Micro Hybrid Cable, Flame Retardant

Hybrid Fibers G657A1 + Power Wires, CPR Dca

Features

- Slim design for installations in indoor or indoor/outdoor environments
- Up to 24 fibers and 4 to 8 copper wires 0.75 to 1.5 mm2
- Excellent installation performance
- Unique design with robust inner tubes
- Temperature range from -45 to +70 °C
- Easy to prepare and identify fibers and copper conductors

Application

Hexatronic Micro Hybrid Cable is a part of our Hexatronic Powered Fiber System InOne, enabling power feeding and optical fibers in one, easy to install, slim cable. This version is halogen-free and flame retardant and is therefore suitable for indoor or combined indoor and outdoor environments where you need remote powering of active devices. Examples are media switches for PoE devices such as surveillance cameras, WiFi Access or 4G and 5G devices powered by 48 Vdc and fiber. Installation by blowing into Hexatronic Microducts provides an easy, cost-efficient roll out at lowest cost. Powered by 110Vdc to terminals with integrated DC-DC power units enable 48 Vdc 150W at 700m, 110W at 1000 m (110Wkm).

Design

The Micro Hybrid Cables are designed with inner protective tubes made of a unique Polyamide compound. The Polyamide gives a special strength to the product, while increasing the bending properties as well as other benefits such as extreme temperature resistance. Including 8 power wires to enable low voltage power feeding. As a result, the Cables are more durable during the installation process as they are able to withstand rough handling. The unique cable design with an extended operational temperature range of -45 to +70 °C can be used in many environments where heat and cold are often a major concern.

Product Information

1 Primary coated fiber: Silica, acrylate

2 Loose tube: PA

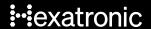**3** Copper wire: Copper wire strand class 5

4 Insulation: PP mm

5 Central strength member: Glass fiber reinforced plastic, PE

6 Slit up yarn: Aramide yarn

7 Wrapping: Water blocking yarns

8 Sheath: Polyethylene, halogen-free

Black fillers can replace empty white tubes.

Technical Information

Product Color	Black sheath
Temperature, Operation [°C]	-45 to +70
Temperature, Storage [°C]	-45 to +70
Temperature, Installation [°C]	-15 to +50
Water Blocking	Length water blocking according to IEC 60794-1-2-F5B
Reaction to Fire	EN 13501-6 CPR classification DCa-s2, d2
Fiber Type	G657A1
Attenuation @Wavelength [nm]	1310/1383/1550
Typical Attenuation [dB/km]	0.32/0.32/0.18
Average Attenuation [dB/km]	0.33/0.33/0.21
Maximum Attenuation [dB/km]	0.36/0.36/0.23
Conformance	Fire rating according to EN 13501-6 CPR classification DCa-s2, d1. Length water blocking according to IEC 60794-1-2-F5B. Mechanical and environmental test in accordance with IEC 60794-5-10 Fiber parameters and tests according to the IEC series 60793-2 and 60793-1 Power wires tested according to EN 50288-7:2005 in applicable parts
Certifications	Fire rating according to EN 13501-6 CPR classification DCa-s2, d2 CE
Marking	Example of sheath marking, 1 time/meter: "HEXATRONIC yymmddhh TOL4059021/zzA GNHQBDUV G657A1 Dca-s2,d2 xxxx m" where yymmddhh = year, month, day and hour of manufacture, xxxxx=running meter marking

Technical Notes

Power wires

- Rated voltage: max 110 Vdc
- Rated current: 1 pair / 2 pair 0.75 mm², max 3 / 6 A, 1.5 mm², max 6 / 12 A
- Dielectric strength cond.-cond: 2000 Vdc 1 min

Installation Notes

The cable should be installed at a temperature between -15 to +40°C. The cable shall not be stored in direct sunlight. The sun may heat up the cable over the permitted temperature limit.

Articles 3

Article name	Color	No. of Fibers	Layout	Bend Radius [mm]	Tensile Force, Installation [N]	Tensile Force, Operation [N]	Crush [N/100 mm]	Diameter Ø [mm]	Weight [kg/km]	Length [m]
Micro Hybrid 12 G657A1 + 4x0.75 mm² Cu, CPR Dca, Green TOL4079030/12	Black	12	1x12 + 4x0.75 mm²	75	800	100	2000	8.3	95	8000/K12, 4000/K10
Micro Hybrid 24 G657A1 + 4x1.5 mm² Cu, CPR Dca, Green TOL4079031/24	Green	24	1x24 + 4x1.5 mm²	75	800	100	2000	10.0	145	–
Micro Hybrid 24 G657A1 + 4x1.5 mm² Cu, CPR Dca, Black TOL4079033/24	Black	24	1x24 + 4x1.5 mm²	75	800	100	2000	10.0	145	–