	14.8±0.6	315	12.4±0.5	0.3	1.4	16.8±0.7	455
4P	1.5	7	1.7	0.6	1.3	16.2±0.6	385	13.8±0.6	0.3	1.4	18.2±0.7	540
5P	1.5	7	1.7	0.6	1.4	18.0±0.7	470	15.4±0.6	0.3	1.5	20.0±0.8	645
7P	1.5	7	1.7	0.6	1.5	19.8±0.8	600	17.0±0.7	0.3	1.5	21.6±0.9	780
10P	1.5	7	1.7	0.6	1.6	24.2±1.0	825	21.2±0.8	0.3	1.7	26.2±1.0	1,065
12P	1.5	7	1.7	0.6	1.7	25.5±1.0	965	22.3±0.9	0.3	1.7	27.3±1.1	1,195
14P	1.5	7	1.7	0.6	1.7	27.3±1.1	1,100	24.1±1.0	0.3	1.8	29.3±1.2	1,365
15P	1.5	7	1.7	0.6	1.8	28.3±1.1	1,200	24.9±1.0	0.3	1.9	30.3±1.2	1,470
19P	1.5	7	1.7	0.6	1.9	31.5±1.3	1,435	27.9±1.1	0.3	2.0	33.5±1.3	1,735
20P	1.5	7	1.7	0.6	1.9	32.2±1.3	1,540	28.6±1.1	0.3	2.0	34.2±1.4	1,850
24P	1.5	7	1.7	0.6	2.0	35.1±1.4	1,805	31.3±1.3	0.4	2.1	37.5±1.5	2,225
27P	1.5	7	1.7	0.6	2.1	37.1±1.5	2,015	33.1±1.3	0.4	2.2	39.5±1.6	2,460
30P	1.5	7	1.7	0.6	2.2	39.1±1.6	2,230	34.9±1.4	0.4	2.3	41.5±1.7	2,695
33P	1.5	7	1.7	0.6	2.2	40.7±1.6	2,430	36.5±1.5	0.4	2.3	43.1±1.7	2,915
37P	1.5	7	1.7	0.6	2.3	43.1±1.7	2,680	38.7±1.5	0.4	2.4	45.5±1.8	3,195
48P	1.5	7	1.7	0.6	2.5	48.7±1.9	3,450	43.9±1.8	0.4	2.6	51.1±2.0	4,035
1T	0.75	7	1.2	0.5	1.0	7.7±0.4	90	5.9±0.4	0.2	1.1	9.2±0.4	140
2T	0.75	7	1.2	0.5	1.2	12.4±0.5	200	10.2±0.4	0.3	1.3	14.4±0.6	325
3T	0.75	7	1.2	0.5	1.2	13.2±0.5	250	11.0±0.4	0.3	1.3	15.2±0.6	380
4T	0.75	7	1.2	0.5	1.3	14.6±0.6	320	12.2±0.5	0.3	1.3	16.4±0.7	450
5T	0.75	7	1.2	0.5	1.3	16.1±0.6	380	13.7±0.5	0.3	1.4	18.1±0.7	535
7T	0.75	7	1.2	0.5	1.4	18.3±0.7	490	15.7±0.6	0.3	1.5	20.3±0.8	670
10T	0.75	7	1.2	0.5	1.6	22.5±0.9	685	19.5±0.8	0.3	1.6	24.3±1.0	890
12T	0.75	7	1.2	0.5	1.6	23.2±0.9	785	20.2±0.8	0.3	1.7	25.2±1.0	1,010
14T	0.75	7	1.2	0.5	1.7	25.0±1.0	905	21.8±0.9	0.3	1.7	26.8±1.1	1,135
15T	0.75	7	1.2	0.5	1.7	25.7±1.0	975	22.5±0.9	0.3	1.8	27.7±1.1	1,220
19T	0.75	7	1.2	0.5	1.8	28.6±1.1	1,170	25.2±1.0	0.3	1.9	30.6±1.2	1,445
20T	0.75	7	1.2	0.5	1.8	29.3±1.2	1,255	25.9±1.0	0.3	1.9	31.3±1.3	1,535
24T	0.75	7	1.2	0.5	1.9	31.9±1.3	1,470	28.3±1.1	0.3	2.0	33.9±1.4	1,775
27T	0.75	7	1.2	0.5	2.0	33.7±1.3	1,640	29.9±1.2	0.3	2.1	35.7±1.4	1,960
30T	0.75	7	1.2	0.5	2.0	35.3±1.4	1,800	31.5±1.3	0.4	2.1	37.7±1.5	2,225
33T	0.75	7	1.2	0.5	2.1	37.0±1.5	1,975	33.0±1.3	0.4	2.2	39.4±1.6	2,420
37T	0.75	7	1.2	0.5	2.2	39.1±1.6	2,180	34.9±1.4	0.4	2.3	41.5±1.7	2,650
48T	0.75	7	1.2	0.5	2.4	44.3±1.8	2,810	39.7±1.6	0.4	2.5	46.7±1.9	3,340

## Inner covering type

## 250V PXY(I/C), POY(I/C), PXI(I/C), POI(I/C)

No. of Triads	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1T	1.0	7	1.4	0.5	1.0	8.1±0.4	105	6.3±0.4	0.2	1.1	9.6±0.4	160
2T	1.0	7	1.4	0.5	1.2	13.2±0.5	240	11.0±0.4	0.3	1.3	15.2±0.6	370
3T	1.0	7	1.4	0.5	1.3	14.2±0.6	305	11.8±0.5	0.3	1.3	16.0±0.6	440
4T	1.0	7	1.4	0.5	1.3	15.5±0.6	385	13.1±0.5	0.3	1.4	17.5±0.7	530
5T	1.0	7	1.4	0.5	1.4	17.3±0.7	470	14.7±0.6	0.3	1.4	19.1±0.8	625
7T	1.0	7	1.4	0.5	1.5	19.7±0.8	610	16.9±0.7	0.3	1.5	21.5±0.9	785
10T	1.0	7	1.4	0.5	1.6	24.0±1.0	835	21.0±0.8	0.3	1.7	26.0±1.0	1,070
12T	1.0	7	1.4	0.5	1.7	24.9±1.0	975	21.7±0.9	0.3	1.7	26.7±1.1	1,200
14T	1.0	7	1.4	0.5	1.7	26.6±1.1	1,115	23.4±0.9	0.3	1.8	28.6±1.1	1,370
15T	1.0	7	1.4	0.5	1.8	27.6±1.1	1,210	24.2±1.0	0.3	1.8	29.4±1.2	1,460
19T	1.0	7	1.4	0.5	1.9	30.8±1.2	1,460	27.2±1.1	0.3	1.9	32.6±1.3	1,740
20T	1.0	7	1.4	0.5	1.9	31.5±1.3	1,560	27.9±1.1	0.3	2.0	33.5±1.3	1,860
24T	1.0	7	1.4	0.5	2.0	34.3±1.4	1,830	30.5±1.2	0.4	2.1	36.7±1.5	2,245
27T	1.0	7	1.4	0.5	2.1	36.3±1.5	2,045	32.3±1.3	0.4	2.2	38.7±1.5	2,480
30T	1.0	7	1.4	0.5	2.1	38.0±1.5	2,245	34.0±1.4	0.4	2.2	40.4±1.6	2,700
33T	1.0	7	1.4	0.5	2.2	39.8±1.6	2,465	35.6±1.4	0.4	2.3	42.2±1.7	2,945
37T	1.0	7	1.4	0.5	2.3	42.1±1.7	2,725	37.7±1.5	0.4	2.4	44.5±1.8	3,230
48T	1.0	7	1.4	0.5	2.5	47.6±1.9	3,510	42.8±1.7	0.4	2.6	50.0±2.0	4,080
1T	1.5	7	1.7	0.6	1.1	9.4±0.4	135	7.4±0.4	0.2	1.1	10.7±0.4	195
2T	1.5	7	1.7	0.6	1.3	15.3±0.6	315	12.9±0.5	0.3	1.4	17.3±0.7	465
3T	1.5	7	1.7	0.6	1.3	16.2±0.6	400	13.8±0.6	0.3	1.4	18.2±0.7	555
4T	1.5	7	1.7	0.6	1.4	18.0±0.7	505	15.4±0.6	0.3	1.5	20.0±0.8	675
5T	1.5	7	1.7	0.6	1.5	20.1±0.8	620	17.3±0.7	0.3	1.5	21.9±0.9	800
7T	1.5	7	1.7	0.6	1.6	22.9±0.9	805	19.9±0.8	0.3	1.7	24.9±1.0	1,030
10T	1.5	7	1.7	0.6	1.8	28.1±1.1	1,130	24.7±1.0	0.3	1.8	29.9±1.2	1,385
12T	1.5	7	1.7	0.6	1.8	29.0±1.2	1,295	25.6±1.0	0.3	1.9	31.0±1.2	1,575
14T	1.5	7	1.7	0.6	1.9	31.2±1.2	1,495	27.6±1.1	0.3	2.0	33.2±1.3	1,795
15T	1.5	7	1.7	0.6	1.9	32.2±1.3	1,610	28.6±1.1	0.3	2.0	34.2±1.4	1,915
19T	1.5	7	1.7	0.6	2.1	36.1±1.4	1,960	32.1±1.3	0.4	2.2	38.5±1.5	2,390
20T	1.5	7	1.7	0.6	2.1	36.9±1.5	2,095	32.9±1.3	0.4	2.2	39.3±1.6	2,540
24T	1.5	7	1.7	0.6	2.2	40.2±1.6	2,460	36.0±1.4	0.4	2.3	42.6±1.7	2,945
27T	1.5	7	1.7	0.6	2.3	42.5±1.7	2,745	38.1±1.5	0.4	2.4	44.9±1.8	3,255
30T	1.5	7	1.7	0.6	2.4	44.7±1.8	3,040	40.1±1.6	0.4	2.5	47.1±1.9	3,575
33T	1.5	7	1.7	0.6	2.5	46.9±1.9	3,340	42.1±1.7	0.4	2.6	49.3±2.0	3,900
37T	1.5	7	1.7	0.6	2.6	49.5±2.0	3,690	44.5±1.8	0.4	2.7	51.9±2.1	4,280
48T	1.5	7	1.7	0.6	2.8	56.0±2.2	4,750	50.6±2.0	0.4	2.9	58.4±2.3	5,420

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



## Flame retardant

## Instrumentation Cable with individual &amp; collective screen

## Inner sheath type

250V PYOY(I/C), PIOC(I/C)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1P	0.75	7	1.2	0.5	1.0	6.9	0.2	0.8	9.7	0.6	140
2P	0.75	7	1.2	0.5	1.1	11.0	0.3	0.9	14.3	0.7	290
3P	0.75	7	1.2	0.5	1.2	11.9	0.3	0.9	15.2	0.8	340
4P	0.75	7	1.2	0.5	1.2	12.8	0.3	1.0	16.3	0.8	390
5P	0.75	7	1.2	0.5	1.3	14.4	0.3	1.0	17.9	0.8	460
7P	0.75	7	1.2	0.5	1.3	14.9	0.3	1.0	18.4	0.9	520
10P	0.75	7	1.2	0.5	1.4	18.6	0.3	1.1	22.3	1.0	710
12P	0.75	7	1.2	0.5	1.5	19.5	0.3	1.1	23.2	1.0	790
14P	0.75	7	1.2	0.5	1.5	20.5	0.3	1.1	24.2	1.0	870
15P	0.75	7	1.2	0.5	1.5	21.2	0.3	1.2	25.1	1.1	930
19P	0.75	7	1.2	0.5	1.6	22.6	0.3	1.2	26.5	1.1	1,070
20P	0.75	7	1.2	0.5	1.6	23.1	0.3	1.2	27.0	1.1	1,110
24P	0.75	7	1.2	0.5	1.7	26.3	0.3	1.3	30.4	1.2	1,340
27P	0.75	7	1.2	0.5	1.7	27.0	0.3	1.3	31.1	1.2	1,440
30P	0.75	7	1.2	0.5	1.8	28.2	0.3	1.3	32.3	1.3	1,560
33P	0.75	7	1.2	0.5	1.8	29.1	0.3	1.4	33.4	1.3	1,680
37P	0.75	7	1.2	0.5	1.9	30.3	0.4	1.4	35.0	1.4	1,910
48P	0.75	7	1.2	0.5	2.0	34.9	0.4	1.5	39.8	1.5	2,400
1P	1.0	7	1.4	0.5	1.0	7.3	0.2	0.8	10.1	0.6	150
2P	1.0	7	1.4	0.5	1.2	11.8	0.3	0.9	15.1	0.8	330
3P	1.0	7	1.4	0.5	1.2	12.6	0.3	0.9	15.9	0.8	380
4P	1.0	7	1.4	0.5	1.2	13.6	0.3	1.0	17.1	0.8	440
5P	1.0	7	1.4	0.5	1.3	15.3	0.3	1.0	18.8	0.9	520
7P	1.0	7	1.4	0.5	1.3	15.8	0.3	1.0	19.3	0.9	590
10P	1.0	7	1.4	0.5	1.5	20.0	0.3	1.1	23.7	1.0	830
12P	1.0	7	1.4	0.5	1.5	20.8	0.3	1.2	24.7	1.0	930
14P	1.0	7	1.4	0.5	1.5	21.8	0.3	1.2	25.7	1.1	1,020
15P	1.0	7	1.4	0.5	1.6	22.8	0.3	1.2	26.7	1.1	1,090
19P	1.0	7	1.4	0.5	1.6	24.0	0.3	1.2	27.9	1.1	1,250
20P	1.0	7	1.4	0.5	1.6	24.5	0.3	1.2	28.4	1.2	1,300
24P	1.0	7	1.4	0.5	1.8	28.2	0.3	1.3	32.3	1.3	1,590
27P	1.0	7	1.4	0.5	1.8	29.0	0.3	1.4	33.3	1.3	1,720
30P	1.0	7	1.4	0.5	1.8	30.0	0.3	1.4	34.3	1.3	1,850
33P	1.0	7	1.4	0.5	1.9	31.2	0.4	1.4	35.9	1.4	2,080
37P	1.0	7	1.4	0.5	1.9	32.2	0.4	1.4	36.9	1.4	2,250
48P	1.0	7	1.4	0.5	2.1	37.5	0.4	1.6	42.6	1.6	2,890
1P	1.5	7	1.7	0.6	1.0	8.2	0.2	0.8	11.0	0.6	180
2P	1.5	7	1.7	0.6	1.2	13.4	0.3	1.0	16.9	0.8	400
3P	1.5	7	1.7	0.6	1.3	14.5	0.3	1.0	18.0	0.8	470
4P	1.5	7	1.7	0.6	1.3	15.7	0.3	1.0	19.2	0.9	540
5P	1.5	7	1.7	0.6	1.4	17.7	0.3	1.1	21.4	0.9	660
7P	1.5	7	1.7	0.6	1.4	18.4	0.3	1.1	22.1	1.0	760
10P	1.5	7	1.7	0.6	1.6	23.3	0.3	1.2	27.2	1.1	1,060
12P	1.5	7	1.7	0.6	1.6	24.2	0.3	1.2	28.1	1.1	1,170
14P	1.5	7	1.7	0.6	1.7	25.6	0.3	1.3	29.7	1.2	1,320
15P	1.5	7	1.7	0.6	1.7	26.5	0.3	1.3	30.6	1.2	1,400
19P	1.5	7	1.7	0.6	1.8	28.2	0.3	1.3	32.3	1.3	1,630
20P	1.5	7	1.7	0.6	1.8	28.8	0.3	1.4	33.1	1.3	1,710
24P	1.5	7	1.7	0.6	2.0	33.1	0.4	1.5	38.0	1.4	2,180
27P	1.5	7	1.7	0.6	2.0	34.0	0.4	1.5	38.9	1.5	2,340
30P	1.5	7	1.7	0.6	2.0	35.2	0.4	1.5	40.1	1.5	2,520
33P	1.5	7	1.7	0.6	2.1	36.6	0.4	1.6	41.7	1.6	2,730
37P	1.5	7	1.7	0.6	2.1	37.8	0.4	1.6	42.9	1.6	2,950
48P	1.5	7	1.7	0.6	2.4	44.1	0.4	1.7	49.4	1.8	3,790

## Inner sheath type

## 250V PYOY(I/C), PLOI(I/C)

No. of Triads	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1T	0.75	7	1.2	0.5	1.0	7.3	0.2	0.8	10.1	0.6	160
2T	0.75	7	1.2	0.5	1.2	11.8	0.3	0.9	15.1	0.8	330
3T	0.75	7	1.2	0.5	1.2	12.5	0.3	0.9	15.8	0.8	380
4T	0.75	7	1.2	0.5	1.2	13.7	0.3	1.0	17.2	0.8	460
5T	0.75	7	1.2	0.5	1.3	15.3	0.3	1.0	18.8	0.9	540
7T	0.75	7	1.2	0.5	1.4	17.4	0.3	1.1	21.1	0.9	680
10T	0.75	7	1.2	0.5	1.5	21.1	0.3	1.2	25.0	1.1	920
12T	0.75	7	1.2	0.5	1.6	22.5	0.3	1.2	26.4	1.1	1,040
14T	0.75	7	1.2	0.5	1.6	23.4	0.3	1.2	27.3	1.1	1,130
15T	0.75	7	1.2	0.5	1.6	24.1	0.3	1.2	28.0	1.1	1,190
19T	0.75	7	1.2	0.5	1.7	26.9	0.3	1.3	31.0	1.2	1,450
20T	0.75	7	1.2	0.5	1.8	27.6	0.3	1.3	31.7	1.3	1,520
24T	0.75	7	1.2	0.5	1.8	29.9	0.3	1.4	34.2	1.3	1,760
27T	0.75	7	1.2	0.5	1.9	32.5	0.4	1.5	37.4	1.4	2,090
30T	0.75	7	1.2	0.5	2.0	33.4	0.4	1.5	38.3	1.4	2,240
33T	0.75	7	1.2	0.5	2.0	35.0	0.4	1.5	39.9	1.5	2,420
37T	0.75	7	1.2	0.5	2.1	36.4	0.4	1.6	41.5	1.5	2,650
48T	0.75	7	1.2	0.5	2.3	42.2	0.4	1.7	47.5	1.7	3,370
1T	1.0	7	1.4	0.5	1.0	7.7	0.2	0.8	10.5	0.6	170
2T	1.0	7	1.4	0.5	1.2	12.5	0.3	0.9	15.8	0.8	370
3T	1.0	7	1.4	0.5	1.2	13.3	0.3	1.0	16.8	0.8	440
4T	1.0	7	1.4	0.5	1.3	14.7	0.3	1.0	18.2	0.8	530
5T	1.0	7	1.4	0.5	1.3	16.3	0.3	1.0	19.8	0.9	620
7T	1.0	7	1.4	0.5	1.4	18.5	0.3	1.1	22.2	1.0	780
10T	1.0	7	1.4	0.5	1.6	22.7	0.3	1.2	26.6	1.1	1,070
12T	1.0	7	1.4	0.5	1.6	23.9	0.3	1.2	27.8	1.1	1,200
14T	1.0	7	1.4	0.5	1.7	25.1	0.3	1.3	29.2	1.2	1,350
15T	1.0	7	1.4	0.5	1.7	25.9	0.3	1.3	30.0	1.2	1,420
19T	1.0	7	1.4	0.5	1.8	28.9	0.3	1.4	33.2	1.3	1,740
20T	1.0	7	1.4	0.5	1.8	29.4	0.3	1.4	33.7	1.3	1,800
24T	1.0	7	1.4	0.5	1.9	32.1	0.4	1.4	36.8	1.4	2,180
27T	1.0	7	1.4	0.5	2.0	34.9	0.4	1.5	39.8	1.5	2,470
30T	1.0	7	1.4	0.5	2.1	35.8	0.4	1.5	40.7	1.5	2,660
33T	1.0	7	1.4	0.5	2.1	37.6	0.4	1.6	42.7	1.6	2,900
37T	1.0	7	1.4	0.5	2.2	39.0	0.4	1.6	44.1	1.6	3,150
48T	1.0	7	1.4	0.5	2.4	45.3	0.4	1.8	50.8	1.8	4,040
1T	1.5	7	1.7	0.6	1.1	8.9	0.2	0.8	11.7	0.7	210
2T	1.5	7	1.7	0.6	1.3	14.5	0.3	1.0	18.0	0.8	470
3T	1.5	7	1.7	0.6	1.3	15.4	0.3	1.0	18.9	0.9	550
4T	1.5	7	1.7	0.6	1.4	17.1	0.3	1.1	20.8	0.9	670
5T	1.5	7	1.7	0.6	1.4	18.9	0.3	1.1	22.6	1.0	790
7T	1.5	7	1.7	0.6	1.5	21.5	0.3	1.2	25.4	1.1	1,010
10T	1.5	7	1.7	0.6	1.7	26.4	0.3	1.3	30.5	1.2	1,390
12T	1.5	7	1.7	0.6	1.8	28.1	0.3	1.3	32.2	1.3	1,580
14T	1.5	7	1.7	0.6	1.8	29.3	0.3	1.4	33.6	1.3	1,760
15T	1.5	7	1.7	0.6	1.9	30.4	0.4	1.4	35.1	1.4	1,960
19T	1.5	7	1.7	0.6	2.0	33.9	0.4	1.5	38.8	1.5	2,390
20T	1.5	7	1.7	0.6	2.0	34.5	0.4	1.5	39.4	1.5	2,470
24T	1.5	7	1.7	0.6	2.1	37.7	0.4	1.6	42.8	1.6	2,900
27T	1.5	7	1.7	0.6	2.3	41.1	0.4	1.7	46.4	1.7	3,300
30T	1.5	7	1.7	0.6	2.3	42.0	0.4	1.7	47.3	1.7	3,530
33T	1.5	7	1.7	0.6	2.4	44.3	0.4	1.8	49.8	1.8	3,870
37T	1.5	7	1.7	0.6	2.4	45.8	0.4	1.8	51.3	1.8	4,190
48T	1.5	7	1.7	0.6	2.7	53.3	0.4	2.0	59.2	2.1	5,410

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

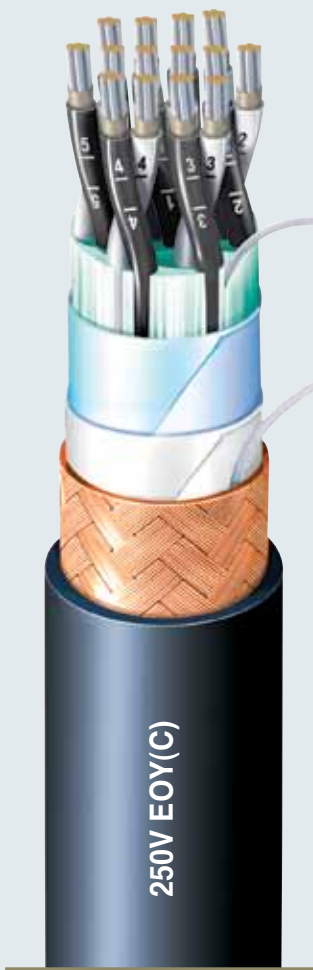
Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Instrumentation Cable with collective screen



## Cable Designation

## Non-H/F TYPE

## Inner covering

250V EXY(C)

250V EOY(C)

## Inner sheath

250V EYOY(C)

## H/F TYPE

## Inner covering

250V EXI(C)

250V EOI(C)

## Inner sheath

250V EIOI(C)

## Application Standard

- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Fire resistance : IEC 60331-21(90min)  
IEC 60331-1,-2(120min)
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μS/mm ↓)  
(For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

## Core Identification

- Colored insulation plus Arabic number printing on the insulation

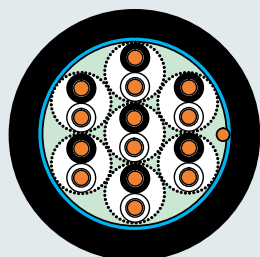
Pair : White, Black

Triad : White, Black, Red

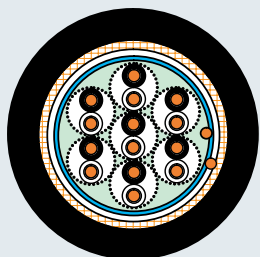
## Construction

Classification	Code	Construction detail	
Conductor	E	- Stranded tinned annealed copper wires as per IEC 60228, Class 2	
Fire resisting layer		- Mica/glass tape	
Insulation		- EPR as per IEC 60092-360	
Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/triad	
Cabling		- Twisted pairs/triads shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable	
Collective screen		- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen	
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable	<b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	O	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable	
Sheath	Y (I)	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black	

**Note.** The other color of sheath and insulation may be applicable when purchaser require



EXI(C) (7P)



EOY(C) (7P)

## Inner covering type

## 250V EXY(C), EOY(C), EXI(C), EOI(C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	0.75	7	1.2	0.5	1.0	8.0±0.4	80	6.2±0.4	0.2	1.1	9.5±0.4	135
2P	0.75	7	1.2	0.5	1.2	12.4±0.5	170	10.2±0.4	0.3	1.3	14.4±0.6	290
3P	0.75	7	1.2	0.5	1.2	13.1±0.5	200	10.9±0.4	0.3	1.3	15.1±0.6	330
4P	0.75	7	1.2	0.5	1.3	14.6±0.6	250	12.2±0.5	0.3	1.3	16.4±0.7	385
5P	0.75	7	1.2	0.5	1.3	16.0±0.6	295	13.6±0.5	0.3	1.4	18.0±0.7	455
7P	0.75	7	1.2	0.5	1.4	17.6±0.7	370	15.0±0.6	0.3	1.5	19.6±0.8	540
10P	0.75	7	1.2	0.5	1.5	21.4±0.9	505	18.6±0.7	0.3	1.6	23.4±0.9	710
12P	0.75	7	1.2	0.5	1.6	22.6±0.9	580	19.6±0.8	0.3	1.6	24.4±1.0	785
14P	0.75	7	1.2	0.5	1.6	24.1±1.0	655	21.1±0.8	0.3	1.7	26.1±1.0	890
15P	0.75	7	1.2	0.5	1.7	25.0±1.0	720	21.8±0.9	0.3	1.7	26.8±1.1	950
19P	0.75	7	1.2	0.5	1.8	27.9±1.1	845	24.5±1.0	0.3	1.8	29.7±1.2	1,105
20P	0.75	7	1.2	0.5	1.8	28.5±1.1	920	25.1±1.0	0.3	1.9	30.5±1.2	1,190
24P	0.75	7	1.2	0.5	1.9	31.0±1.2	1,065	27.4±1.1	0.3	2.0	33.0±1.3	1,360
27P	0.75	7	1.2	0.5	1.9	32.7±1.3	1,170	29.1±1.2	0.3	2.0	34.7±1.4	1,485
30P	0.75	7	1.2	0.5	2.0	34.4±1.4	1,295	30.6±1.2	0.4	2.1	36.8±1.5	1,710
33P	0.75	7	1.2	0.5	2.1	36.1±1.4	1,425	32.1±1.3	0.4	2.2	38.5±1.5	1,855
37P	0.75	7	1.2	0.5	2.1	37.9±1.5	1,540	33.9±1.4	0.4	2.2	40.3±1.6	1,995
48P	0.75	7	1.2	0.5	2.3	42.9±1.7	1,985	38.5±1.5	0.4	2.4	45.3±1.8	2,500
1P	1.0	7	1.4	0.5	1.0	8.4±0.4	95	6.6±0.4	0.2	1.1	9.9±0.4	150
2P	1.0	7	1.4	0.5	1.2	13.1±0.5	195	10.9±0.4	0.3	1.3	15.1±0.6	325
3P	1.0	7	1.4	0.5	1.3	14.1±0.6	240	11.7±0.5	0.3	1.3	15.9±0.6	375
4P	1.0	7	1.4	0.5	1.3	15.4±0.6	290	13.0±0.5	0.3	1.4	17.4±0.7	445
5P	1.0	7	1.4	0.5	1.4	17.1±0.7	355	14.5±0.6	0.3	1.4	18.9±0.8	510
7P	1.0	7	1.4	0.5	1.4	18.6±0.7	440	16.0±0.6	0.3	1.5	20.6±0.8	615
10P	1.0	7	1.4	0.5	1.6	22.9±0.9	605	19.9±0.8	0.3	1.7	24.9±1.0	825
12P	1.0	7	1.4	0.5	1.6	24.0±1.0	690	21.0±0.8	0.3	1.7	26.0±1.0	925
14P	1.0	7	1.4	0.5	1.7	25.8±1.0	795	22.6±0.9	0.3	1.8	27.8±1.1	1,045
15P	1.0	7	1.4	0.5	1.7	26.6±1.1	855	23.4±0.9	0.3	1.8	28.6±1.1	1,110
19P	1.0	7	1.4	0.5	1.8	29.6±1.2	1,015	26.2±1.0	0.3	1.9	31.6±1.3	1,295
20P	1.0	7	1.4	0.5	1.9	30.5±1.2	1,105	26.9±1.1	0.3	1.9	32.3±1.3	1,385
24P	1.0	7	1.4	0.5	2.0	33.2±1.3	1,290	29.4±1.2	0.3	2.0	35.0±1.4	1,590
27P	1.0	7	1.4	0.5	2.0	34.9±1.4	1,415	31.1±1.2	0.4	2.1	37.3±1.5	1,835
30P	1.0	7	1.4	0.5	2.1	36.7±1.5	1,565	32.7±1.3	0.4	2.2	39.1±1.6	2,005
33P	1.0	7	1.4	0.5	2.2	38.5±1.5	1,720	34.3±1.4	0.4	2.2	40.7±1.6	2,165
37P	1.0	7	1.4	0.5	2.2	40.5±1.6	1,870	36.3±1.5	0.4	2.3	42.9±1.7	2,355
48P	1.0	7	1.4	0.5	2.4	45.8±1.8	2,405	41.2±1.6	0.4	2.5	48.2±1.9	2,955

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Instrumentation Cable with collective screen

## Inner covering type

250V EXY(C), EOY(C), EXI(C), EOI(C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	1.5	7	1.7	0.6	1.1	9.6±0.4	120	7.6±0.4	0.2	1.1	10.9±0.4	175
2P	1.5	7	1.7	0.6	1.3	15.0±0.6	250	12.6±0.5	0.3	1.4	17.0±0.7	400
3P	1.5	7	1.7	0.6	1.3	15.9±0.6	305	13.5±0.5	0.3	1.4	17.9±0.7	465
4P	1.5	7	1.7	0.6	1.4	17.7±0.7	385	15.1±0.6	0.3	1.5	19.7±0.8	555
5P	1.5	7	1.7	0.6	1.5	19.6±0.8	470	16.8±0.7	0.3	1.5	21.4±0.9	645
7P	1.5	7	1.7	0.6	1.5	21.4±0.9	580	18.6±0.7	0.3	1.6	23.4±0.9	785
10P	1.5	7	1.7	0.6	1.7	26.3±1.1	805	23.1±0.9	0.3	1.8	28.3±1.1	1,060
12P	1.5	7	1.7	0.6	1.8	27.7±1.1	935	24.3±1.0	0.3	1.8	29.5±1.2	1,185
14P	1.5	7	1.7	0.6	1.8	29.7±1.2	1,060	26.3±1.1	0.3	1.9	31.7±1.3	1,345
15P	1.5	7	1.7	0.6	1.9	30.7±1.2	1,155	27.1±1.1	0.3	1.9	32.5±1.3	1,435
19P	1.5	7	1.7	0.6	2.0	34.3±1.4	1,370	30.5±1.2	0.4	2.1	36.7±1.5	1,780
20P	1.5	7	1.7	0.6	2.0	35.0±1.4	1,475	31.2±1.2	0.4	2.1	37.4±1.5	1,895
24P	1.5	7	1.7	0.6	2.1	38.1±1.5	1,720	34.1±1.4	0.4	2.2	40.5±1.6	2,180
27P	1.5	7	1.7	0.6	2.2	40.4±1.6	1,915	36.2±1.4	0.4	2.3	42.8±1.7	2,400
30P	1.5	7	1.7	0.6	2.3	42.5±1.7	2,120	38.1±1.5	0.4	2.4	44.9±1.8	2,630
33P	1.5	7	1.7	0.6	2.4	44.5±1.8	2,330	39.9±1.6	0.4	2.5	46.9±1.9	2,860
37P	1.5	7	1.7	0.6	2.5	47.0±1.9	2,555	42.2±1.7	0.4	2.6	49.4±2.0	3,115
48P	1.5	7	1.7	0.6	2.7	53.2±2.1	3,285	48.0±1.9	0.4	2.8	55.6±2.2	3,920
1T	0.75	7	1.2	0.5	1.0	8.4±0.4	100	6.6±0.4	0.2	1.1	9.9±0.4	155
2T	0.75	7	1.2	0.5	1.2	13.5±0.6	205	11.3±0.5	0.3	1.3	15.5±0.6	345
3T	0.75	7	1.2	0.5	1.3	14.6±0.6	250	12.2±0.5	0.3	1.3	16.4±0.7	400
4T	0.75	7	1.2	0.5	1.3	16.0±0.7	325	13.6±0.5	0.3	1.4	18.0±0.7	480
5T	0.75	7	1.2	0.5	1.4	17.9±0.7	385	15.3±0.6	0.3	1.5	19.9±0.8	570
7T	0.75	7	1.2	0.5	1.5	20.3±0.8	500	17.5±0.7	0.3	1.6	22.3±0.9	705
10T	0.75	7	1.2	0.5	1.7	24.9±1.0	680	21.7±0.9	0.3	1.7	26.7±1.1	940
12T	0.75	7	1.2	0.5	1.7	25.7±1.0	795	22.5±0.9	0.3	1.8	27.7±1.1	1,055
14T	0.75	7	1.2	0.5	1.8	27.7±1.1	895	24.3±1.0	0.3	1.8	29.5±1.2	1,180
15T	0.75	7	1.2	0.5	1.8	28.5±1.2	995	25.1±1.0	0.3	1.9	30.5±1.2	1,270
19T	0.75	7	1.2	0.5	1.9	31.8±1.3	1,090	28.2±1.1	0.3	2.0	33.8±1.4	1,495
20T	0.75	7	1.2	0.5	1.9	32.5±1.3	1,175	28.9±1.2	0.3	2.0	34.5±1.4	1,590
24T	0.75	7	1.2	0.5	2.0	35.4±1.4	1,470	31.6±1.3	0.4	2.1	37.8±1.5	1,920
27T	0.75	7	1.2	0.5	2.1	37.4±1.5	1,630	33.4±1.3	0.4	2.2	39.8±1.6	2,110
30T	0.75	7	1.2	0.5	2.2	39.4±1.6	1,805	35.2±1.4	0.4	2.3	41.8±1.7	2,310
33T	0.75	7	1.2	0.5	2.3	41.3±1.7	1,970	36.9±1.5	0.4	2.3	43.5±1.7	2,495
37T	0.75	7	1.2	0.5	2.3	43.4±1.8	2,185	39.0±1.6	0.4	2.4	45.8±1.8	2,720
48T	0.75	7	1.2	0.5	2.6	49.4±2.0	2,795	44.4±1.8	0.4	2.6	51.6±2.1	3,425



### Inner covering type 250V EXY(C), EOY(C), EXI(C), EOI(C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1T	1.0	7	1.4	0.5	1.1	9.1±0.4	120	7.1±0.4	0.2	1.1	10.4±0.4	175
2T	1.0	7	1.4	0.5	1.3	14.5±0.6	250	12.1±0.5	0.3	1.3	16.3±0.7	390
3T	1.0	7	1.4	0.5	1.3	15.4±0.6	315	13.0±0.5	0.3	1.4	17.4±0.7	465
4T	1.0	7	1.4	0.5	1.4	17.1±0.7	395	14.5±0.6	0.3	1.4	18.9±0.8	550
5T	1.0	7	1.4	0.5	1.4	18.9±0.8	470	16.3±0.7	0.3	1.5	20.9±0.8	655
7T	1.0	7	1.4	0.5	1.5	21.5±0.9	605	18.7±0.7	0.3	1.6	23.5±0.9	810
10T	1.0	7	1.4	0.5	1.7	26.4±1.1	840	23.2±0.9	0.3	1.8	28.4±1.1	1,100
12T	1.0	7	1.4	0.5	1.7	27.3±1.1	965	24.1±1.0	0.3	1.8	29.3±1.2	1,225
14T	1.0	7	1.4	0.5	1.8	29.4±1.2	1,110	26.0±1.0	0.3	1.9	31.4±1.3	1,395
15T	1.0	7	1.4	0.5	1.9	30.4±1.2	1,210	26.8±1.1	0.3	1.9	32.2±1.3	1,485
19T	1.0	7	1.4	0.5	2.0	33.9±1.4	1,445	30.1±1.2	0.4	2.1	36.3±1.5	1,850
20T	1.0	7	1.4	0.5	2.0	34.7±1.4	1,550	30.9±1.2	0.4	2.1	37.1±1.5	1,965
24T	1.0	7	1.4	0.5	2.1	37.8±1.5	1,815	33.8±1.4	0.4	2.2	40.2±1.6	2,265
27T	1.0	7	1.4	0.5	2.2	40.0±1.6	2,020	35.8±1.4	0.4	2.3	42.4±1.7	2,500
30T	1.0	7	1.4	0.5	2.3	42.1±1.7	2,235	37.7±1.5	0.4	2.4	44.5±1.8	2,740
33T	1.0	7	1.4	0.5	2.4	44.1±1.8	2,455	39.5±1.6	0.4	2.5	46.5±1.9	2,980
37T	1.0	7	1.4	0.5	2.5	46.6±1.9	2,700	41.8±1.7	0.4	2.5	48.8±2.0	3,235
48T	1.0	7	1.4	0.5	2.7	52.7±2.1	3,475	47.5±1.9	0.4	2.8	55.1±2.2	4,105
1T	1.5	7	1.7	0.6	1.1	10.1±0.4	150	8.1±0.4	0.2	1.2	11.6±0.5	215
2T	1.5	7	1.7	0.6	1.3	16.4±0.7	325	14.0±0.6	0.3	1.4	18.4±0.7	480
3T	1.5	7	1.7	0.6	1.4	17.7±0.7	415	15.1±0.6	0.3	1.5	19.7±0.8	585
4T	1.5	7	1.7	0.6	1.5	19.6±0.8	520	16.8±0.7	0.3	1.5	21.4±0.9	695
5T	1.5	7	1.7	0.6	1.5	21.7±0.9	625	18.9±0.8	0.3	1.6	23.7±0.9	830
7T	1.5	7	1.7	0.6	1.7	24.9±1.0	815	21.7±0.9	0.3	1.7	26.7±1.1	1,050
10T	1.5	7	1.7	0.6	1.9	30.6±1.2	1,145	27.0±1.1	0.3	1.9	32.4±1.3	1,420
12T	1.5	7	1.7	0.6	1.9	31.6±1.3	1,305	28.0±1.1	0.3	2.0	33.6±1.3	1,605
14T	1.5	7	1.7	0.6	2.0	34.0±1.4	1,505	30.2±1.2	0.4	2.1	36.4±1.5	1,915
15T	1.5	7	1.7	0.6	2.0	35.0±1.4	1,620	31.2±1.2	0.4	2.1	37.4±1.5	2,040
19T	1.5	7	1.7	0.6	2.2	39.2±1.6	1,955	35.0±1.4	0.4	2.3	41.6±1.7	2,425
20T	1.5	7	1.7	0.6	2.2	40.1±1.6	2,100	35.9±1.4	0.4	2.3	42.5±1.7	2,580
24T	1.5	7	1.7	0.6	2.4	43.9±1.8	2,480	39.3±1.6	0.4	2.4	46.1±1.8	2,980
27T	1.5	7	1.7	0.6	2.4	46.2±1.8	2,740	41.6±1.7	0.4	2.5	48.6±1.9	3,290
30T	1.5	7	1.7	0.6	2.5	48.6±1.9	3,030	43.8±1.8	0.4	2.6	51.0±2.0	3,610
33T	1.5	7	1.7	0.6	2.6	51.0±2.0	3,330	46.0±1.8	0.4	2.7	53.4±2.1	3,940
37T	1.5	7	1.7	0.6	2.7	53.8±2.2	3,665	48.6±1.9	0.4	2.8	56.2±2.2	4,305
48T	1.5	7	1.7	0.6	3.0	61.1±2.4	4,745	55.3±2.2	0.4	3.1	63.5±2.5	5,475

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Instrumentation Cable with collective screen

## Inner sheath type

250V EYOY(C), EIOI(C)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1P	0.75	7	1.2	0.5	1.0	8.1	0.2	0.8	10.9	0.6	160
2P	0.75	7	1.2	0.5	1.2	12.4	0.3	0.9	15.7	0.8	320
3P	0.75	7	1.2	0.5	1.2	13.3	0.3	1.0	16.8	0.8	380
4P	0.75	7	1.2	0.5	1.3	14.3	0.3	1.0	17.8	0.8	430
5P	0.75	7	1.2	0.5	1.3	16.0	0.3	1.0	19.5	0.9	500
7P	0.75	7	1.2	0.5	1.4	17.3	0.3	1.1	21.0	0.9	590
10P	0.75	7	1.2	0.5	1.5	20.9	0.3	1.2	24.8	1.0	790
12P	0.75	7	1.2	0.5	1.5	21.7	0.3	1.2	25.6	1.1	860
14P	0.75	7	1.2	0.5	1.6	22.7	0.3	1.2	26.6	1.1	940
15P	0.75	7	1.2	0.5	1.6	23.6	0.3	1.2	27.5	1.1	990
19P	0.75	7	1.2	0.5	1.7	25.7	0.3	1.3	29.8	1.2	1,170
20P	0.75	7	1.2	0.5	1.7	26.3	0.3	1.3	30.4	1.2	1,220
24P	0.75	7	1.2	0.5	1.8	29.3	0.3	1.4	33.6	1.3	1,450
27P	0.75	7	1.2	0.5	1.9	31.2	0.4	1.4	35.9	1.4	1,680
30P	0.75	7	1.2	0.5	2.0	33.1	0.4	1.5	38.0	1.4	1,860
33P	0.75	7	1.2	0.5	2.0	34.2	0.4	1.5	39.1	1.5	1,980
37P	0.75	7	1.2	0.5	2.0	35.3	0.4	1.5	40.2	1.5	2,120
48P	0.75	7	1.2	0.5	2.3	41.2	0.4	1.7	46.5	1.7	2,730
1P	1.0	7	1.4	0.5	1.1	8.7	0.2	0.8	11.5	0.6	180
2P	1.0	7	1.4	0.5	1.2	13.1	0.3	1.0	16.6	0.8	360
3P	1.0	7	1.4	0.5	1.3	14.2	0.3	1.0	17.7	0.8	420
4P	1.0	7	1.4	0.5	1.3	15.1	0.3	1.0	18.6	0.9	470
5P	1.0	7	1.4	0.5	1.4	17.1	0.3	1.1	20.8	0.9	570
7P	1.0	7	1.4	0.5	1.4	18.3	0.3	1.1	22.0	1.0	660
10P	1.0	7	1.4	0.5	1.6	22.3	0.3	1.2	26.2	1.1	900
12P	1.0	7	1.4	0.5	1.6	23.2	0.3	1.2	27.1	1.1	980
14P	1.0	7	1.4	0.5	1.6	24.1	0.3	1.2	28.0	1.1	1,060
15P	1.0	7	1.4	0.5	1.7	25.2	0.3	1.3	29.3	1.2	1,150
19P	1.0	7	1.4	0.5	1.7	27.3	0.3	1.3	31.4	1.2	1,340
20P	1.0	7	1.4	0.5	1.8	28.1	0.3	1.3	32.2	1.3	1,400
24P	1.0	7	1.4	0.5	1.9	31.3	0.4	1.4	36.0	1.4	1,750
27P	1.0	7	1.4	0.5	2.0	33.3	0.4	1.5	38.2	1.4	1,950
30P	1.0	7	1.4	0.5	2.0	35.1	0.4	1.5	40.0	1.5	2,120
33P	1.0	7	1.4	0.5	2.1	36.5	0.4	1.6	41.6	1.5	2,300
37P	1.0	7	1.4	0.5	2.1	37.7	0.4	1.6	42.8	1.6	2,460
48P	1.0	7	1.4	0.5	2.4	44.0	0.4	1.7	49.3	1.8	3,160
1P	1.5	7	1.7	0.6	1.1	9.7	0.2	0.9	12.7	0.7	220
2P	1.5	7	1.7	0.6	1.3	15.0	0.3	1.0	18.5	0.9	440
3P	1.5	7	1.7	0.6	1.3	16.1	0.3	1.0	19.6	0.9	510
4P	1.5	7	1.7	0.6	1.4	17.3	0.3	1.1	21.0	0.9	590
5P	1.5	7	1.7	0.6	1.5	19.6	0.3	1.1	23.3	1.0	710
7P	1.5	7	1.7	0.6	1.5	21.0	0.3	1.2	24.9	1.0	840
10P	1.5	7	1.7	0.6	1.7	25.6	0.3	1.3	29.7	1.2	1,140
12P	1.5	7	1.7	0.6	1.7	26.7	0.3	1.3	30.8	1.2	1,260
14P	1.5	7	1.7	0.6	1.8	27.9	0.3	1.3	32.0	1.3	1,380
15P	1.5	7	1.7	0.6	1.8	29.0	0.3	1.4	33.3	1.3	1,480
19P	1.5	7	1.7	0.6	1.9	31.6	0.4	1.4	36.3	1.4	1,830
20P	1.5	7	1.7	0.6	1.9	32.3	0.4	1.5	37.2	1.4	1,920
24P	1.5	7	1.7	0.6	2.1	36.2	0.4	1.5	41.1	1.5	2,280
27P	1.5	7	1.7	0.6	2.2	38.5	0.4	1.6	43.6	1.6	2,540
30P	1.5	7	1.7	0.6	2.2	40.6	0.4	1.7	45.9	1.7	2,780
33P	1.5	7	1.7	0.6	2.3	42.2	0.4	1.7	47.5	1.7	2,990
37P	1.5	7	1.7	0.6	2.4	43.8	0.4	1.7	49.1	1.8	3,240
48P	1.5	7	1.7	0.6	2.6	50.9	0.4	1.9	56.6	2.0	4,160

### Inner sheath type 250V EYOY(C), EIOI(C)

No. of Triads	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1T	0.75	7	1.2	0.5	1.1	8.7	0.2	0.8	11.5	0.6	190
2T	0.75	7	1.2	0.5	1.2	13.5	0.3	1.0	17.0	0.8	390
3T	0.75	7	1.2	0.5	1.3	14.6	0.3	1.0	18.1	0.8	460
4T	0.75	7	1.2	0.5	1.3	16.0	0.3	1.0	19.5	0.9	530
5T	0.75	7	1.2	0.5	1.4	17.9	0.3	1.1	21.6	0.9	640
7T	0.75	7	1.2	0.5	1.5	20.3	0.3	1.1	24.0	1.0	790
10T	0.75	7	1.2	0.5	1.7	24.9	0.3	1.3	29.0	1.2	1,100
12T	0.75	7	1.2	0.5	1.7	26.3	0.3	1.3	30.4	1.2	1,220
14T	0.75	7	1.2	0.5	1.8	27.6	0.3	1.3	31.7	1.3	1,350
15T	0.75	7	1.2	0.5	1.8	28.5	0.3	1.3	32.6	1.3	1,420
19T	0.75	7	1.2	0.5	1.9	31.7	0.4	1.4	36.4	1.4	1,800
20T	0.75	7	1.2	0.5	1.9	32.3	0.4	1.5	37.2	1.4	1,880
24T	0.75	7	1.2	0.5	2.0	35.3	0.4	1.5	40.2	1.5	2,180
27T	0.75	7	1.2	0.5	2.2	38.5	0.4	1.6	43.6	1.6	2,490
30T	0.75	7	1.2	0.5	2.2	39.3	0.4	1.6	44.4	1.6	2,630
33T	0.75	7	1.2	0.5	2.3	41.5	0.4	1.7	46.8	1.7	2,890
37T	0.75	7	1.2	0.5	2.3	42.9	0.4	1.7	48.2	1.7	3,110
48T	0.75	7	1.2	0.5	2.6	49.9	0.4	1.9	55.6	2.0	4,000
1T	1.0	7	1.4	0.5	1.1	9.2	0.2	0.9	12.2	0.7	220
2T	1.0	7	1.4	0.5	1.3	14.5	0.3	1.0	18.0	0.8	440
3T	1.0	7	1.4	0.5	1.3	15.4	0.3	1.0	18.9	0.9	510
4T	1.0	7	1.4	0.5	1.4	17.1	0.3	1.1	20.8	0.9	610
5T	1.0	7	1.4	0.5	1.4	18.9	0.3	1.1	22.6	1.0	710
7T	1.0	7	1.4	0.5	1.5	21.5	0.3	1.2	25.4	1.1	900
10T	1.0	7	1.4	0.5	1.7	26.4	0.3	1.3	30.5	1.2	1,240
12T	1.0	7	1.4	0.5	1.8	28.1	0.3	1.3	32.2	1.3	1,400
14T	1.0	7	1.4	0.5	1.8	29.3	0.3	1.4	33.6	1.3	1,550
15T	1.0	7	1.4	0.5	1.9	30.4	0.4	1.4	35.1	1.4	1,730
19T	1.0	7	1.4	0.5	2.0	33.9	0.4	1.5	38.8	1.5	2,090
20T	1.0	7	1.4	0.5	2.0	34.5	0.4	1.5	39.4	1.5	2,170
24T	1.0	7	1.4	0.5	2.1	37.7	0.4	1.6	42.8	1.6	2,530
27T	1.0	7	1.4	0.5	2.3	41.1	0.4	1.7	46.4	1.7	2,890
30T	1.0	7	1.4	0.5	2.3	42.0	0.4	1.7	47.3	1.7	3,060
33T	1.0	7	1.4	0.5	2.4	44.3	0.4	1.8	49.8	1.8	3,360
37T	1.0	7	1.4	0.5	2.4	45.8	0.4	1.8	51.3	1.8	3,620
48T	1.0	7	1.4	0.5	2.7	53.3	0.4	2.0	59.2	2.1	4,670
1T	1.5	7	1.7	0.6	1.1	10.2	0.3	0.9	13.5	0.7	280
2T	1.5	7	1.7	0.6	1.3	16.4	0.3	1.0	19.9	0.9	530
3T	1.5	7	1.7	0.6	1.4	17.7	0.3	1.1	21.4	0.9	640
4T	1.5	7	1.7	0.6	1.5	19.6	0.3	1.1	23.3	1.0	760
5T	1.5	7	1.7	0.6	1.5	21.7	0.3	1.2	25.6	1.1	910
7T	1.5	7	1.7	0.6	1.7	24.9	0.3	1.3	29.0	1.2	1,170
10T	1.5	7	1.7	0.6	1.9	30.6	0.4	1.4	35.3	1.4	1,700
12T	1.5	7	1.7	0.6	1.9	32.3	0.4	1.5	37.2	1.4	1,910
14T	1.5	7	1.7	0.6	2.0	33.9	0.4	1.5	38.8	1.5	2,120
15T	1.5	7	1.7	0.6	2.0	35.0	0.4	1.5	39.9	1.5	2,230
19T	1.5	7	1.7	0.6	2.2	39.2	0.4	1.6	44.3	1.6	2,730
20T	1.5	7	1.7	0.6	2.2	39.9	0.4	1.6	45.0	1.7	2,820
24T	1.5	7	1.7	0.6	2.4	43.8	0.4	1.7	49.1	1.8	3,330
27T	1.5	7	1.7	0.6	2.5	47.5	0.4	1.8	53.0	1.9	3,770
30T	1.5	7	1.7	0.6	2.5	48.6	0.4	1.9	54.3	1.9	4,040
33T	1.5	7	1.7	0.6	2.6	51.2	0.4	1.9	56.9	2.0	4,400
37T	1.5	7	1.7	0.6	2.7	53.2	0.4	2.0	59.1	2.1	4,810
48T	1.5	7	1.7	0.6	3.0	61.8	0.4	2.2	68.1	2.3	6,200

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

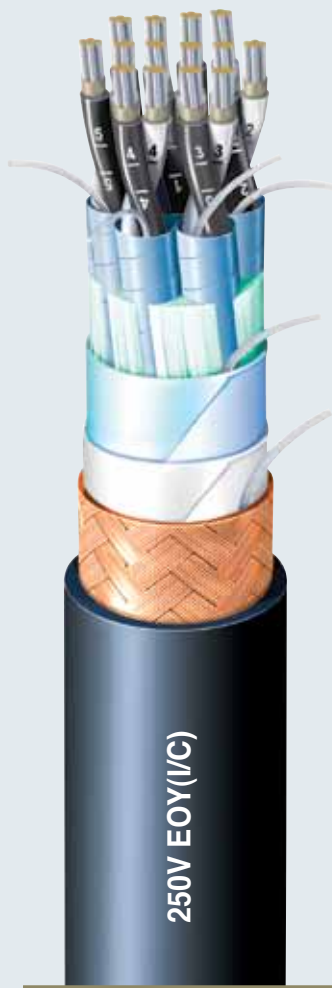
Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Instrumentation Cable with individual collective screen



## Cable Designation

## Non-H/F TYPE

## Inner covering

250V EXY(I/C)

250V EOY(I/C)

## Inner sheath

250V EYOY(I/C)

## H/F TYPE

## Inner covering

250V EXI(I/C)

250V EOI(I/C)

## Inner sheath

250V EIOI(I/C)

## Application Standard

- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Fire resistance : IEC 60331-1,-2(90min)  
IEC 60331-1,-2(120min)
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μS/mm ↓)  
(For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

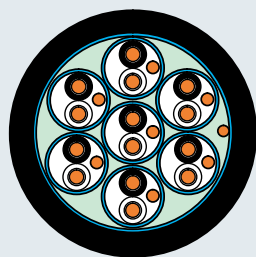
## Core Identification

- Colored insulation plus Arabic number printing on the insulation
- Pair : White, Black      Triad : White, Black, Red

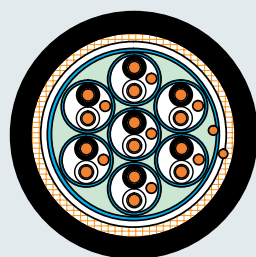
## Construction

Classification	Code	Construction detail	
Conductor		- Stranded tinned annealed copper wires as per IEC 60228, Class 2	
Fire resisting layer	E	- Mica/glass tape	
Insulation		- EPR as per IEC 60092-360	
Twisting		- Two/Three Insulated cores shall be twisted together to form a pair/triad	
Individual screen	(I)	- AL/PS tape with drain wire - Each pair/triad is wrapped with polyester tape to prevent electrical contact with adjacent pairs/triads	
Cabling		- Screened pairs/triads shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable	
Collective screen	(C)	- AL/PS Tape with drain wire - A suitable tape may be applied on the collective screen	
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable	<b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	0	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable	
Sheath	Y (I)	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black	

**Note.** The other color of sheath and insulation may be applicable when purchaser require



EXI(I/C) (7P)



EOY(I/C) (7P)

## Inner covering type

## 250V EXY(I/C), EOY(I/C), EXI(I/C), EOI(I/C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	0.75	7	1.2	0.5	1.0	8.1±0.4	85	6.3±0.4	0.2	1.1	9.6±0.4	140
2P	0.75	7	1.2	0.5	1.2	12.8±0.5	195	10.6±0.4	0.3	1.3	14.8±0.6	320
3P	0.75	7	1.2	0.5	1.2	13.5±0.5	235	11.3±0.5	0.3	1.3	15.5±0.6	370
4P	0.75	7	1.2	0.5	1.3	15.0±0.6	290	12.6±0.5	0.3	1.4	17.0±0.7	440
5P	0.75	7	1.2	0.5	1.3	16.4±0.7	350	14.0±0.6	0.3	1.4	18.4±0.7	510
7P	0.75	7	1.2	0.5	1.4	18.1±0.7	445	15.5±0.6	0.3	1.5	20.1±0.8	620
10P	0.75	7	1.2	0.5	1.6	22.3±0.9	620	19.3±0.8	0.3	1.6	24.1±1.0	820
12P	0.75	7	1.2	0.5	1.6	23.3±0.9	705	20.3±0.8	0.3	1.7	25.3±1.0	935
14P	0.75	7	1.2	0.5	1.7	25.1±1.0	815	21.9±0.9	0.3	1.7	26.9±1.1	1,045
15P	0.75	7	1.2	0.5	1.7	25.8±1.0	875	22.6±0.9	0.3	1.8	27.8±1.1	1,125
19P	0.75	7	1.2	0.5	1.8	28.8±1.2	1,045	25.4±1.0	0.3	1.9	30.8±1.2	1,320
20P	0.75	7	1.2	0.5	1.8	29.4±1.2	1,125	26.0±1.0	0.3	1.9	31.4±1.3	1,405
24P	0.75	7	1.2	0.5	1.9	32.0±1.3	1,310	28.4±1.1	0.3	2.0	34.0±1.4	1,615
27P	0.75	7	1.2	0.5	2.0	33.9±1.4	1,460	30.1±1.2	0.4	2.1	36.3±1.5	1,865
30P	0.75	7	1.2	0.5	2.1	35.7±1.4	1,615	31.7±1.3	0.4	2.1	37.9±1.5	2,025
33P	0.75	7	1.2	0.5	2.1	37.2±1.5	1,760	33.2±1.3	0.4	2.2	39.6±1.6	2,205
37P	0.75	7	1.2	0.5	2.2	39.3±1.6	1,935	35.1±1.4	0.4	2.3	41.7±1.7	2,405
48P	0.75	7	1.2	0.5	2.4	44.5±1.8	2,490	39.9±1.6	0.4	2.5	46.9±1.9	3,020
1P	1.0	7	1.4	0.5	1.1	8.7±0.4	100	6.7±0.4	0.2	1.1	10.0±0.4	155
2P	1.0	7	1.4	0.5	1.2	13.4±0.5	220	11.2±0.4	0.3	1.3	15.4±0.6	355
3P	1.0	7	1.4	0.5	1.3	14.4±0.6	280	12.0±0.5	0.3	1.3	16.2±0.6	415
4P	1.0	7	1.4	0.5	1.3	15.8±0.6	345	13.4±0.5	0.3	1.4	17.8±0.7	500
5P	1.0	7	1.4	0.5	1.4	17.6±0.7	425	15.0±0.6	0.3	1.5	19.6±0.8	590
7P	1.0	7	1.4	0.5	1.4	19.1±0.8	530	16.5±0.7	0.3	1.5	21.1±0.8	710
10P	1.0	7	1.4	0.5	1.6	23.5±0.9	735	20.5±0.8	0.3	1.7	25.5±1.0	965
12P	1.0	7	1.4	0.5	1.6	24.6±1.0	840	21.6±0.9	0.3	1.7	26.6±1.1	1,080
14P	1.0	7	1.4	0.5	1.7	26.5±1.1	975	23.3±0.9	0.3	1.8	28.5±1.1	1,230
15P	1.0	7	1.4	0.5	1.7	27.3±1.1	1,050	24.1±1.0	0.3	1.8	29.3±1.2	1,310
19P	1.0	7	1.4	0.5	1.9	30.7±1.2	1,265	27.1±1.1	0.3	1.9	32.5±1.3	1,545
20P	1.0	7	1.4	0.5	1.9	31.3±1.3	1,360	27.7±1.1	0.3	2.0	33.3±1.3	1,660
24P	1.0	7	1.4	0.5	2.0	34.1±1.4	1,590	30.3±1.2	0.4	2.1	36.5±1.5	2,000
27P	1.0	7	1.4	0.5	2.1	36.1±1.4	1,770	32.1±1.3	0.4	2.2	38.5±1.5	2,205
30P	1.0	7	1.4	0.5	2.1	37.8±1.5	1,945	33.8±1.4	0.4	2.2	40.2±1.6	2,395
33P	1.0	7	1.4	0.5	2.2	39.6±1.6	2,135	35.4±1.4	0.4	2.3	42.0±1.7	2,610
37P	1.0	7	1.4	0.5	2.3	41.9±1.7	2,350	37.5±1.5	0.4	2.4	44.3±1.8	2,855
48P	1.0	7	1.4	0.5	2.5	47.4±1.9	3,030	42.6±1.7	0.4	2.6	49.8±2.0	3,595

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



## Fire resistance

## Instrumentation Cable with individual &amp; collective screen

## Inner covering type

250V EXY(I/C), EOY(I/C), EXI(I/C), EOI(I/C)

No. of Units	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1P	1.5	7	1.7	0.6	1.1	9.7±0.4	120	7.7±0.4	0.2	1.1	11.0±0.4	180
2P	1.5	7	1.7	0.6	1.3	15.3±0.6	280	12.9±0.5	0.3	1.4	17.3±0.7	435
3P	1.5	7	1.7	0.6	1.3	16.2±0.6	350	13.8±0.6	0.3	1.4	18.2±0.7	510
4P	1.5	7	1.7	0.6	1.4	18.1±0.7	440	15.5±0.6	0.3	1.5	20.1±0.8	615
5P	1.5	7	1.7	0.6	1.5	20.1±0.8	540	17.3±0.7	0.3	1.5	21.9±0.9	720
7P	1.5	7	1.7	0.6	1.5	21.9±0.9	675	19.1±0.8	0.3	1.6	23.9±1.0	885
10P	1.5	7	1.7	0.6	1.7	26.9±1.1	945	23.7±0.9	0.3	1.8	28.9±1.2	1,205
12P	1.5	7	1.7	0.6	1.8	28.4±1.1	1,095	25.0±1.0	0.3	1.9	30.4±1.2	1,370
14P	1.5	7	1.7	0.6	1.9	30.6±1.2	1,265	27.0±1.1	0.3	1.9	32.4±1.3	1,540
15P	1.5	7	1.7	0.6	1.9	31.5±1.3	1,360	27.9±1.1	0.3	2.0	33.5±1.3	1,665
19P	1.5	7	1.7	0.6	2.0	35.1±1.4	1,625	31.3±1.3	0.4	2.1	37.5±1.5	2,045
20P	1.5	7	1.7	0.6	2.1	36.1±1.4	1,765	32.1±1.3	0.4	2.2	38.5±1.5	2,195
24P	1.5	7	1.7	0.6	2.2	39.3±1.6	2,065	35.1±1.4	0.4	2.3	41.7±1.7	2,535
27P	1.5	7	1.7	0.6	2.3	41.6±1.7	2,300	37.2±1.5	0.4	2.4	44.0±1.8	2,795
30P	1.5	7	1.7	0.6	2.4	43.8±1.8	2,545	39.2±1.6	0.4	2.4	46.0±1.8	3,045
33P	1.5	7	1.7	0.6	2.4	45.6±1.8	2,770	41.0±1.6	0.4	2.5	48.0±1.9	3,315
37P	1.5	7	1.7	0.6	2.5	48.2±1.9	3,045	43.4±1.7	0.4	2.6	50.6±2.0	3,625
48P	1.5	7	1.7	0.6	2.8	54.7±2.2	3,950	49.3±2.0	0.4	2.8	56.9±2.3	4,580
1T	0.75	7	1.2	0.5	1.1	8.7±0.4	105	6.7±0.4	0.2	1.1	10.0±0.4	160
2T	0.75	7	1.2	0.5	1.3	14.1±0.6	240	11.7±0.5	0.3	1.3	15.9±0.6	375
3T	0.75	7	1.2	0.5	1.3	15.0±0.6	300	12.6±0.5	0.3	1.4	17.0±0.7	450
4T	0.75	7	1.2	0.5	1.3	16.4±0.7	370	14.0±0.6	0.3	1.4	18.4±0.7	530
5T	0.75	7	1.2	0.5	1.4	18.4±0.7	455	15.8±0.6	0.3	1.5	20.4±0.8	630
7T	0.75	7	1.2	0.5	1.5	20.9±0.8	585	18.1±0.7	0.3	1.6	22.9±0.9	790
10T	0.75	7	1.2	0.5	1.7	25.7±1.0	820	22.5±0.9	0.3	1.8	27.7±1.1	1,070
12T	0.75	7	1.2	0.5	1.7	26.5±1.1	935	23.3±0.9	0.3	1.8	28.5±1.1	1,190
14T	0.75	7	1.2	0.5	1.8	28.5±1.1	1,080	25.1±1.0	0.3	1.9	30.5±1.2	1,355
15T	0.75	7	1.2	0.5	1.8	29.4±1.2	1,160	26.0±1.0	0.3	1.9	31.4±1.3	1,440
19T	0.75	7	1.2	0.5	2.0	33.0±1.3	1,405	29.2±1.2	0.3	2.0	34.8±1.4	1,705
20T	0.75	7	1.2	0.5	2.0	33.7±1.3	1,505	29.9±1.2	0.3	2.1	35.7±1.4	1,830
24T	0.75	7	1.2	0.5	2.1	36.7±1.5	1,765	32.7±1.3	0.4	2.2	39.1±1.6	2,205
27T	0.75	7	1.2	0.5	2.2	38.8±1.6	1,965	34.6±1.4	0.4	2.3	41.2±1.6	2,430
30T	0.75	7	1.2	0.5	2.2	40.6±1.6	2,155	36.4±1.5	0.4	2.3	43.0±1.7	2,645
33T	0.75	7	1.2	0.5	2.3	42.6±1.7	2,370	38.2±1.5	0.4	2.4	45.0±1.8	2,880
37T	0.75	7	1.2	0.5	2.4	45.0±1.8	2,610	40.4±1.6	0.4	2.5	47.4±1.9	3,150
48T	0.75	7	1.2	0.5	2.6	50.9±2.0	3,360	45.9±1.8	0.4	2.7	53.3±2.1	3,970

**Inner covering type****250V EXY(I/C), EOY(I/C), EXI(I/C), EOI(I/C)**

No. of Triads	Conductor			Thickness of Insulation	Unarmoured			Armoured				
	Nominal Area	Min. Number of wires	Max. Dia.		Thickness of outer sheath	Nominal overall dia.	Cable Weight (Approx.)	Nominal over dia. inner covering	Dia. of wire for armour	Thickness of outer sheath	Nominal overall Dia.	Cable Weight (Approx.)
No.	mm <sup>2</sup>	EA.	mm	mm	mm	mm	kg/km	mm	mm	mm	mm	kg/km
1T	1.0	7	1.4	0.5	1.1	9.2±0.4	125	7.2±0.4	0.2	1.1	10.5±0.4	180
2T	1.0	7	1.4	0.5	1.3	14.9±0.6	280	12.5±0.5	0.3	1.4	16.9±0.7	430
3T	1.0	7	1.4	0.5	1.3	15.8±0.6	355	13.4±0.5	0.3	1.4	17.8±0.7	510
4T	1.0	7	1.4	0.5	1.4	17.6±0.7	450	15.0±0.6	0.3	1.5	19.6±0.8	620
5T	1.0	7	1.4	0.5	1.5	19.6±0.8	550	16.8±0.7	0.3	1.5	21.4±0.9	725
7T	1.0	7	1.4	0.5	1.6	22.3±0.9	710	19.3±0.8	0.3	1.6	24.1±1.0	910
10T	1.0	7	1.4	0.5	1.7	27.2±1.1	980	24.0±1.0	0.3	1.8	29.2±1.2	1,240
12T	1.0	7	1.4	0.5	1.8	28.3±1.1	1,135	24.9±1.0	0.3	1.9	30.3±1.2	1,410
14T	1.0	7	1.4	0.5	1.9	30.4±1.2	1,310	26.8±1.1	0.3	1.9	32.2±1.3	1,585
15T	1.0	7	1.4	0.5	1.9	31.3±1.3	1,410	27.7±1.1	0.3	2.0	33.3±1.3	1,710
19T	1.0	7	1.4	0.5	2.0	34.9±1.4	1,690	31.1±1.2	0.4	2.1	37.3±1.5	2,110
20T	1.0	7	1.4	0.5	2.1	35.9±1.4	1,830	31.9±1.3	0.4	2.1	38.1±1.5	2,245
24T	1.0	7	1.4	0.5	2.2	39.1±1.6	2,145	34.9±1.4	0.4	2.3	41.5±1.7	2,615
27T	1.0	7	1.4	0.5	2.3	41.3±1.7	2,390	36.9±1.5	0.4	2.3	43.5±1.7	2,865
30T	1.0	7	1.4	0.5	2.3	43.3±1.7	2,625	38.9±1.6	0.4	2.4	45.7±1.8	3,145
33T	1.0	7	1.4	0.5	2.4	45.4±1.8	2,885	40.8±1.6	0.4	2.5	47.8±1.9	3,430
37T	1.0	7	1.4	0.5	2.5	47.9±1.9	3,180	43.1±1.7	0.4	2.6	50.3±2.0	3,755
48T	1.0	7	1.4	0.5	2.7	54.2±2.2	4,095	49.0±2.0	0.4	2.8	56.6±2.3	4,745
1T	1.5	7	1.7	0.6	1.1	10.2±0.4	150	8.2±0.4	0.2	1.2	11.7±0.5	220
2T	1.5	7	1.7	0.6	1.4	17.0±0.7	365	14.4±0.6	0.3	1.4	18.8±0.8	520
3T	1.5	7	1.7	0.6	1.4	18.1±0.7	460	15.5±0.6	0.3	1.5	20.1±0.8	630
4T	1.5	7	1.7	0.6	1.5	20.1±0.8	575	17.3±0.7	0.3	1.5	21.9±0.9	760
5T	1.5	7	1.7	0.6	1.6	22.4±0.9	705	19.4±0.8	0.3	1.6	24.2±1.0	910
7T	1.5	7	1.7	0.6	1.7	25.5±1.0	925	22.3±0.9	0.3	1.7	27.3±1.1	1,155
10T	1.5	7	1.7	0.6	1.9	31.3±1.3	1,285	27.7±1.1	0.3	2.0	33.3±1.3	1,585
12T	1.5	7	1.7	0.6	1.9	32.3±1.3	1,475	28.7±1.1	0.3	2.0	34.3±1.4	1,785
14T	1.5	7	1.7	0.6	2.0	34.8±1.4	1,700	31.0±1.2	0.4	2.1	37.2±1.5	2,120
15T	1.5	7	1.7	0.6	2.1	36.1±1.4	1,845	32.1±1.3	0.4	2.2	38.5±1.5	2,280
19T	1.5	7	1.7	0.6	2.2	40.2±1.6	2,220	36.0±1.4	0.4	2.3	42.6±1.7	2,700
20T	1.5	7	1.7	0.6	2.3	41.3±1.7	2,400	36.9±1.5	0.4	2.3	43.5±1.7	2,875
24T	1.5	7	1.7	0.6	2.4	45.0±1.8	2,815	40.4±1.6	0.4	2.5	47.4±1.9	3,355
27T	1.5	7	1.7	0.6	2.5	47.6±1.9	3,140	42.8±1.7	0.4	2.6	50.0±2.0	3,705
30T	1.5	7	1.7	0.6	2.6	50.1±2.0	3,470	45.1±1.8	0.4	2.7	52.5±2.1	4,070
33T	1.5	7	1.7	0.6	2.7	52.5±2.1	3,815	47.3±1.9	0.4	2.8	54.9±2.2	4,440
37T	1.5	7	1.7	0.6	2.8	55.4±2.2	4,205	50.0±2.0	0.4	2.9	57.8±2.3	4,865
48T	1.5	7	1.7	0.6	3.1	62.8±2.5	5,440	56.8±2.3	0.4	3.1	65.0±2.6	6,155

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

## Fire resistance

## Instrumentation Cable with individual &amp; collective screen

## Inner sheath type

250V EYOY(I/C), EIOI(I/C)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1P	0.75	7	1.2	0.5	1.0	8.1	0.2	0.8	10.9	0.6	160
2P	0.75	7	1.2	0.5	1.2	13.2	0.3	1.0	16.7	0.8	370
3P	0.75	7	1.2	0.5	1.3	14.3	0.3	1.0	17.8	0.8	430
4P	0.75	7	1.2	0.5	1.3	15.5	0.3	1.0	19.0	0.9	490
5P	0.75	7	1.2	0.5	1.4	17.5	0.3	1.1	21.2	0.9	590
7P	0.75	7	1.2	0.5	1.4	18.1	0.3	1.1	21.8	1.0	660
10P	0.75	7	1.2	0.5	1.6	22.9	0.3	1.2	26.8	1.1	930
12P	0.75	7	1.2	0.5	1.6	23.8	0.3	1.2	27.7	1.1	1,010
14P	0.75	7	1.2	0.5	1.7	25.1	0.3	1.3	29.2	1.2	1,140
15P	0.75	7	1.2	0.5	1.7	26.0	0.3	1.3	30.1	1.2	1,200
19P	0.75	7	1.2	0.5	1.8	27.7	0.3	1.3	31.8	1.3	1,380
20P	0.75	7	1.2	0.5	1.8	28.3	0.3	1.3	32.4	1.3	1,430
24P	0.75	7	1.2	0.5	1.9	32.3	0.4	1.5	37.2	1.4	1,840
27P	0.75	7	1.2	0.5	2.0	33.4	0.4	1.5	38.3	1.4	1,980
30P	0.75	7	1.2	0.5	2.0	34.6	0.4	1.5	39.5	1.5	2,120
33P	0.75	7	1.2	0.5	2.1	36.0	0.4	1.5	40.9	1.5	2,280
37P	0.75	7	1.2	0.5	2.1	37.2	0.4	1.6	42.3	1.6	2,470
48P	0.75	7	1.2	0.5	2.3	43.2	0.4	1.7	48.5	1.8	3,140
1P	1.0	7	1.4	0.5	1.1	8.7	0.2	0.8	11.5	0.6	180
2P	1.0	7	1.4	0.5	1.3	14.1	0.3	1.0	17.6	0.8	410
3P	1.0	7	1.4	0.5	1.3	15.1	0.3	1.0	18.6	0.9	470
4P	1.0	7	1.4	0.5	1.3	16.3	0.3	1.0	19.8	0.9	540
5P	1.0	7	1.4	0.5	1.4	18.4	0.3	1.1	22.1	1.0	650
7P	1.0	7	1.4	0.5	1.4	19.1	0.3	1.1	22.8	1.0	740
10P	1.0	7	1.4	0.5	1.6	24.2	0.3	1.2	28.1	1.1	1,050
12P	1.0	7	1.4	0.5	1.7	25.3	0.3	1.3	29.4	1.2	1,180
14P	1.0	7	1.4	0.5	1.7	26.6	0.3	1.3	30.7	1.2	1,290
15P	1.0	7	1.4	0.5	1.8	27.7	0.3	1.3	31.8	1.3	1,380
19P	1.0	7	1.4	0.5	1.8	29.3	0.3	1.4	33.6	1.3	1,600
20P	1.0	7	1.4	0.5	1.8	29.9	0.3	1.4	34.2	1.3	1,650
24P	1.0	7	1.4	0.5	2.0	34.4	0.4	1.5	39.3	1.5	2,120
27P	1.0	7	1.4	0.5	2.0	35.4	0.4	1.5	40.3	1.5	2,270
30P	1.0	7	1.4	0.5	2.1	36.8	0.4	1.6	41.9	1.6	2,480
33P	1.0	7	1.4	0.5	2.1	38.1	0.4	1.6	43.2	1.6	2,650
37P	1.0	7	1.4	0.5	2.2	39.6	0.4	1.6	44.7	1.6	2,870
48P	1.0	7	1.4	0.5	2.4	45.9	0.4	1.8	51.4	1.8	3,680
1P	1.5	7	1.7	0.6	1.1	9.7	0.2	0.9	12.7	0.7	220
2P	1.5	7	1.7	0.6	1.3	15.9	0.3	1.0	19.4	0.9	480
3P	1.5	7	1.7	0.6	1.4	17.2	0.3	1.1	20.9	0.9	580
4P	1.5	7	1.7	0.6	1.4	18.6	0.3	1.1	22.3	1.0	670
5P	1.5	7	1.7	0.6	1.5	21.0	0.3	1.2	24.9	1.0	810
7P	1.5	7	1.7	0.6	1.5	21.8	0.3	1.2	25.7	1.1	920
10P	1.5	7	1.7	0.6	1.8	27.8	0.3	1.3	31.9	1.3	1,320
12P	1.5	7	1.7	0.6	1.8	28.9	0.3	1.4	33.2	1.3	1,470
14P	1.5	7	1.7	0.6	1.9	30.6	0.4	1.4	35.3	1.4	1,720
15P	1.5	7	1.7	0.6	1.9	31.7	0.4	1.4	36.4	1.4	1,820
19P	1.5	7	1.7	0.6	2.0	33.7	0.4	1.5	38.6	1.5	2,120
20P	1.5	7	1.7	0.6	2.0	34.4	0.4	1.5	39.3	1.5	2,200
24P	1.5	7	1.7	0.6	2.2	39.6	0.4	1.6	44.7	1.6	2,690
27P	1.5	7	1.7	0.6	2.2	40.7	0.4	1.7	46.0	1.7	2,900
30P	1.5	7	1.7	0.6	2.3	42.3	0.4	1.7	47.6	1.7	3,140
33P	1.5	7	1.7	0.6	2.4	44.0	0.4	1.7	49.3	1.8	3,380
37P	1.5	7	1.7	0.6	2.4	45.5	0.4	1.8	51.0	1.8	3,670
48P	1.5	7	1.7	0.6	2.7	53.0	0.4	2.0	58.9	2.1	4,740

### Inner sheath type 250V EYOY(I/C), EIOI(I/C)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance	
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	kg/km
1T	0.75	7	1.2	0.5	1.1	8.7	0.2	0.8	11.5	0.6	190
2T	0.75	7	1.2	0.5	1.3	14.3	0.3	1.0	17.8	0.8	430
3T	0.75	7	1.2	0.5	1.3	15.2	0.3	1.0	18.7	0.9	490
4T	0.75	7	1.2	0.5	1.4	16.8	0.3	1.1	20.5	0.9	590
5T	0.75	7	1.2	0.5	1.4	18.6	0.3	1.1	22.3	1.0	690
7T	0.75	7	1.2	0.5	1.5	21.1	0.3	1.2	25.0	1.1	870
10T	0.75	7	1.2	0.5	1.7	25.9	0.3	1.3	30.0	1.2	1,200
12T	0.75	7	1.2	0.5	1.8	27.6	0.3	1.3	31.7	1.3	1,350
14T	0.75	7	1.2	0.5	1.8	28.8	0.3	1.4	33.1	1.3	1,500
15T	0.75	7	1.2	0.5	1.8	29.7	0.3	1.4	34.0	1.3	1,580
19T	0.75	7	1.2	0.5	2.0	33.3	0.4	1.5	38.2	1.4	2,030
20T	0.75	7	1.2	0.5	2.0	33.9	0.4	1.5	38.8	1.5	2,100
24T	0.75	7	1.2	0.5	2.1	37.0	0.4	1.6	42.1	1.6	2,440
27T	0.75	7	1.2	0.5	2.2	40.2	0.4	1.6	45.3	1.7	2,750
30T	0.75	7	1.2	0.5	2.3	41.3	0.4	1.7	46.6	1.7	2,970
33T	0.75	7	1.2	0.5	2.3	43.3	0.4	1.7	48.6	1.8	3,200
37T	0.75	7	1.2	0.5	2.4	45.0	0.4	1.8	50.5	1.8	3,500
48T	0.75	7	1.2	0.5	2.7	52.3	0.4	2.0	58.2	2.0	4,510
1T	1.0	7	1.4	0.5	1.1	9.2	0.2	0.9	12.2	0.7	220
2T	1.0	7	1.4	0.5	1.3	15.0	0.3	1.0	18.5	0.9	470
3T	1.0	7	1.4	0.5	1.3	16.0	0.3	1.0	19.5	0.9	550
4T	1.0	7	1.4	0.5	1.4	17.7	0.3	1.1	21.4	0.9	660
5T	1.0	7	1.4	0.5	1.5	19.8	0.3	1.1	23.5	1.0	790
7T	1.0	7	1.4	0.5	1.6	22.5	0.3	1.2	26.4	1.1	1,000
10T	1.0	7	1.4	0.5	1.8	27.6	0.3	1.3	31.7	1.3	1,380
12T	1.0	7	1.4	0.5	1.8	29.2	0.3	1.4	33.5	1.3	1,560
14T	1.0	7	1.4	0.5	1.9	30.7	0.4	1.4	35.4	1.4	1,820
15T	1.0	7	1.4	0.5	1.9	31.6	0.4	1.4	36.3	1.4	1,910
19T	1.0	7	1.4	0.5	2.0	35.3	0.4	1.5	40.2	1.5	2,320
20T	1.0	7	1.4	0.5	2.1	36.1	0.4	1.5	41.0	1.5	2,420
24T	1.0	7	1.4	0.5	2.2	39.4	0.4	1.6	44.5	1.6	2,830
27T	1.0	7	1.4	0.5	2.3	42.8	0.4	1.7	48.1	1.7	3,210
30T	1.0	7	1.4	0.5	2.4	43.9	0.4	1.7	49.2	1.8	3,430
33T	1.0	7	1.4	0.5	2.4	46.1	0.4	1.8	51.6	1.8	3,740
37T	1.0	7	1.4	0.5	2.5	47.9	0.4	1.8	53.4	1.9	4,070
48T	1.0	7	1.4	0.5	2.8	55.7	0.4	2.0	61.6	2.1	5,240
1T	1.5	7	1.7	0.6	1.1	10.2	0.3	0.9	13.5	0.7	280
2T	1.5	7	1.7	0.6	1.4	17.1	0.3	1.1	20.8	0.9	580
3T	1.5	7	1.7	0.6	1.4	18.2	0.3	1.1	21.9	1.0	680
4T	1.5	7	1.7	0.6	1.5	20.2	0.3	1.1	23.9	1.0	820
5T	1.5	7	1.7	0.6	1.6	22.6	0.3	1.2	26.5	1.1	990
7T	1.5	7	1.7	0.6	1.7	25.7	0.3	1.3	29.8	1.2	1,260
10T	1.5	7	1.7	0.6	1.9	31.6	0.4	1.4	36.3	1.4	1,830
12T	1.5	7	1.7	0.6	2.0	33.6	0.4	1.5	38.5	1.5	2,080
14T	1.5	7	1.7	0.6	2.0	35.1	0.4	1.5	40.0	1.5	2,290
15T	1.5	7	1.7	0.6	2.1	36.4	0.4	1.6	41.5	1.5	2,460
19T	1.5	7	1.7	0.6	2.2	40.6	0.4	1.7	45.9	1.7	2,990
20T	1.5	7	1.7	0.6	2.3	41.5	0.4	1.7	46.8	1.7	3,120
24T	1.5	7	1.7	0.6	2.4	45.3	0.4	1.8	50.8	1.8	3,650
27T	1.5	7	1.7	0.6	2.6	49.4	0.4	1.9	55.1	2.0	4,160
30T	1.5	7	1.7	0.6	2.6	50.5	0.4	1.9	56.2	2.0	4,430
33T	1.5	7	1.7	0.6	2.7	53.2	0.4	2.0	59.1	2.1	4,860
37T	1.5	7	1.7	0.6	2.8	55.2	0.4	2.0	61.1	2.1	5,280
48T	1.5	7	1.7	0.6	3.1	64.2	0.4	2.2	70.5	2.4	6,810

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data



# VFD Cable



## Flame Retardant

H/F TYPE 0.6/1KV FX-PYOY(VFD)	
H/F TYPE 1.8/3KV FX-PYOY(VFD)	60

## Fire Resistance

H/F TYPE 1.8/3KV FX-EYOY(VFD)	61
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# Cable Designation

## H/F TYPE

0.6/1KV FX-PY0Y(VFD)  
1.8/3KV FX-PY0Y(VFD)

# Application Standard

- Design guide : IEC 60092-350 & IEC 60092-376
- Insulation material : IEC 60092-360 EPR
- Sheath material : IEC 60092-360, ST2 or SHF1
- Flame retardant : IEC 60332-1 & IEC 60332-3 Category A
- Fire resistance : IEC 60331-21(90min)  
IEC 60331-1,-2(120min)
- Halogen content : IEC 60754-1, 0.5% ↓ (For Halogen free cable only)
- Smoke emission : IEC 61034, 60% ↑ (For Halogen free cable only)
- Fluorine content : IEC 60684-2, 0.1% ↓ (For Halogen free cable only)
- pH and conductivity : IEC 60754-2, pH (4.3 ↑) & Conductivity (10μs/mm ↓)  
(For Halogen free cable only)
- Cold bend/impact (Option) : CSA C22.2 NO. 2556 or IEC 60092-350 Annex E. Method 1
- Oil resistant (Option) : IEEE 1580 TYPE "T", at 70°Cx4h (For PVC sheath material only)
- Max. rated conductor temperature : 90°C

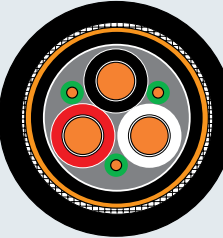
# Core Identification

- Colored insulation plus Arabic number printing on the insulation
- 3 Core : White, Black, Red
- Earth Wire : Green / Yellow stripe

# Construction

Classification	Code	Construction detail
Conductor	FX-	- Stranded tinned annealed copper wires as per IEC 60228, Class 5
Fire resisting layer	E	- Mica/glass tape
Insulation		- EPR as per IEC 60092-360
Cabling		- Insulated conductors shall be cabled - Flame retardant & non-hygroscopic fillers may be used - Suitable tape(s) may be applied on the cabled core - A Filler may be applied to obtain a circular Cable
Screen	VFD	- CU/PS Tape providing 100% coverage
Inner covering or Inner sheath		<b>Inner covering</b> - Flexible compound covering - Applied to Armoured & Sheath cable <b>Inner sheath</b> - Non-H/F type : ST2(Y) as per IEC 60092-350 - H/F type : SHF1(I) as per IEC 60092-350
Armour	0	- Braid of Plain annealed copper wire - Coverage density : Min. 90% - A suitable separator tape(s) may be applied under/over the armour - Applied to Armoured & Sheath cable
Sheath	Y (I)	- Non-H/F type : ST2(Y) as per IEC 60092-360 - H/F type : SHF1(I) as per IEC 60092-360 - Outer sheath color : Black

**Note.** The other color of sheath and insulation may be applicable when purchaser require



FX-EY0Y(VFD) (3C+3E)



## VFD Cable

### 0.6/1KV FX-PYOY(VFD), FX-PIOI(VFD)

No. of Pairs	Conductor			Thickness of Insulation	Thickness of inner sheath	Nominal dia. of inner sheath	Dia. of wire for armour	Thickness of sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Min. No. of wires	Max. dia.						Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	4	0.31	3.0	0.7	1.2	11.4	0.3	0.9	15.1	1.0	5.09	730	3,500	420
3C	6	0.31	3.9	0.7	1.2	12.7	0.3	1.0	16.4	1.1	3.39	620	3,500	510
3C	10	0.41	5.1	0.7	1.3	14.8	0.3	1.0	18.6	1.1	1.95	500	3,500	700

### 1.8/3kV FX-PYOY(VFD), FX-PIOI(VFD)

No. of Core	Conductor			Thickness of Insulation	Thickness of inner sheath	Inner sheath diameter		Diameter of wire for braid armour	Thickness of Outer Sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Max. dia. of wires in conductor	Max. dia.			Nominal	Tolerance			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	10	0.41	5.1	2.0	1.5	21.4	0.9	0.30	1.2	25.6	1.2	1.95	1110	6500	960
3E	4	0.31	3.0	0.7								5.09			
3C	16	0.41	6.3	2.0	1.7	25.1	1.1	0.30	1.3	29.5	1.3	1.24	850	6500	1280
3E	6	0.31	3.9	0.7								3.39			
3C	25	0.41	7.8	2.0	1.8	28.3	1.1	0.30	1.3	32.8	1.4	0.795	720	6500	1660
3E	6	0.31	3.9	0.7								3.39			
3C	35	0.41	9.2	2.0	1.9	31.1	1.2	0.40	1.4	36.2	1.5	0.565	640	6500	2150
3E	6	0.31	3.9	0.7								3.39			
3C	50	0.41	11.0	2.0	2.0	35.1	1.4	0.40	1.5	40.4	1.6	0.393	550	6500	2790
3E	10	0.41	5.1	0.7								1.95			
3C	70	0.51	13.1	2.0	2.2	39.5	1.5	0.40	1.6	45.0	1.8	0.277	470	6500	3600
3E	16	0.41	6.3	0.7								1.24			
3C	95	0.51	15.1	2.0	2.3	43.4	1.6	0.40	1.7	49.1	1.9	0.210	420	6500	4450
3E	16	0.41	6.3	0.7								1.24			
3C	120	0.51	17.0	2.0	2.5	47.6	1.7	0.40	1.8	53.6	2.0	0.164	380	6500	5400
3E	25	0.41	7.8	0.9								0.795			
3C	150	0.51	19.0	2.0	2.7	51.8	1.9	0.40	1.9	58.0	2.1	0.132	340	6500	6500
3E	25	0.41	7.8	0.9								0.795			
3C	185	0.51	21.0	2.0	2.8	55.3	2.0	0.40	2.0	61.6	2.2	0.108	320	6500	7580
3E	35	0.41	9.2	0.9								0.565			
3C	240	0.51	24.0	2.0	3.0	61.6	2.1	0.40	2.2	68.3	2.4	0.0817	280	6500	9590
3E	50	0.41	11.0	1.0								0.393			
3C	300	0.51	27.0	2.0	3.2	67.4	2.3	0.40	2.3	74.3	2.6	0.0654	260	6500	11800
3E	50	0.41	11.0	1.0								0.393			

## 1.8/3kV FX-EYOY(VFD), FX-EIOI(VFD)

No. of Core	Conductor			Thickness of Insulation	Thickness of inner sheath	Inner sheath diameter		Diameter of wire for braid armour	Thickness of Outer Sheath	Overall diameter		Conductor Resistance (at 20°C) (Max.)	Insulation Resistance (at 20°C) (Min.)	Test Voltage	Cable Weight
	Nominal Area	Max. dia. of wires in conductor	Max. dia.			Nominal	Tolerance			Nominal	Tolerance				
No.	mm <sup>2</sup>	EA	mm	mm	mm	mm	mm	mm	mm	mm	±mm	Ω/km	MΩ-km	V/5min.	kg/km
3C	10	0.41	5.1	2.0	1.6	22.7	1.0	0.3	1.2	26.9	1.2	1.95	1050	6500	1040
3E	4	0.31	3.0	0.7								5.09			
3C	16	0.41	6.3	2.0	1.7	25.9	1.1	0.3	1.3	30.3	1.3	1.24	830	6500	1340
3E	6	0.31	3.9	0.7								3.39			
3C	25	0.41	7.8	2.0	1.8	28.8	1.2	0.3	1.4	33.3	1.4	0.795	700	6500	1720
3E	6	0.31	3.9	0.7								3.39			
3C	35	0.41	9.2	2.0	1.9	31.6	1.2	0.4	1.4	36.8	1.5	0.565	620	6500	2230
3E	6	0.31	3.9	0.7								3.39			
3C	50	0.41	11.0	2.0	2.0	35.6	1.4	0.4	1.5	41.0	1.6	0.393	540	6500	2870
3E	10	0.41	5.1	0.7								1.95			
3C	70	0.51	13.1	2.0	2.2	40.0	1.5	0.4	1.7	45.6	1.8	0.277	470	6500	3700
3E	16	0.41	6.3	0.7								1.24			
3C	95	0.51	15.1	2.0	2.4	44.0	1.6	0.4	1.8	49.8	1.9	0.210	420	6500	4560
3E	16	0.41	6.3	0.7								1.24			
3C	120	0.51	17.0	2.0	2.5	48.1	1.7	0.4	1.9	54.1	2.0	0.164	370	6500	5510
3E	25	0.41	7.8	0.9								0.795			
3C	150	0.51	19.0	2.0	2.7	52.3	1.9	0.4	2.0	58.5	2.2	0.132	340	6500	6610
3E	25	0.41	7.8	0.9								0.795			
3C	185	0.51	21.0	2.0	2.8	55.8	2.0	0.4	2.0	62.2	2.3	0.108	320	6500	7720
3E	35	0.41	9.2	0.9								0.565			
3C	240	0.51	24.0	2.0	3.0	62.1	2.2	0.4	2.2	68.8	2.5	0.0817	280	6500	9730
3E	50	0.41	11.0	1.0								0.393			
3C	300	0.51	27.0	2.0	3.2	67.9	2.3	0.4	2.3	74.9	2.6	0.0654	250	6500	11970
3E	50	0.41	11.0	1.0								0.393			

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# Technical Data



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## 1. Electrical data for EPR

Conductor (additional data)			Conductor Resistance 20°C		Test voltage						Insulation Resistance 20°C	
Nominal Section Area	Min.no.of wires	Max. Dia.	-	Pair	12/20kV	8.7/15kV	6/10kV	3.6/6kV	0.6/1kV	250V	0.6/1kV	250V
mm <sup>2</sup>	EA	mm	Ω/km	Ω/km	kV	kV	kV	kV	kV	kV	MΩ • km	MΩ • km
0.75	7	1.2	24.8	26.3	-	-	-	-	-	1.5	-	1.035
1.0	7	1.4	18.2	19.3	-	-	-	-	3.5	1.5	1.160	910
1.5	7	1.7	12.2	12.9	-	-	-	-	3.5	1.5	1.020	910
2.5	7	2.2	7.56	8.02	-	-	-	-	3.5	-	850	-
4	7	2.7	4.70	-	-	-	-	-	3.5	-	710	-
6	7	3.3	3.11	-	-	-	-	-	3.5	-	600	-
10	7	4.2	1.84	-	-	-	-	12.5	3.5	-	485	-
16	7	5.3	1.16	-	-	-	21.0	12.5	3.5	-	400	-
25	7	6.6	0.734	-	-	30.5	21.0	12.5	3.5	-	405	-
35	7	7.9	0.529	-	42.0	30.5	21.0	12.5	3.5	-	350	-
50	19	9.1	0.391	-	42.0	30.5	21.0	12.5	3.5	-	335	-
70	19	11.0	0.270	-	42.0	30.5	21.0	12.5	3.5	-	310	-
95	19	12.9	0.195	-	42.0	30.5	21.0	12.5	3.5	-	270	-
120	37	14.5	0.154	-	42.0	30.5	21.0	12.5	3.5	-	260	-
150	37	16.2	0.126	-	42.0	30.5	21.0	12.5	3.5	-	270	-
185	37	18.0	0.100	-	42.0	30.5	21.0	12.5	3.5	-	280	-
240	61	20.6	0.0762	-	42.0	30.5	21.0	12.5	3.5	-	260	-
300	61	23.1	0.0607	-	42.0	30.5	21.0	12.5	3.5	-	245	-
400	61	26.1	0.0475	-	42.0	30.5	21.0	12.5	3.5	-	240	-
500	61	29.2	0.0369	-	42.0	30.5	21.0	12.5	3.5	-	240	-
630	91	33.2	0.0286	-	-	-	-	-	3.5	-	245	-

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

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VFD Cable

Technical data

# Technical Data

## 2. Technical Data for HIS Inner Covering Cable

### 0.6/1kV EPR insulation flame retardant cable

Nominal Area	Single core cable *)						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C
mm <sup>2</sup>	μF/km	mH/km	Ω/km	mm	mm	mm	μF/km	mH/km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.252	0.516	0.162	0.194	15.6	15.6	0.339	0.326	0.102	0.123	15.6	15.6
2.5	0.293	0.478	0.150	0.180	9.64	9.64	0.382	0.303	0.095	0.114	9.64	9.64
4	0.352	0.450	0.141	0.170	5.99	6.00	0.435	0.283	0.0890	0.107	5.99	5.99
6	0.409	0.419	0.132	0.158	3.97	3.97	0.496	0.270	0.0849	0.102	3.97	3.97
10	0.507	0.387	0.122	0.146	2.35	2.35	0.586	0.254	0.0799	0.096	2.35	2.35
16	0.626	0.363	0.114	0.137	1.48	1.49	0.693	0.242	0.0760	0.0912	1.48	1.48
25	0.621	0.343	0.108	0.129	0.942	0.945	0.695	0.242	0.0761	0.0913	0.939	0.940
35	0.721	0.333	0.105	0.126	0.683	0.686	0.780	0.235	0.0738	0.0885	0.679	0.680
50	0.759	0.319	0.100	0.120	0.509	0.513	0.825	0.233	0.0731	0.0877	0.504	0.506
70	0.841	0.305	0.0959	0.115	0.357	0.363	0.881	0.228	0.0717	0.0860	0.352	0.355
95	0.957	0.294	0.0923	0.111	0.268	0.274	1.002	0.223	0.0702	0.0842	0.261	0.265
120	1.021	0.288	0.0905	0.109	0.218	0.226	1.028	0.221	0.0695	0.0834	0.210	0.215
150	0.966	0.286	0.0900	0.108	0.187	0.196	0.995	0.223	0.0701	0.0841	0.178	0.184
185	0.951	0.280	0.0880	0.106	0.158	0.168	0.992	0.224	0.0703	0.0843	0.149	0.156
240	1.026	0.275	0.0863	0.104	0.133	0.145	1.058	0.221	0.0695	0.0834	0.123	0.131
300	1.091	0.271	0.0852	0.102	0.118	0.131	1.105	0.219	0.0689	0.0826	0.107	0.116

\*) Above data for 1 conductor cables given at Three-foil formation

### 0.6/1kV EPR insulation flame retardant & fire resistance cable

Nominal Area	Single core cable *)						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C
mm <sup>2</sup>	μF/km	mH/km	Ω/km	mm	mm	mm	μF/km	mH/km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.310	0.539	0.169	0.203	15.6	15.6	0.399	0.361	0.114	0.136	15.6	15.6
2.5	0.229	0.500	0.157	0.189	9.64	9.64	0.443	0.334	0.105	0.126	9.64	9.64
4	0.272	0.467	0.147	0.176	5.99	6.00	0.495	0.311	0.0978	0.117	5.99	5.99
6	0.314	0.435	0.137	0.164	3.97	3.97	0.552	0.295	0.0926	0.111	3.97	3.97
10	0.386	0.405	0.127	0.153	2.35	2.35	0.641	0.275	0.0864	0.104	2.35	2.35
16	0.470	0.376	0.118	0.142	1.48	1.49	0.739	0.260	0.0815	0.0979	1.48	1.48
25	0.492	0.358	0.112	0.135	0.943	0.946	0.731	0.256	0.0806	0.0967	0.939	0.941
35	0.567	0.343	0.108	0.129	0.683	0.687	0.816	0.247	0.0777	0.0933	0.679	0.681
50	0.610	0.328	0.103	0.124	0.509	0.514	0.856	0.243	0.0764	0.0917	0.504	0.507
70	0.683	0.315	0.0991	0.119	0.358	0.364	0.913	0.237	0.0746	0.0895	0.352	0.356
95	0.778	0.301	0.0947	0.114	0.268	0.276	1.030	0.231	0.0727	0.0873	0.261	0.266
120	0.837	0.295	0.0927	0.111	0.219	0.227	1.059	0.228	0.0718	0.0861	0.211	0.216
150	0.814	0.293	0.0919	0.110	0.188	0.197	1.021	0.230	0.0721	0.0866	0.179	0.185
185	0.818	0.287	0.0902	0.108	0.159	0.170	1.010	0.229	0.0721	0.0865	0.150	0.157
240	0.887	0.280	0.0879	0.106	0.134	0.146	1.075	0.226	0.0711	0.0853	0.124	0.132
300	0.949	0.276	0.0867	0.104	0.119	0.132	1.122	0.224	0.0703	0.0844	0.108	0.118

\*) Above data for 1 conductor cables given at Three-foil formation

### 3. Technical Data for HIS Inner Sheath Cable

#### 0.6/1kV EPR insulation flame retardant cable

\*) Above data for 1 conductor cables given at Three-foil formation

Nominal Area	Single core cable *)						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C
mm <sup>2</sup>	μF/km	mH/km	Ω/km	mm	mm	mm	μF/km	mH/km	Ω/km	Ω/km	Ω/km	Ω/km
16	0.230	0.493	0.155	0.186	1.49	1.49	0.230	0.387	0.1215	0.1457	1.48	1.49
25	0.263	0.460	0.144	0.173	0.947	0.952	0.263	0.359	0.1128	0.1354	0.943	0.946
35	0.290	0.438	0.138	0.165	0.688	0.694	0.290	0.341	0.1071	0.1285	0.683	0.687
50	0.325	0.415	0.131	0.157	0.515	0.523	0.325	0.324	0.1017	0.1221	0.509	0.513
70	0.367	0.395	0.1240	0.149	0.366	0.375	0.367	0.306	0.0962	0.1154	0.357	0.363
95	0.413	0.375	0.1177	0.141	0.277	0.288	0.413	0.293	0.0920	0.1104	0.267	0.274
120	0.450	0.363	0.1140	0.137	0.229	0.241	0.450	0.283	0.0888	0.1066	0.217	0.225
150	0.487	0.356	0.1117	0.134	0.198	0.212	0.487	0.276	0.0866	0.1039	0.185	0.194
185	0.533	0.343	0.1079	0.129	0.170	0.184	0.533	0.268	0.0842	0.1010	0.156	0.166
240	0.596	0.330	0.1038	0.125	0.145	0.160	0.596	0.259	0.0814	0.0977	0.130	0.141
300	0.652	0.322	0.1010	0.121	0.130	0.146	0.652	0.253	0.0793	0.0952	0.114	0.126

#### 0.6/1kV EPR insulation flame retardant cable

\*) Above data for 1 conductor cables given at Three-foil formation

Nominal Area	Single core cable *)						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C
mm <sup>2</sup>	μF/km	mH/km	Ω/km	mm	mm	mm	μF/km	mH/km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.252	0.532	0.167	0.201	15.6	15.6	0.339	0.326	0.102	0.123	15.6	15.6
2.5	0.293	0.494	0.155	0.186	9.64	9.64	0.382	0.303	0.095	0.114	9.64	9.64
4	0.352	0.459	0.144	0.173	5.99	6.00	0.435	0.283	0.0890	0.107	5.99	5.99
6	0.409	0.429	0.135	0.162	3.97	3.97	0.496	0.270	0.0849	0.102	3.97	3.97
10	0.507	0.395	0.124	0.149	2.35	2.35	0.586	0.254	0.0799	0.096	2.35	2.35
16	0.626	0.373	0.117	0.141	1.48	1.49	0.693	0.242	0.0760	0.0912	1.48	1.48
25	0.621	0.354	0.111	0.133	0.942	0.945	0.695	0.242	0.0761	0.0913	0.939	0.940
35	0.721	0.338	0.106	0.128	0.683	0.686	0.780	0.235	0.0738	0.0885	0.679	0.680
50	0.759	0.328	0.103	0.124	0.509	0.514	0.825	0.233	0.0731	0.0877	0.504	0.506
70	0.841	0.312	0.0982	0.118	0.358	0.364	0.881	0.228	0.0717	0.0860	0.352	0.355
95	0.957	0.302	0.0950	0.114	0.268	0.276	1.002	0.223	0.0702	0.0842	0.261	0.265
120	1.021	0.295	0.0927	0.111	0.219	0.227	1.028	0.221	0.0695	0.0834	0.210	0.215
150	0.966	0.294	0.0924	0.111	0.188	0.198	0.995	0.223	0.0701	0.0841	0.178	0.184
185	0.951	0.287	0.0902	0.108	0.159	0.170	0.992	0.224	0.0703	0.0843	0.149	0.156
240	1.026	0.282	0.0885	0.106	0.134	0.147	1.058	0.221	0.0695	0.0834	0.123	0.131
300	1.091	0.279	0.0878	0.105	0.120	0.134	1.105	0.219	0.0689	0.0826	0.107	0.116

#### 0.6/1kV EPR insulation flame retardant & fire resistance cable

\*) Above data for 1 conductor cables given at Three-foil formation

Nominal Area	Single core cable *)						Multi core cable					
	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C	Capacitance C	Inductance L	Reactance X 50 HZ	Reactance X 60 HZ	Impedance Z at 50HZ 90°C	Impedance Z at 60HZ 90°C
mm <sup>2</sup>	μF/km	mH/km	Ω/km	mm	mm	mm	μF/km	mH/km	Ω/km	Ω/km	Ω/km	Ω/km
1.5	0.252	0.532	0.167	0.201	15.6	15.6	0.339	0.326	0.102	0.123	15.6	15.6
2.5	0.293	0.494	0.155	0.186	9.64	9.64	0.382	0.303	0.095	0.114	9.64	9.64
4	0.352	0.459	0.144	0.173	5.99	6.00	0.435	0.283	0.0890	0.107	5.99	5.99
6	0.409	0.429	0.135	0.162	3.97	3.97	0.496	0.270	0.0849	0.102	3.97	3.97
10	0.507	0.395	0.124	0.149	2.35	2.35	0.586	0.254	0.0799	0.096	2.35	2.35
16	0.626	0.373	0.117	0.141	1.48	1.49	0.693	0.242	0.0760	0.0912	1.48	1.48
25	0.621	0.354	0.111	0.133	0.942	0.945	0.695	0.242	0.0761	0.0913	0.939	0.940
35	0.721	0.338	0.106	0.128	0.683	0.686	0.780	0.235	0.0738	0.0885	0.679	0.680
50	0.759	0.328	0.103	0.124	0.509	0.514	0.825	0.233	0.0731	0.0877	0.504	0.506
70	0.841	0.312	0.0982	0.118	0.358	0.364	0.881	0.228	0.0717	0.0860	0.352	0.355
95	0.957	0.302	0.0950	0.114	0.268	0.276	1.002	0.223	0.0702	0.0842	0.261	0.265
120	1.021	0.295	0.0927	0.111	0.219	0.227	1.028	0.221	0.0695	0.0834	0.210	0.215
150	0.966	0.294	0.0924	0.111	0.188	0.198	0.995	0.223	0.0701	0.0841	0.178	0.184
185	0.951	0.287	0.0902	0.108	0.159	0.170	0.992	0.224	0.0703	0.0843	0.149	0.156
240	1.026	0.282	0.0885	0.106	0.134	0.147	1.058	0.221	0.0695	0.0834	0.123	0.131
300	1.091	0.279	0.0878	0.105	0.120	0.134	1.105	0.219	0.0689	0.0826	0.107	0.116



## Technical Data

### 4. Current ratings for continuous (Inner Covering Cable)

#### 6/10kV EPR insulation flame retardant cable

Nominal cross-sectional Area mm <sup>2</sup>	Single core cable			Three core		
	Continuous	Short time		Continuous	Short time	
		30min	1hour		30min	1hour
16	96	111	103	67	98	80
25	127	149	136	89	134	109
35	157	187	170	110	171	138
50	196	238	213	137	219	175
70	242	301	266	169	282	223
95	293	373	326	205	356	279
120	339	441	381	237	426	331
150	389	519	443	273	505	391
185	444	606	512	311	595	457
240	522	735	613	366	736	561
300	601	872	719	420	879	665

#### 0.6/1kV EPR insulation flame retardant cable

Nominal cross-sectional Area mm <sup>2</sup>	Single core cable			Two core			Three core & four core		
	Continuous	Short time		Continuous	Short time		Continuous	Short time	
		30min	1hour		30min	1hour		30min	1hour
1.5	23	24	24	20	21	21	16	17	16
2.5	30	31	31	26	27	27	21	22	22
4	40	42	42	34	36	35	28	30	29
6	52	55	55	44	47	46	36	39	38
10	72	76	76	61	67	64	50	55	53
16	96	102	101	82	91	87	67	75	71
25	127	136	134	108	125	115	89	104	95
35	157	169	166	133	159	144	110	134	120
50	196	214	207	167	207	183	137	173	152
70	242	269	257	206	269	232	169	226	193
95	293	332	312	249	341	288	205	289	241
120	339	393	363	288	412	342	237	350	287
150	389	462	420	331	497	405	273	423	341
185	444	540	484	377	593	476	311	507	403
240	522	659	578	444	742	587	366	633	496
300	601	785	677	511	897	701	420	764	592

#### 0.6/1kV EPR insulation flame retardant & fire resistance cable

Nominal cross-sectional Area mm <sup>2</sup>	Single core cable			Two core			Three core & four core		
	Continuous	Short time		Continuous	Short time		Continuous	Short time	
		30min	1hour		30min	1hour		30min	1hour
1.5	23	24	24	20	21	21	16	17	16
2.5	30	31	31	26	28	27	21	22	22
4	40	42	42	34	36	36	28	30	29
6	52	55	55	44	48	46	36	39	38
10	72	76	76	61	67	64	50	56	53
16	96	102	101	82	93	87	67	77	71
25	127	137	134	108	127	116	89	107	96
35	157	170	166	133	162	145	110	137	121
50	196	216	208	167	211	185	137	178	154
70	242	272	257	206	274	234	169	232	195
95	293	335	313	249	348	291	205	295	244
120	339	396	364	288	421	347	237	357	291
150	389	466	422	331	505	410	273	430	346
185	444	546	486	377	603	482	311	515	408
240	522	665	581	444	753	593	366	643	503
300	601	792	680	511	909	708	420	775	600

## 5. Current ratings for continuous (Inner Sheath Cable)

### 0.6/1kV EPR insulation flame retardant & fire resistance cable

Nominal cross-sectional Area mm <sup>2</sup>	Single core cable			Three core		
	Continuous	Short time		Continuous	Short time	
		30min	1hour		30min	1hour
16	96	111	103	67	98	80
25	127	149	136	89	134	109
35	157	187	170	110	171	138
50	196	238	213	137	219	175
70	242	301	266	169	282	223
95	293	373	326	205	356	279
120	339	441	381	237	426	331
150	389	519	443	273	505	391
185	444	606	512	311	595	457
240	522	735	613	366	736	561
300	601	872	719	420	879	665

### 0.6/1kV EPR insulation flame retardant cable

Nominal cross-sectional Area mm <sup>2</sup>	Single core cable			Two core			Three core & four core		
	Continuous	Short time		Continuous	Short time		Continuous	Short time	
		30min	1hour		30min	1hour		30min	1hour
1.5	23	24	24	20	21	21	16	17	16
2.5	30	31	31	26	27	27	21	22	22
4	40	42	42	34	36	35	28	30	29
6	52	55	55	44	47	46	36	39	38
10	72	76	76	61	67	64	50	55	53
16	96	102	101	82	92	87	67	76	71
25	127	136	134	108	126	116	89	105	96
35	157	170	166	133	160	144	110	134	120
50	196	216	208	167	209	184	137	175	152
70	242	271	257	206	271	233	169	228	194
95	293	335	313	249	345	290	205	292	243
120	339	396	364	288	416	344	237	353	288
150	389	467	422	331	501	407	273	427	343
185	444	546	486	377	599	480	311	511	406
240	522	667	582	444	748	590	366	639	500
300	601	798	683	511	904	705	420	771	597

### 0.6/1kV EPR insulation flame retardant & fire resistance cable

Nominal cross-sectional Area mm <sup>2</sup>	Single core cable			Two core			Three core & four core		
	Continuous	Short time		Continuous	Short time		Continuous	Short time	
		30min	1hour		30min	1hour		30min	1hour
1.5	23	24	24	20	21	21	16	17	16
2.5	30	31	31	26	27	27	21	22	22
4	40	42	42	34	36	36	28	30	29
6	52	55	55	44	48	46	36	39	38
10	72	76	76	61	67	64	50	56	53
16	96	102	101	82	93	87	67	77	71
25	127	137	134	108	128	116	89	107	96
35	157	171	166	133	162	145	110	136	121
50	196	216	208	167	211	185	137	178	154
70	242	272	257	206	276	235	169	232	196
95	293	337	313	249	349	292	205	296	244
120	339	398	365	288	421	346	237	357	291
150	389	469	423	331	506	410	273	431	346
185	444	552	488	377	605	483	311	516	409
240	522	671	583	444	755	594	366	646	504
300	601	802	685	511	911	710	420	778	601

## Technical Data

### NOTES)

1. Maximum permissible service temperature of the conductor is 90°C.
2. The current ratings given above are based on an ambient air temperature of 45°C.
3. The current ratings given above are for 6 cables of less bunched or laid together in flat formation.  
When more than 6 cables are bunched or laid close together, the current ratings given above should be multiplied correction factor 0.85.  
In case of cables not being loaded simultaneously, consideration of the actual loading appertaining is permitted.
4. For cables with more than 4 core cables, the current ratings are given by the Formula ;

$$I = \frac{I_1}{\sqrt[3]{N}}$$

Where,

**I<sub>1</sub> : Current for single core cable**

**N : Number of cores**

No. of cores	1,0 mm <sup>2</sup> (A)	1,5 mm <sup>2</sup> (A)	2,5 mm <sup>2</sup> (A)
5	11	13	18
7	9	12	16
9	9	11	14
12	8	10	13
14	7	10	12
16	7	9	12
19	7	9	11
24	6	8	10
30	6	7	10
37	5	7	9
44	5	7	8

### 5. Correction factors for various ambient air temperature

Maximum conductor Temperature	Correction for various ambient air temperature									
°C	35	40	45	50	55	60	65	70	75	80
90	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

## 6. Short Circuit Current Ratings

The short circuit currents quoted here are for cables operating normally at maximum conductor temperature of 90°C  
EPR insulation is actually capable of withstanding short-term temperature up to 250°C

Nominal Sectional Area	Short circuit currents(kA)													
	Duration of short circuit in second													
	0.03	0.05	0.07	0.1	0.14	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
1.5	1.3	1.0	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2
2.5	2.0	1.6	1.3	1.1	0.9	0.8	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.3
4	3.2	2.5	2.1	1.8	1.5	1.3	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6
6	4.9	3.8	3.2	2.7	2.3	1.9	1.5	1.3	1.2	1.1	1.0	0.9	0.9	0.8
10	8.2	6.3	5.4	4.5	3.8	3.2	2.6	2.2	2.0	1.8	1.7	1.6	1.5	1.4
16	13.0	10.1	8.5	7.1	6.0	5.0	4.1	3.6	3.2	2.9	2.7	2.5	2.4	2.2
25	20.6	15.9	13.5	11.3	9.5	8.0	6.5	5.6	5.0	4.6	4.3	4.0	3.8	3.6
35	28.5	22.1	18.7	15.6	13.2	11.1	9.0	7.8	7.0	6.4	5.9	5.5	5.2	4.9
50	38.6	29.9	25.3	21.2	17.9	15.0	12.2	10.6	9.5	8.6	8.0	7.5	7.1	6.7
70	55.9	43.3	36.6	30.6	25.9	21.6	17.7	15.3	13.7	12.5	11.6	10.8	10.2	9.7
95	77.5	60.0	50.7	42.4	35.9	30.0	24.5	21.2	19.0	17.3	16.0	15.0	14.1	13.4
120	97.9	75.8	64.1	53.6	45.3	37.9	31.0	26.8	24.0	21.9	20.3	19.0	17.9	17.0
150	120.3	93.1	78.7	65.9	55.7	46.6	38.0	32.9	29.5	26.9	24.9	23.3	22.0	20.8
185	150.8	116.8	98.8	82.6	69.8	58.4	47.7	41.3	36.9	33.7	31.2	29.2	27.5	26.1
240	198.3	153.6	129.8	108.6	91.8	76.8	62.7	54.3	48.6	44.3	41.0	38.4	36.2	34.3
300	248.7	192.6	162.8	136.2	115.1	96.3	78.6	68.1	60.9	55.6	51.5	48.2	45.4	43.1
400	329.3	255.1	215.6	180.4	152.5	127.6	104.1	90.2	80.7	73.6	68.2	63.8	60.1	57.0
500	401.0	310.6	262.5	219.6	185.6	155.3	126.8	109.8	98.2	89.7	83.0	77.7	73.2	69.5

High Voltage Power Cable

Power &amp; Lighting Cable

Control Cable

Instrumentation Cable

VFD Cable

Technical data

# Technical Data

## VOLTAGE RATING SELECTION

### Selection cable for A.C systems

Supply system	Supply category	System voltage (kV)					Recommended (kV)	
		Phase to earth (U <sub>0</sub> )		Phase to phase (U)		Maximum sustained voltage (U <sub>m</sub> )	IEC standard	BS standards
		Above	Up to and including	Above	Up to and including		U <sub>0</sub> / U	U <sub>0</sub> / U
3-Phase 4-Wire	A & B	-	0.15	-	0.25	0.28	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	0.25	1	1.2	0.6 / 1	0.6 / 1
3-Phase 4-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
3-Phase 3-Wire	A & B	-	0.15	-	0.25	0.28	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	0.25	1	1.2	0.6 / 1	0.6 / 1
		0.6	1.9	-	3.3	3.6	1.8 / 3	1.9 / 3.3
		1.9	3.8	3.3	6.6	7.2	3.6 / 6	3.8 / 6.6
		3.8	6.35	6.6	11	12	6 / 10	6.35 / 11
		6.35	8.7	11	15	17	8.7 / 15	-
		8.7	12.7	15	22	24	12 / 20	12.7 / 22
3-Phase 3-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
		-	-	0.6	1.9	-	1.8 / 3	1.9 / 3.3
		-	-	1.9	3.3	3.6	3.6 / 6	3.8 / 6.6
		-	-	3.3	6.6	7.2	6 / 10	6.35 / 11
		-	-	6.6	11	12	8.7 / 15	11 / 11
		-	-	11	15	17.5	12 / 20	12.7 / 22
2-Phase 3-Wire or 2-Phase 4-Wire	A & B	-	0.15	-	0.21	-	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	-	0.84	-	0.6 / 1	0.6 / 1
2-Phase 3-Wire or 2-Phase 4-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
		-	-	0.6	1.9	-	1.8 / 3	1.9 / 3.3
1-Phase 3-Wire	A & B	-	0.15	-	0.25	0.28	0.15 / 0.25	0.15 / 0.25
		0.15	0.6	0.25	1	1.2	0.6 / 1	0.6 / 1
1-Phase 3-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.25	0.6	-	0.6 / 1	0.6 / 1
1-Phase 2-Wire or 1-Phase 1-Wire	C	-	-	-	0.15	-	0.15 / 0.25	0.15 / 0.25
		-	-	0.15	0.6	-	0.6 / 1	0.6 / 1
		-	-	0.6	1.9	-	1.8 / 3	1.9 / 3.3
		-	-	1.9	3.3	3.6	3.6 / 6	3.8 / 6.6
		-	-	3.3	6.6	7.2	6 / 10	6.35 / 11
		-	-	6.6	11	12	8.7 / 15	-
		-	-	11	15	17.5	12 / 20	12.7 / 22

**Note)** The rated voltage of the cable for a given application shall be suitable for the operating condition in the system in which the cable is used. To facilitate the choice of the cable, the system are divided into the following three categories

Category A : This category comprises those systems in which any phase conductor than comes in contact with earth or an earth conductor , is automatically disconnected from the system within 1 minute.

Category B : This category comprises those systems in which, under fault conditions, are operated for a short time, not exceeding 8 hours on any occasion, faults in any year should not exceed 125 hours.

Category C : This category comprises all systems which do not fall into categories A and B.

## TEST METHODS & TEST EQUIPMENT

### 1. Flame retardant test



IEC 60332-3. CAT. A (VTFT)

### 2. Fire resistant test



IEC 60331 (at 750°C, 1000°C)

### 3. Cold test (Bending / Impact)



CSA C22.2 No.03 (-40°C/ -35°C)

### 4. Halogen content test



IEC 60754-1,2 Test

### 5. Smoke emission test



IEC 61034-1,2 Test

### 6. Oxygen index test



ASTM D 2863



## Technical Data

### INSTALLATION RECOMMENDATIONS

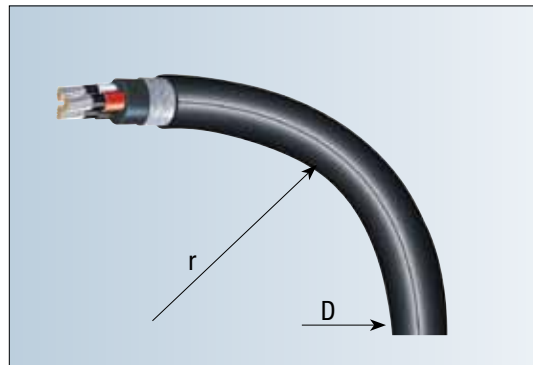
The following installation recommendations are in accordance with IEC regulation and practice. Different regulations may apply in other countries.

#### 1. Minimum cable bending radius

The bending radius for the installation of cables should be not less than the values given as follows;

Type of cable		Minimum bending radius
Unarmored or unbraided		
Up to 1.8/3kV	$D \leq 25\text{mm}$	4 X D
	$D > 25\text{mm}$	6 X D
	Metal braid screened or armored	6 X D
	Tape screened	8 X D
3.6/6kV above	Single core	12 X D
	3-core	9 X D

Notes) D : Overall diameter of cable



#### 2. Installation temperature

Minimum recommended installation temperature for cables shall be  $-20^{\circ}\text{C}$ .

But, if the ambient temperature were below  $-20^{\circ}\text{C}$ , the cable should be installed after maintained at room temperature (about  $15\sim 25^{\circ}\text{C}$ ) for 24 hours or more.

#### 3. Pulling tension

The cable pulling tension during installation can be estimated by means of the following formula:

$p = 5\text{kg} \times \text{total cross section of conductors in the armoured cable or,}$   
 $p = 2.5\text{kg} \times \text{total cross section of conductors in the unarmoured cable}$

Additional tension will be supplied from the braid and the insulation and sheathing compound.

#### 4. Explosion risk areas

##### 1) Areas

The areas on board are usually classified in two main categories with regards to the explosion risk :

- ▶ Hazardous areas : Areas in which explosive gas-air mixtures are, or may be expected to be, present in quantities such as to require special precautions for the construction and use of electrical apparatus.
- ▶ Safe areas(non-hazardous areas) : Areas in which explosive gas-air mixtures are not expected to be, present in quantities such as to required special precautions for the construction and use of electrical apparatus.

A hazardous area is divided into three zones :

- ▶ Zone 0 : in which an explosive gas-air mixture is continuously present or present for long periods.
- ▶ Zone 1 : in which an explosive gas-air mixture is likely to occur in normal operation.
- ▶ Zone 2 : in which an explosive gas-air mixture is not likely to occur, and if occurs it will only exist for a short time.

## 2) Installation of cables

- ▶ For cables to be used in zone 0 and zone 1, one of the following types of protection is required:
  - A non-metallic outer sheath in combination with braiding or other metallic covering for earth fault detection and mechanical protection. A non-metallic outer sheath is, however, not required if the screen or armouring consists of a corrosion resistant bronze alloy.
  - A lead sheathing in addition to further mechanical protection, for example armour braiding or non-metallic impervious sheath.
  - For mineral insulated cables, a copper or stainless steel sheath.
  - Single core cables in installations with A.C or D.C. current with a high ripple content should be of types without screen or armouring. where mechanical damage is possible, such cables should otherwise be mechanically protected or installed in ducts or similar.
- ▶ For installations in zone 2, cables without screen or armour can be used.

## 5. Earthing of metal coverings of cables

### 1) General requirements

All metal coverings of cables, armouring or shielding shall be earthed. Earthing must be provided at both ends except for final sub-circuits where earthing at only one end(the supply end) is sufficient. Earthing at one end is permitted where it is required for technical or safety reasons, control and instrumentation cables, mineral insulated cables, intrinsically safe circuits, control circuits etc.

Metal covering of single core cable for AC and single core cable for DC with ripple content exceeding 10% and having a current rating exceeding 20A is to be earthed at one and only. when single core cables for AC and DC with ripple content higher than 10% are installed in or passing through hazardous areas, the metal screen or armour is to be earthed inside the hazardous area to avoid dangerous potential between screen armour and earthed part of the installation.

### 2) Cross section of earth connections

Earth connections for metal coverings shall be carried out with conductors having cross sectional areas related to the cross sectional areas of the phase conductors and the current ratings of the cables, or at least the same cross sectional areas as the metal covering itself.

### 3) Earthing through metal clamps etc.

Metal coverings of cables may be earthed through clamps. The clamps must grip the metal covering of the cable and must be connected to the hull and provide a good conductive connection between the metal covering and the hull. The metal clamps must be corrosion resistant.

### 4) Earthing through cable glands

The metal coverings of cables may be earthed by means of glands intended for the purpose and so designed as to ensure an effective earth connection. The glands shall be firmly attached to, and in effective electrical contact with, a metal structure earthed in accordance with these regulations.

## Technical Data

### 5) Earthing of metal pipes, conduits etc.

Metal pipes and cable conduits are to be earthed. Pipes and conduits may be earthed by being screwed into a metal enclosure, or by nuts in both sides of the wall of metallic enclosure, provided that the surface is clean and free from rust, scale or print.

Comments : For intrinsically safe circuits it is important to separate the earth conductor from the protective earthing. The resistance between a zener barrier earth and protective earth must be max.

1ohm and preferably less than. 0.1ohm to avoid that possible fault current does not lead to a potential increase in the system.

## 6. Fixing of cables

Cables are to be suitably fixed to the supports. In order to guard against the effects of electrodynamic forces developing on the occurrence of a short circuit, single core cables should be firmly fixed by using supports of a strength adequate to withstand forces corresponding to the values of prospective short circuit current.

The requirement concerning fixing can normally be fulfilled when the cables are clamped as follows:

- For cables entering enclosures and conduits the nearest clamp is to be placed at a minimum distance from the entry of 10 times the diameter the cable concerned from the entry.
- At other points the distance between the clamps must not exceed the in the following table:

External diameter of cable (mm)		Spacing of fixing points (mm)	
Above	Up to	Cables without Metal braid or armor	Cables with copper, bronze or steel braid or armor
-	8	200	250
8	13	250	300
12	20	300	350
20	30	350	400
30	-	400	450

## 7. Mechanical protection of cables

Cables are to be installed in such a way that they are not subject to damaging mechanical stressed. where this can not be obtained the cables are to be protected. Unless the cable itself(for example armour or sheath) provides adequate protection the cables should be :

- Enclosed in suitable conduits or casings
- Covered by steel pipes or profiles
- Steel pipes in which the cables are run

in areas where there is an exceptional risk of mechanical damage, for example in cargo hold area or different storage areas, the cables always have to be protected, even when the cables are armoured.

The thickness of the protective conduits must be at least 4mm.

The wall thickness of the protective conduit must be at least 2mm.

Cables lay on aluminum supports may have a corresponding protection of aluminum.

the thickness must be at least 4mm.

Metal casing used for mechanical protection of cables should be efficiently protected against corrosion.

## 8. Installation of cables for fire properties

Cables must at least meet the flame retardant requirements. On board passenger ships, cargo-ships and mobile offshore units, where requirements are considered to be satisfied if the cables have characteristics complying with the cable bunch test IEC-Publication 60332-3, or fire stops are installed in accordance with the following recommendations: When cable complying with single-cable test, but not the cable-bunch-test, are installed, fire stops are to be provided in enclosed or semi-enclosed spaces except for cargo rooms and tunnels in cargo areas.

### a) For vertical cable runs

- With a max. distance between fire stops of two decks or 6 meters, unless installed in totally enclosed cable ducts
- At the main and emergency switchboard
- Where cables enter into an engine control room
- At centralized control panels for propulsion machinery and essential auxiliaries
- At the entrance to cables ducts

### b) For horizontal cable runs

- Fire stops shall be as specified in item a) above but the maximum distance between fire stops may be increased to 14m.

When choosing cable types special attention should be paid to reduce possible damage due to corrosion in case of a fire. Non-halogen free cables(materials) will give off corrosive gases during a fire.

The corrosion effect depends on the amount of halogens in the materials used.

Flame retardant cables are to give characteristics complying with the test requirements in IEC-Publication 60332-1, with amendments.

Fire resistant cables are to give characteristics complying with the requirements in IEC-Publication 60331.

## 9. Intrinsically safe installations

Cables and flexible cables for intrinsically safe circuits must have screen or similar of a conducting material and the outer sheath must be of an insulating material. A non-metallic outer sheath is, however, not required if the screen or armour consists of a corrosion resistant bronze alloy. Where there is no danger of interference from the external electrical or magnetic fields, short flexible cables may be used without screen.

### a) Associated equipment

Associated equipment(e.g.power supply units) shall be situated in a safe area or has protection as mentioned in "Explosion risk areas."

### b) Connection of equipment

Within limitations laid down in 3., ordinary non-explosion protected equipment may be connected to intrinsically safe equipment, provided that it is designed to meet regulations in other respects.

### c) Compliance with any limitations in the certificate

With intrinsically safe circuits special considerations must be given to ensure that the circuits characteristics (including connected equipment, cables, conductors etc.) satisfy any limitations in the test certificate.

Such limitations may be maximum values for capacitance and inductance etc. It is pointed out there is a danger of damage to i.s equipment when using normal equipment for insulation testing

### d) Adjacent location

Conductors for i.s safe circuits and conductors for non-i.s safe circuits shall not be run together in the same cable, flexible cable, conduit, cables bunch etc.

### e) Protection against electrical and magnetic fields

Where i.s circuits are exposed to magnetic or electrical field that may destroy the intrinsic safety of the system.

Precautions must be taken during installation. Such precautions may be:

- Cables for i.s circuits and non-i.s circuits to be installed a minimum distance of 50mm apart.
- The minimum distance to heavy current cables using D.C with a high ripple content should be 300mm.
- Cables for i.s circuits and non-i.s circuits to be separated panel of conducting material which is earthed.
- Cables for i.s circuits to have effective transposition.

### f) Marking

The marking may be a marking plate or by colour marking of the cables when using colour marking, the colour should be light blue.

## Handling, Installation Method & Notice

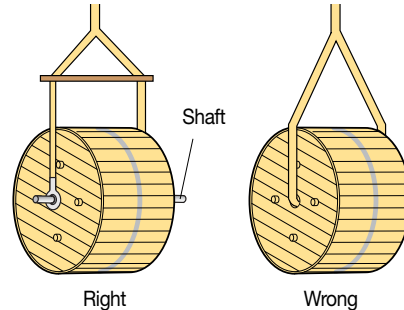
### ■ Loading & Transportation

#### 1. In case of a crane

Should transport by using standard rope and a shaft which is put in the center of drum.

\* Matters that requires attention

- Placing it even with the ground.
- Should move slowly and when it placedown, don't do sudden stop.

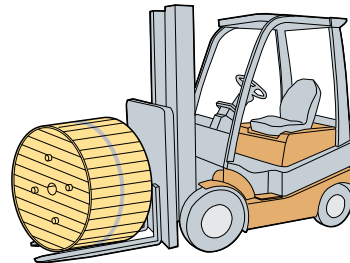


#### 2. In case of a forklift

Drums should not be damaged by a forklift.

\* Matters that requires attention:

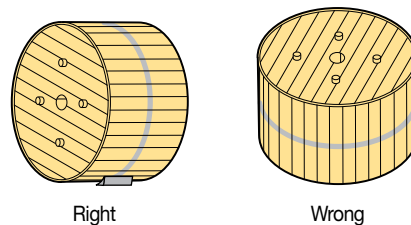
- Place the drum on the center of a fork.
- The width of a fork should be longer than drum size.



### ■ Transportation and Unloading

\* Matters that requires attention while handling cables.

- Don't lie drums down.
- Don't move it 20m longer when rolling it.
- Don't use gimlets or something like sharp when moving.
- Don't roll a damaged drum.
- Don't roll at projecting surface.
- Don't store drum near to stove and heater.



## Check point while handling cables(Storage)

### ■ Storage

- Don't leave the protecting packing materials and outside package until remove it for setting up cables.
- Should construct a fence to protect against damages by moving machines.
- Keep it inside or in depository when safekeeping in long term.  
(For reference, drums and packages can stand against dry whether outside the house)
- Must seal both sides of cables remaining in the drums the cap and heat-contracting tube so that moisture doesn't soak in after finishing the removal of exterior packing materials and cutting and installing cables.

# Certificates Approved

## HIS CABLE

IEC 60092-350, 353, 354, 376



Cert. of ISO 9001



Cert. of ISO 14001



Cert. of OHSAS 18001

High Voltage Power Cable

Power & Lighting Cable

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[www.tmc-cable.com](http://www.tmc-cable.com)

**Head Office / Ipjang Factory**

#368-7, gasan-ri, Ipjang-Myeon, Cheonan-si, Chungnam, Korea  
Tel. +82-41-589-6500 Fax. +82-41-589-6400

**Bukmyeon Factory**

#330-852, Maesong-ri, Buk-Myeon, Cheonan-si, Chungnam, Korea  
Tel. +82-41-554-0630 Fax. +82-41-553-7166

**Seoul Office**

#100-704, 13F Danam Building, Namdaemunno 5-ga, Jung-gu, Seoul, Korea  
Tel. +82-2-771-3434 Fax. +82-2-771-3003

**Geoje Office**

KHAN Building 1F, 915 Aju-dong, Geoje-si, Gyeongsangnam-do, Korea  
Tel. +82-55-688-5261 Fax. +82-55-688-5262

**Dalian Office(China)**

Changjiang Office Building No.123 Changjiang Road, Zhongshan District 939/940 Room Dalian, China.  
Tel. +86-411-8252-9669, 9769 Fax. +86-411-8269-8316