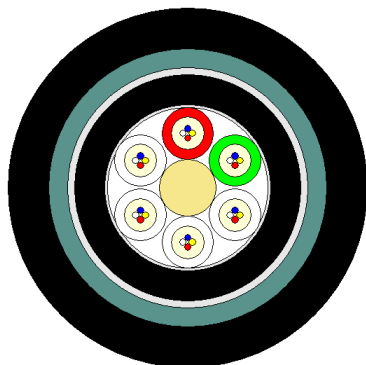


A-DQH(SR)H

Cable Design

IEC/EN 60794



- not to scale -

- **Central Strength Member (CSM):** glass fibre reinforced plastic rod (FRP), with plastic oversheathing when needed.
- **Loose Tube:** thermoplastic material, containing optical fibres and filled with a suitable water tightness compound.
- **Filler Elements:** thermoplastic rods, where needed.
- **Stranding:** loose tubes (and fillers), SZ stranded around the CSM.
- **Longitudinal Water Tightness:** dry core with water swellable elements.
- **Inner Sheath:** HFFR, 2 ripcords beneath.
- **Armour:** both sides copolymer coated corrugated steel tape with overlap, water swellable elements. Steel thickness: 0.15 mm. 2 ripcords beneath the tape.
- **Outer Sheath:** HFFR.

Technical data

No. of Fibres		4	12	24	48	288
Design	1 st layer	1 x 4	1 x 12	2 x 12	4 x 12	9 x 12
Design	2 nd layer	-	-	-	-	15 x 12
Loose Tube / Filler - Ø	mm	1.9	-	2.5	-	2.5
CSM - Ø	mm	2.1	-	2.1	-	3.5
CSM-Oversheathing - Ø	mm	-	-	-	-	5.0
Inner Sheath Thickness	mm	-	-	1.0	-	-
Outer Sheath Thickness	mm	-	-	1.5	-	-
Cable Diameter	mm	12.5	-	13.7	-	21.6
Cable Weight	kg / km	190	-	215	-	475
Minimum Bending Radius	mm	Without Tension 15 x Cable-Ø		Under Maximum Tension 20 x Cable-Ø		
Temperature Range	°C	Installation - 10 to + 50		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	1800 N	$\Delta\alpha$ reversible, fibre strain $\leq 0.33\%$
Crush	IEC 60794-1-2-E3	3000 N / 100 mm, max. 15 min	$\Delta\alpha \leq 0.05$ dB, no damage
Impact	IEC 60794-1-2-E4	10 Nm, 3 impacts, R= 300 mm	$\Delta\alpha \leq 0.05$ dB after the test
Torsion	IEC 60794-1-2-E7	100N, +/- 180°, 10 cycles	$\Delta\alpha \leq 0.05$ dB, no damage
Repeated Bending	IEC 60794-1-2-E6	R=20x D, 100 N, 35 cycles	no damage
Cable Bend	IEC 60794-1-2-E11	R=20x D, 4 turns, 3 cycles	$\Delta\alpha \leq 0.05$ dB, no damage
Temperature Cycling	IEC 60794-1-2-F1	-40°C to +70°C	$\Delta\alpha \leq 0.05$ dB/km
Water Penetration	IEC 60794-1-2-F5B	sample=3m, water column=1m	no water leakage in 24h

All optical measurements at 1550 nm (SM) and 1300 nm (MM). Acceptance criteria for MM fibres ≤ 0.2 dB for all mechanical test and ≤ 0.5 dB/km for temperature cycling, instead of 0.05 dB (SM).

Optical Characteristics

See the attached cabled optical fibre data sheet.

Fire Performance

Test	Test Standard	Specified Value	Acceptance Criteria
Flame non-propagation	IEC 60332-1	unburnt cable length	> 50 mm
Fire non-propagation	IEC 60332-3-24	burnt cable height	< 2.5 m
Fire	IEC 60331-25		Acc. IEC 60331-25
Smoke Density	IEC 61034	transmission of light	> 60 %
Halogen Content	IEC 60754-1	halogen content	< 0.5 %
Corrosivity of Smoke Gases	IEC 60754-2	pH-value	≥ 4.3
Conductivity of Smoke Gases	IEC 60754-2	conductivity	≤ 10 µS/mm

Identification

Fibre Colours

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

Buffer Tube Colours

1st layer

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

2nd layer

Tube	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Colour	red	green	white	white	white	white	white	white	white	white	white	white	white	white	white

Filler Elements Colours

All filler elements are uncoloured (natural).

Sheath Colour

The inner and outer sheath colour is black.

Sheath Marking

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

<Manufacturer> <year of manufacture> <no. and type of fibre> <length marking in meter>

Logistic

Packing

Wooden drums with protection.

Delivery Lengths

Standard delivery length is 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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