

HITRONIC® PCF DUPLEX FD PNC PVC-PUR

DB28351702EN

valid from: 01.11.2014

1. Product Description

Cable designation: AT-V(ZN)Y(ZN)11Y 2K200/230 *flex*
J-V(ZN)Y(ZN)11Y 2K200/230 *flex*

Splittable duplex polymer cladded glass optical fibre (PCF) indoor cable with non-metallic strain relief, PVC inner and PUR outer sheath, for applications in industrial environments with high mechanical stress, suitable for drag chains

2. Application

PCF bus cable for PROFINET applications; Type C special applications (highly flexible, permanent movement)
Applications with cable lengths up to 100m at 100Mbit/s data rate
For direct connector assembly (single cable diameter 2.2 mm)

3. Cable Design

| | |
|------------------------|--|
| Cable construction | 2x PCF fibre (polymer cladded fibre with ETFE buffer), non-metallic strain relief elements, PVC single cable sheath, stranded with two filler elements and central element, plastic fleece as wrapping, strain relief elements, PUR outer sheath |
| Cable inner sheath | PVC (special PVC-based compound) |
| Cable outer sheath | PUR (Polyurethane) mat, halogen-free |
| Colour of inner sheath | See colour coding |
| Colour of outer sheath | Green (similar to RAL 6018) |
| Colour coding | Black, orange (with arrow printing) |
| Strain relief | Aramid yarns (in single and total cable construction) |
| Type of armouring | - |

4. Optical and Physical Properties of Fibre

| | | | |
|--------------------|----------|----------|------|
| Attenuation | @ 650 nm | dB/km | ≤ 10 |
| | @ 850 nm | dB/km | ≤ 8 |
| Bandwidth | @ 650 nm | MHz x km | ≥ 17 |
| | @850 nm | MHz x km | ≥ 20 |
| Numerical Aperture | | | 0.37 |
| Core diameter | | µm | 200 |
| Cladding diameter | | µm | 230 |

5. Thermal Properties

| | |
|--------------------------|-------------------|
| Operating temperature | -20°C up to +70°C |
| Installation temperature | -10°C up to +50°C |
| Storage temperature | -30°C up to +70°C |

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6. Mechanical Properties

| | | |
|------------------------------------|--------------------|--------------------|
| Max. number of fibres | | 2 |
| Fibre outer diameter (with buffer) | | 500 µm |
| Sub cable outer diameter | | 2.2 mm |
| Cable outer diameter | | 8.8 ± 0.3 mm |
| Cable weight | | 71 kg/km |
| Min. bending radius | once | 130 mm |
| | several times | 175 mm |
| Max. tensile strength | fixed installation | 800 N |
| | short term | 1.000 N |
| Max. lateral pressure | fixed installation | 3.000 N/10 cm |
| | short term | 5.000 N/10 cm |
| For use in drag chains* | bending cycles | > 5.00.000 |
| | chains length | 4.5 m |
| | speed | 3 m/s |
| | acceleration | 3 m/s ² |

* Please note assembly guidelines T3
(LAPP main catalogue)

7. Chemical Properties

| | |
|---------------------|--|
| PVC sub unit sheath | Non-aging, flame retardant, abrasion resistant |
| PUR outer sheath | Flame-retardant, halogen-free, oil resistant, low adhesion |

8. Features

- RoHS compliant
- Oil resistant according to IEC 60811-2-1 and DIN EN 50363-10-2 (100°C, 168h)
- PROFINET Optical Fibre Cable Type C according to guideline "PROFINET Cabling and Interconnection Technology" Version 3.1 March 2014
- EC-Directive: This cable is conform to the 2011/65/EU (RoHS, Restriction of the use of hazardous substances)

9. Product Range Overview

| Part number | Article designation | No. Of Fibres | Outer Ø (mm) |
|-------------|-------------------------------------|---------------|--------------|
| 28351702 | HITRONIC® PCF DUPLEX FD PNC PVC-PUR | 2 | 8.8 |