Micro Hybrid Cable

Hybrid Fibers G657A1 + Power Wires

Features

- Super slim design for microducts down to 8 mm
- 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

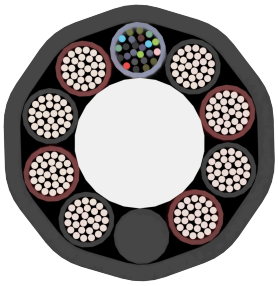
Application

Hexatronic Micro Hybrid Cable is a part of our Hexatronic Powered Fiber System InOne, enabling power feeding and optical fibers to be installed into traditional microducts with an inner diameter of downto 8 mm. The System is suitable for all types of metropolitan, rural access networks and backbone networks 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



Hexatronic InOne Hybrid Micro Cable Cross Section

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 jacket
Color Code	DIN0888
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 60794-1-22-F5A
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	Length water blocking according to IEC 60794-1-2-F5A. 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	CE
Marking	Example of jacket marking, 1 time/meter: “HEXATRONIC A35 Viper yymmddhh TOL4079028/12 GNHLDV G657A1 xxxxx 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	Typical installation performance: • Ducts ID 8 mm, cable OD ≤6.7 mm: 800 m • Ducts ID 10-16 mm, cable OD ≤8.0 mm: 1000 m • Ducts ID 14-16 mm, cable OD ≤10 mm: 1000 m Installation performance verified on Hexatronic test track, according to IEC 60794. Installation performance is affected by the installed path, environmental conditions, installation equipment etc and actual performance may therefore deviate from the above specified values.

If the cable is installed by blowing the temperature shall be -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.

Items 4

Item 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 TOL4079028/12	**Black**	**12**	**1x12 + 4x0.75 mm²**	**75**	**800**	**100**	**2000**	**5.7**	**45**	**8000/K10, 4000/K8**
Micro Hybrid 24 G657A1 + 4x1.5 mm² Cu TOL4079029/24	**Black**	**24**	**1x24 + 4x1.5 mm²**	**75**	**800**	**100**	**2000**	**6.7**	**80**	**3000/K8**
Micro Hybrid 24 G657A1 + 8x1.5 mm² TOL4079036/24	**Black**	**24**	**1x24 + 8x1.5 mm²**	**100**	**2500**	**170**	**2000**	**9.9**	**170**	**8000/K12**
Micro Hybrid 24 G657A1 + 2x10 mm² Cu TOL4079038/24	**Black**	**24**	**1x24 + 2x10 mm²**	**125 / 150 mm**	**-**	**1000**	**2000**	**12.6**	**271**	**500/K11**

