

## 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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automation

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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 <sup>2</sup> |

\* 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          |

|  |                        |             |
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