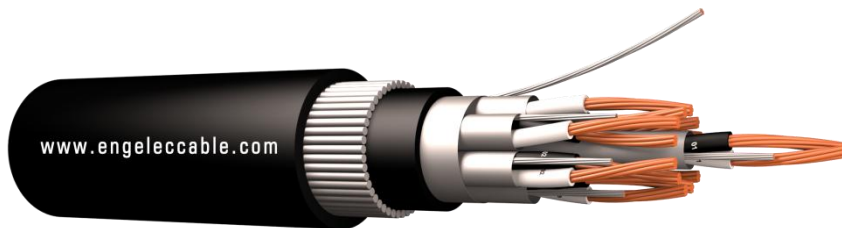


Part No: P1T2IOS

Description: The ENGELEC armoured BS 5308 cable Part 1 Type 2 individually and collectively screen are generally used when the risk of mechanical damage is increased. The galvanized steel wire armoring provides excellent protection. Generally used within industrial process manufacturing plants for communication, data and voice transmission signals and services, Also used for the interconnection of electrical equipment and instruments, typically in chemical or petrochemical industry. The armored versions are generally use for outdoor installation for direct burial or installed in the duct and suitable for wet and damp areas.



Construction

| | |
|--------------------------|---|
| Conductor | Annealed or tinned copper, sizes: 0.5mm ² and 0.75mm ² multi-stranded(Class 5), 1.5mm ² multi-stranded(Class 2) to BS 6360 |
| Insulation | PE (XLPE) |
| Pairing | Two insulated conductors uniformly twisted together with a lay not exceeding 100mm |
| Colour code | Multipair cables:See technical information |
| Individual screen | Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm ² |
| Binder tape | PETP transparent tape |
| Collective screen | Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm ² |
| Inner Sheath | PVC (polyvinyl chloride), type TM 1 to BS 6746 |
| Armour | Galvanized steel wire armour |
| Outer sheath | PVC Sheath, type TM 1 or type 6 to BS 6746 |
| Sheath colour | Black or blue |



Mechanical and Electrical Properties

* **Operating temperature** : -20°C up to + 70°C(fixed installation) ; -10°C to +50°C(flexed operation).

* **Minimum bending radius** : 12 x overall diameter.

| Conductor Area Size | mm ² | 0.5 | 0.75 | 1.0 | 1.5 | |
|---|-----------------------|---------|---------|---------|---------|------|
| Conductor resistance max | ohm/km | 39.7 | 26.5 | 18.4 | 12.3 | |
| Insulation resistance min | Mohm/km | 25 | 25 | 25 | 25 | |
| Max. Mutual Capacitance: pair or adjacent cores | pF/m | 250 | 250 | 250 | 250 | |
| Capacitance between any core or screen max. | pF/m | 400 | 400 | 400 | 400 | |
| Max. L/R Ratio for adjacent cores(Inductance/Resistance) | μH/ohm | 25 | 25 | 35 | 40 | |
| Test voltage | Core to core | V | 1000 | 1000 | 1000 | 1000 |
| | Core to screen | V | 1000 | 1000 | 1000 | 1000 |
| Rated voltage max | V | 300/500 | 300/500 | 300/500 | 300/500 | |

Standards

| | | | |
|---------------------------------|-------------------------------|----------------------|--|
| RoHS Compliance : | Yes | UV Resistance : | Good, ISO 4892-3† |
| CE Compliant : | Yes (2014/35/EU) | Weather Resistance : | Good, ISO 4892-3† |
| Manufactured in accordance to : | BS 5308, BS 6746, IEC 60331-1 | CPR Classification | F _{CA} (EN50575:2014+A1:2016) |

Dimension Parameter

| Engelec Cable Part Number | No. of Pairs | Nominal Conductor CSA | Nominal Thickness of Insulation | Nominal Thickness of bedding | Nominal Dia. over Bedding | Nominal Thickness of Armour | Nominal Thickness of Sheath | Nominal Dia. of Cable | Approx. Weight |
|---------------------------|--------------|-----------------------|---------------------------------|------------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------|----------------|
| | | mm ² | mm | mm | mm | mm | mm | mm | kg/km |
| P1T2IOS02P05X | 2 | 0.5 | 0.6 | 0.8 | 10.6 | 0.9 | 1.3 | 15 | 505 |
| P1T2IOS05P05X | 5 | 0.5 | 0.6 | 1.1 | 14.3 | 0.9 | 1.5 | 19.1 | 830 |
| P1T2IOS10P05X | 10 | 0.5 | 0.6 | 1.2 | 19.1 | 1.25 | 1.6 | 24.8 | 1420 |
| P1T2IOS15P05X | 15 | 0.5 | 0.6 | 1.3 | 22.2 | 1.6 | 1.7 | 28.8 | 1570 |
| P1T2IOS20P05X | 20 | 0.5 | 0.6 | 1.3 | 25.3 | 1.6 | 1.8 | 32.1 | 2040 |
| P1T2IOS30P05X | 30 | 0.5 | 0.6 | 1.5 | 30.6 | 1.6 | 1.9 | 37.6 | 2610 |
| P1T2IOS50P05X | 50 | 0.5 | 0.6 | 1.7 | 38.9 | 2 | 2.1 | 47.1 | 4270 |
| P1T2IOS02P75X | 2 | 0.75 | 0.6 | 0.8 | 11.5 | 0.9 | 1.4 | 16.1 | 545 |
| P1T2IOS05P75X | 5 | 0.75 | 0.6 | 1.2 | 15.7 | 1.25 | 1.5 | 21.2 | 1005 |
| P1T2IOS10P75X | 10 | 0.75 | 0.6 | 1.3 | 20.9 | 1.6 | 1.7 | 27.5 | 1400 |
| P1T2IOS15P75X | 15 | 0.75 | 0.6 | 1.3 | 24.2 | 1.6 | 1.8 | 31 | 1750 |
| P1T2IOS20P75X | 20 | 0.75 | 0.6 | 1.5 | 27.9 | 1.6 | 1.8 | 34.7 | 2300 |
| P1T2IOS30P75X | 30 | 0.75 | 0.6 | 1.7 | 33.8 | 2 | 2 | 41.8 | 2460 |
| P1T2IOS50P75X | 50 | 0.75 | 0.6 | 2 | 43.1 | 2.5 | 2.3 | 52.7 | 4800 |
| P1T2IOS02P15X | 2 | 1.5 | 0.6 | 0.9 | 13 | 0.9 | 1.4 | 17.6 | 800 |
| P1T2IOS05P15X | 5 | 1.5 | 0.6 | 1.2 | 17.5 | 1.25 | 1.6 | 23.2 | 1290 |
| P1T2IOS10P15X | 10 | 1.5 | 0.6 | 1.3 | 23.5 | 1.6 | 1.8 | 30.3 | 1990 |
| P1T2IOS15P15X | 15 | 1.5 | 0.6 | 1.5 | 27.6 | 1.6 | 1.9 | 34.6 | 2590 |
| P1T2IOS20P15X | 20 | 1.5 | 0.6 | 1.5 | 31.3 | 1.6 | 2 | 38.5 | 3310 |
| P1T2IOS30P15X | 30 | 1.5 | 0.6 | 1.7 | 38 | 2 | 2.1 | 46.2 | 4380 |
| P1T2IOS50P15X | 50 | 1.5 | 0.6 | 2 | 48.5 | 2.5 | 2.4 | 58.3 | 6260 |

Remark: 'X' means IEC60228 conductor class, customized for class 1 or class 2 or class 5.

Conductor Option

| Conductor Area Size | mm ² | 0.5 | 0.75 | 1.0 | 1.5 |
|---------------------|-----------------|--------|--------|--------|---------|
| Conductor Class 1 | No. x mm | 1/0.8 | 1/0.98 | 1/1.13 | 1/1.38 |
| Conductor Class 2 | No. x mm | 7/0.3 | 7/0.37 | 7/0.43 | 7/0.50 |
| Conductor Class 5 | No. x mm | 24/0.2 | 24/0.2 | 32/0.2 | 30/0.25 |

Pair Identify

- Number marking : Pair color black and white, printed since from number '1', '2', '3', '4'
- Color marking :

| Pair Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|-------------|-------|--------|-------|-------|-------|------|--------|-------|-------|------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|------------|------------|------------|------------|------------|
| Wire A | White | White | White | White | White | Red | Red | Red | Red | Red | Black | Black | Black | Black | Black | Yellow | Yellow | Yellow | Yellow | Yellow | Blue/White | Blue/White | Blue/White | Blue/White | Blue/White |
| Wire B | Blue | Orange | Green | Brown | Grey | Blue | Orange | Green | Brown | Grey | Blue | Orange | Green | Brown | Grey | Blue | Orange | Green | Brown | Grey | Blue | Orange | Green | Brown | Grey |

* Information and images on this datasheet are intended for guidance only and products may vary due to technical improvements and commercial factors.