EN 50288-7 Hypron® XLPE Insulation IOS Armoured Fire Retardant

- Instrumentation cables 170/300 V
- Individual & Overall Screen (IOS)
- Lead free
- **Aliphatic and aromatic hydrocarbons resistant**

STANDARDS

Test IEC 60332-3-22 Cat.A

APPLICATIONS

These instrumentation and communication cable are used to **transmit analogue or digital signals in measurement and process control in moist areas and where aliphatic and aromatic hydrocarbons may be present**. They are well adapted to **underground use in industrial applications where chemical and mechanical protections are needed (refinery areas, chemical plant...). The individual screening of each pair limits the consequence of crosstalk. Hypron® offers an alternative to conventional lead sheathed cable and is an environmental friendly solution.**

Design

Conductor:

Stranded bare copper class 2

Insulation:

Cross-linked polyethylene (XLPE)

Individual screen:

Binder tape

Tinned copper drain wire

Aluminium/polyester tape

Binder tape

Binder tape:

Bedding:

Inner sheath:

Polyvinyl chloride (PVC)

Colour: black.

Overall screen/sealing barrier:

Tinned copper drain wire

Aluminium backed polyethylene tape

Bedding:

High density polyethylene (PE)

Colour: black.

Special sheath(intermediate sheath):

Polyamide

Armour:

Galvanized steel wires (SWA)

Outer sheath:

Lead free
Yes

Rated Voltage Uo/U (Um)
170/300V

Mechanical resistance to impacts
Good

Fire retardant
EN IEC 60332-3-22 (cat A)

Chemical resistance
Aliphatic and aromatic hydrocarbons resistant

Electro magnetic interference resistance
Yes

Operating temp.
-20 ... 60 °C

Max.conductor temp.in service
90 °C

CONTACT

Market information
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EN 50288-7 Hypron® XLPE Insulation IOS Armoured Fire Retardant

CHARACTERISTICS

Construction characteristics	
Conductor material	Bare copper
Type of conductor	Stranded, class 2
Insulation	XLPE (Cross-linked Polyethylene)
Individual screen	Tinned copper drain wire + aluminium/polyester tape
Inner sheath	PVC
Overall screen	Tinned copper drain wire + aluminium/polyethylene tape
Material of bedding	High-density polyethylene (PE)
Intermediate sheath	Polyamide
Armour type	Galvanized steel wires
Outer sheath	PVC
Lead free	Yes
Protection	Yes
Electrical characteristics	
Rated Voltage Uo/U (Um)	170/300V
Mechanical characteristics	
Mechanical resistance to impacts	Good
Usage characteristics	
Fire retardant	EN IEC 60332-3-22 (cat A)
Chemical resistance	Aliphatic and aromatic hydrocarbons resistant
Electro magnetic interference resistance	Yes
Operating temperature, range	-20 ... 60 °C
Max. conductor temperature in service	90 °C
Standard	EN

SECTION 0.5MM²

Reference	nb pairs	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over inner sheath [mm]	Diam. intermediate sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	2	0.9	1.38	7.9	11.3	13.1	18.5	20.4	527
10187587	5	0.9	1.38	10.1	13.5	15.3	20.7	22.8	675
10164900	10	0.9	1.38	13	16.6	18.4	23.7	26.1	861
	20	0.9	1.38	16.9	20.6	23.1	28.2	31.1	1381
	30	0.9	1.38	20.1	23.8	26.3	31.3	34.6	1717

Lead free
Yes


Rated Voltage Uo/U (Um)
170/300V


Mechanical resistance to impacts
Good


Fire retardant
EN IEC 60332-3-22 (cat A)


Chemical resistance
Aliphatic and aromatic hydrocarbons resistant


Electro magnetic interference resistance
Yes


Operating temp.
-20 ... 60 °C


Max.conductor temp.in service
90 °C

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SECTION 0.75MM²

Reference	nb pairs	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over inner sheath [mm]	Diam. intermediate sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	2	1.1	1.58	8.6	12	13.8	19.2	21.2	574
10187835	5	1.1	1.58	11.1	14.5	16.3	21.6	23.9	752
10187838	10	1.1	1.58	14.5	18.1	20.6	25.8	28.5	1148
	20	1.1	1.58	18.8	22.5	25.0	30.1	33.2	1601
	30	1.1	1.58	22.5	26.2	28.7	33.7	37.1	2017

SECTION 1.0MM²

Reference	nb pairs	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over inner sheath [mm]	Diam. intermediate sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	2	1.28	1.76	9.3	12.7	14.5	19.9	21.9	612
10187844	5	1.28	1.76	12	15.4	17.2	22.5	24.8	812
10187847	10	1.28	1.76	15.7	19.2	21.7	26.9	29.6	1256
	20	1.28	1.76	20.5	24.2	26.7	31.7	35.0	1781
	30	1.28	1.76	24.6	28.3	30.8	35.7	39.4	2275

SECTION 1.5MM²

Reference	nb pairs	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over inner sheath [mm]	Diam. intermediate sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
	2	1.5	2.16	10.7	14.1	15.9	21.2	23.4	695
10187852	5	1.5	2.16	14	17.3	19.8	25.0	27.6	1078
10187855	10	1.5	2.16	18.5	22	24.5	29.6	32.6	1520
	20	1.5	2.16	24.3	28	30.5	35.4	39.1	2406
	30	1.5	2.16	29.2	32.9	36.1	40.8	45.0	3128

Lead free
Yes


Rated Voltage Uo/U (Um)
170/300V


Mechanical resistance to impacts
Good


Fire retardant
EN IEC 60332-3-22 (cat A)


Chemical resistance
Aliphatic and aromatic hydrocarbons resistant


Electro magnetic interference resistance
Yes


Operating temp.
-20 ... 60 °C


Max.conductor temp.in service
90 °C

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SECTION 2.5MM²

Reference	nb pairs	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over inner sheath [mm]	Diam. intermediate sheath [mm]	Diam. over armour [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
10187860	2	1.91	2.57	12.2	15.6	17.4	22.7	25.0	803
10187863	5	1.91	2.57	16.1	19.4	21.9	27.1	29.9	1277
10187867	10	1.91	2.57	21.4	25	27.5	32.5	35.8	1850
10187873	20	1.91	2.57	28.2	31.9	35.1	39.9	44.0	2993
	30	1.91	2.57	34	37.7	40.9	45.5	50.2	3926

SELLING AND DELIVERY INFORMATION

Other fire performances IEC 60332-1 or IEC 60332-3-24(C) on request.

Minimum bending radius:

15 x outer diameter
To be doubled during laying operations

Tinned copper conductors available on request

Lead free
Yes


Rated Voltage Uo/U (Um)
170/300V


Mechanical resistance to impacts
Good


Fire retardant
EN IEC 60332-3-22 (cat A)


Chemical resistance
Aliphatic and aromatic hydrocarbons resistant


Electro magnetic interference resistance
Yes


Operating temp.
-20 ... 60 °C


Max.conductor temp.in service
90 °C