



CONTACT

Market information
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- Instrumentation cables 170/300 V
- Overall Screen (OS)
- Lead free
- Aliphatic and aromatic hydrocarbons resistant

STANDARDS

Test IEC 60332-3-22 Cat.A

APPLICATIONS

These instrumentation and communication cables 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...).** 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)

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



Lead free
Yes



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



Armour:
Galvanized steel wires (SWA)



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

Colour: black

Other colour on request

Core identification

Pair: white - black

CHARACTERISTICS

Construction characteristics

| | |
|---------------------|--|
| Conductor material | Bare copper |
| Type of conductor | Stranded, class 2 |
| Insulation | XLPE (Cross-linked Polyethylene) |
| 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 U ₀ /U (U _m) | 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] |
|-----------|----------|----------------------|----------------------------|------------------------------|--------------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | 1 | 0.9 | 1.38 | 6 | 9.2 | 11.0 | 16.5 | 18.2 | 467 |
| | 2 | 0.9 | 1.38 | 6 | 9.2 | 11.0 | 16.5 | 18.2 | 473 |
| 10187666 | 5 | 0.9 | 1.38 | 9.4 | 12.8 | 14.6 | 20.0 | 22.0 | 613 |
| 10164894 | 10 | 0.9 | 1.38 | 12.1 | 15.7 | 17.5 | 22.8 | 25.1 | 786 |
| | 20 | 0.9 | 1.38 | 15.6 | 19.3 | 21.8 | 27.0 | 29.7 | 1182 |
| | 30 | 0.9 | 1.38 | 18.6 | 22.3 | 24.8 | 29.9 | 33.0 | 1433 |



Lead free
Yes



Rated Voltage U₀/U (U_m)
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

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] |
|-----------|----------|----------------------|----------------------------|------------------------------|--------------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | 1 | 1.1 | 1.58 | 6 | 9.2 | 11.0 | 16.5 | 18.2 | 472 |
| | 2 | 1.1 | 1.58 | 6.3 | 9.5 | 11.3 | 16.8 | 18.5 | 497 |
| 10187674 | 5 | 1.1 | 1.58 | 10.4 | 13.8 | 15.6 | 21.0 | 23.1 | 687 |
| 10187677 | 10 | 1.1 | 1.58 | 13.5 | 17 | 19.5 | 24.7 | 27.3 | 1031 |
| | 20 | 1.1 | 1.58 | 17.5 | 21.2 | 23.7 | 28.8 | 31.8 | 1387 |
| | 30 | 1.1 | 1.58 | 20.9 | 24.6 | 27.1 | 32.1 | 35.4 | 1731 |

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] |
|-----------|----------|----------------------|----------------------------|------------------------------|--------------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | 1 | 1.28 | 1.76 | 6 | 9.2 | 11.0 | 16.5 | 18.2 | 475 |
| | 2 | 1.28 | 1.76 | 6.8 | 10 | 11.8 | 17.2 | 19.0 | 530 |
| 10187683 | 5 | 1.28 | 1.76 | 11.3 | 14.7 | 16.5 | 21.8 | 24.1 | 742 |
| 10187686 | 10 | 1.28 | 1.76 | 14.8 | 18.4 | 20.9 | 26.1 | 28.8 | 1137 |
| | 20 | 1.28 | 1.76 | 19.2 | 23 | 25.5 | 30.6 | 33.7 | 1564 |
| | 30 | 1.28 | 1.76 | 23 | 26.7 | 29.2 | 34.1 | 37.7 | 1959 |

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] |
|-----------|----------|----------------------|----------------------------|------------------------------|--------------------------------|------------------------|-----------------------|-----------------------|------------------------|
| | 1 | 1.5 | 2.16 | 6.8 | 10 | 11.8 | 17.3 | 19.0 | 529 |
| | 2 | 1.5 | 2.16 | 7.7 | 10.9 | 12.7 | 18.1 | 20.0 | 597 |
| 10187691 | 5 | 1.5 | 2.16 | 13.3 | 16.6 | 19.1 | 24.3 | 26.9 | 1012 |
| 10187694 | 10 | 1.5 | 2.16 | 17.6 | 21.2 | 23.7 | 28.8 | 31.8 | 1402 |
| | 20 | 1.5 | 2.16 | 23 | 26.7 | 29.2 | 34.1 | 37.7 | 2168 |
| | 30 | 1.5 | 2.16 | 27.6 | 31.3 | 34.5 | 39.3 | 43.3 | 2783 |



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
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Aliphatic and
aromatic
hydrocarbons
resistant



Electro magnetic
interference
resistance
Yes



Operating temp.
-20 ... 60 °C



Max. conductor
temp. in service
90 °C

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] |
|-----------|----------|----------------------|----------------------------|------------------------------|--------------------------------|------------------------|-----------------------|-----------------------|------------------------|
| 10187699 | 1 | 1.91 | 2.57 | 7.6 | 10.8 | 12.6 | 18.0 | 19.9 | 585 |
| 10187700 | 2 | 1.91 | 2.57 | 11.7 | 15.1 | 16.9 | 22.2 | 24.5 | 769 |
| 10187703 | 5 | 1.91 | 2.57 | 15.4 | 18.7 | 21.2 | 26.4 | 29.1 | 1196 |
| 10187707 | 10 | 1.91 | 2.57 | 20.4 | 23.9 | 26.4 | 31.4 | 34.7 | 1702 |
| 10187712 | 20 | 1.91 | 2.57 | 26.9 | 30.6 | 33.8 | 38.6 | 42.6 | 2732 |
| | 30 | 1.91 | 2.57 | 32.4 | 36.1 | 39.3 | 43.9 | 48.5 | 3564 |

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 U₀/U
(Um)
170/300V



Mechanical
resistance to
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EN IEC 60332-3-22
(cat A)



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Electro magnetic
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Max. conductor
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