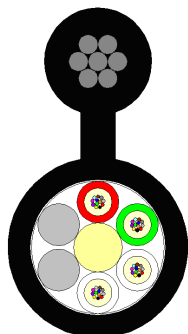


Optical fibre cables for aerial installation

Cable Design

Acc. to IEC 60794



- Figure : 48 fibres cable (not to scale) -

- **Messenger** : galvanized steel strand
- **Central Strength Member (CSM)**: glass fibre reinforced plastic rod (FRP), with plastic oversheathing when needed.
- **Loose Tube**: thermoplastic material, containing up to 24 fibres and filled with a suitable water tightness compound.
- **Filler Elements**: thermoplastic rods, where needed.
- **Stranding**: loose tubes (and fillers), SZ stranded in one layer around the CSM. A white-red identification thread is laid into the optical core.
- **Longitudinal Water Tightness**: dry core with water swellable elements.
- **Outer Sheath**: high density polyethylene. Two ripcords are laid beneath.

Technical data

No. of Fibres		12	24	48	72	96	144	192	288	
Design		1 x 12	2 x 12	4 x 12	6 x 12	8 x 12	6 x 24	8 x 24	12 x 24	
Loose Tube / Filler - Ø	mm	2.5			3.0			3.5		
CSM - Ø	mm	2.6	2.6	2.6	2.6	2.6	3.1	3.3	3.5	
CSM-Oversheathing - Ø	mm	-	-	-	-	4.2	-	5.0	9.0	
Messenger Dimensions	mm	7 x 1.4								
Outer Sheath Thickness	mm	1.5 (min.) over core / 1.75 ± 0.1 over messenger								
Web Dimensions (W x H)		2.5 ± 0.5 x 3.0 ± 1.0								
Cable Diameter	mm	10.8	10.8	10.8	10.8	12.4	12.3	14.2	18.2	
Cable Height	mm	21.5	21.5	21.5	21.5	23.1	23.0	24.9	28.9	
Cable Weight	kg / km	215	215	215	220	245	245	285	385	
Minimum Bending Radius	mm	Without Tension 10 x Cable-Ø				Under Maximum Tension 15 x Cable-Ø				
Temperature Range	°C	Installation - 15 to + 60			Transport & Storage - 40 to + 70			Operation - 40 to + 70		

Please refer to our General Installation, Safety & Handling recommendations before handling.

Main characteristics

Test	Test Standard	Specified Value	Acceptance Criteria
Max. Installation Tension	IEC 60794-1-2-E1	≥ 9 kN	$\Delta\alpha \leq 0.05$ dB/100m fibre strain ≤ 0.33 %
Max. Operation Tension	IEC 60794-1-2-E1	≥ 9 kN	$\Delta\alpha \leq 0.05$ dB/100m fibre strain ≤ 0.20 %
Crush (mandrel / plate)	IEC 60794-1-2-E3	1,000 N	$\Delta\alpha \leq 0.05$ dB
Impact	IEC 60794-1-2-E4	15 Nm, 3 impacts, R= 300 mm	$\Delta\alpha \leq 0.05$ dB after the test
Cable Bend	IEC 60794-1-2-E11	R ≤ 150 mm (with messenger) R=10x D(optical core), 4 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB
Temperature Cycling	IEC 60794-1-2-F1	-40°C to +70°C	$\Delta\alpha \leq 0.1$ dB/km
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water column=1m	no water leakage in 24h (optical core only)

All optical measurements at 1550 nm.

Optical Characteristics

See the attached cabled optical fibre data sheet.

Identification

Fibre Colours

No.	1	2	3	4	5	6	7	8	9	10	11	12
Colour	white	red	yellow	green	blue	grey	brown	black	violet	aqua	orange	pink

In buffer tubes containing 24 fibres, these are identified by repeating the same colour code and using a synthetic coloured binder around each 12 fibres group. Binders colour : blue, orange.

Buffer Tube Colours

Tube	1	2	3	4	5	6	7	8	9	10	11	12
Colour	red	green	white	white	white	white	white	white	white	white	white	white

Filler Elements Colours

All filler elements are uncoloured (natural).

Sheath Colour

The outer sheath colour is black.

Sheath Marking

The outer sheath is marked in 1 meter intervals as follows:

<Manufacturer> <part numbers> <cable code> PE Optical Cable <fiber type> <batch no.>
<year and week of manufacture> <length marking in meters>

Logistic

Packing

Wooden drums with protection.

Delivery Lengths

Standard delivery lengths are 2 km or 4 km with a tolerance of - 1% / + 3%

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All sizes and values without tolerances are reference values. Specifications are for product as supplied by PrysmianGroup: any modification or alteration afterwards of product may give different result.

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