ARMOURED CABLES FOR RAILWAY DUCTS

TFvST Sheath - Micromodule structure - K209B Type

DESCRIPTION AND APPLICATION

Micromodule structure fibre-optic cables with a double LSZH thermoplastic sheath, fibreglass yarns and armoured with a steel tape for mechanical and rodent protection. This cable can be installed in underground ducts or directly buried. For use in medium or long distance networks.

CONSTRUCTION

1. Micromodules: fibres are grouped into a jelly-filled micro-structure of 6 or 12 fibres and a maximum diameter of 1.4 mm.
2. Core: The micro-modules are grouped inside without any central reinforcing element.
3. Water-blocking yarns and/or tapes.
4. LSZH thermoplastic inner sheath.
5. Fibreglass yarns.
6. Corrugated copolymer-coated steel tape longitudinally applied with overlap.
7. LSZH thermoplastic outer sheath. UV protected.

Markings:

CABLESCOM / Year / Number of fibres / Type of fibre / Type of sheath / Length markings

Other sheath markings available upon request

OPTICAL FIBRE CHARACTERISTICS

Optical fibres are according to ITU-T G.652D recommendations and EN 60793-2 - Class B 50 B 1. See our product sheet of fibre characteristics.

Optical transmission characteristics of cabled fibre:

Attenuation coefficient:

Maximum at 1310 nm: 0.36 dB/km

Average / Maximum at 1550 nm: 0.21 / 0.24 dB/km

PMD ≤ 0.20 ps/km1/2

Cut-off wavelength (λcc) ≤ 1260 nm

MICROMODULE COLOUR CODE

	# fibres in cable				
Micromodule	**6**	**12**	**36**	**72**	**144**
1	Red	Red	Red	Red	Red
2		Blue	Blue	Blue	Blue
3			Green	green	green
4			Yellow	Yellow	Yellow
5			Violet	Violet	Violet
6			White	White	White
7					Orange
8					Grey
9					Brown
10					Black
11					Turquoise
12					Pink
Micromodule diameter (mm)	1.20	1.20	1.20	1.40	1.40

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Certified Company **ISO 9001 – ISO 14001**

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OPTICAL FIBRE COLOUR CODE

# fibre	1	2	3	4	5	6	7	8	9	10	11	12
Colour	Red	Blue	green	Yellow	Violet	White	Orange	Grey	Brown	Black	Turquoise	Pink

PRODUCT INFORMATION

Code	*Num. Fibres*	*Fibres per micromodule*	*Nominal weight* (kg/km)	*Nominal OD* (mm)	*Max. Inst. Tensile strength* (N)
EE5345D00000600N	6	6	115	9.5	1400
EE5345D00001200N	12	6	135	11.0	1400
EE5345D00003600N	36	6	155	11.5	1400
EE5345D00007200N	72	12	185	12.5	2000
EE5345D00014400N	144	12	240	14.5	2650

Mechanical characteristics	*Standard*	*Test conditions*
Installation Maximum Tensile Strength (εf<0.3 %; Δα<0.1dB/km during the test and reversible after the test)	UNE-EN 60794-1-2, Met. E1	See table above
Bending resistance (Δα<0.1 dB and reversible)	UNE-EN 60794-1-2, Met. 10	D=20 x Ø cable
Temperature cycling (operation, Δα<0.1 dB/km and reversible)	UNE-EN 60794-1-2, Met. F1	-30ºC / 60ºC
Water penetration	UNE-EN 60794-1-2, Met.F5B	LP_{water} ≤ 3 m (8 hours)
Flame propagation	UNE-EN 60332-1-2 NF 32070 (C2)	
Smoke density	UNE-EN 61034-2	Transmittance > 50 %

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