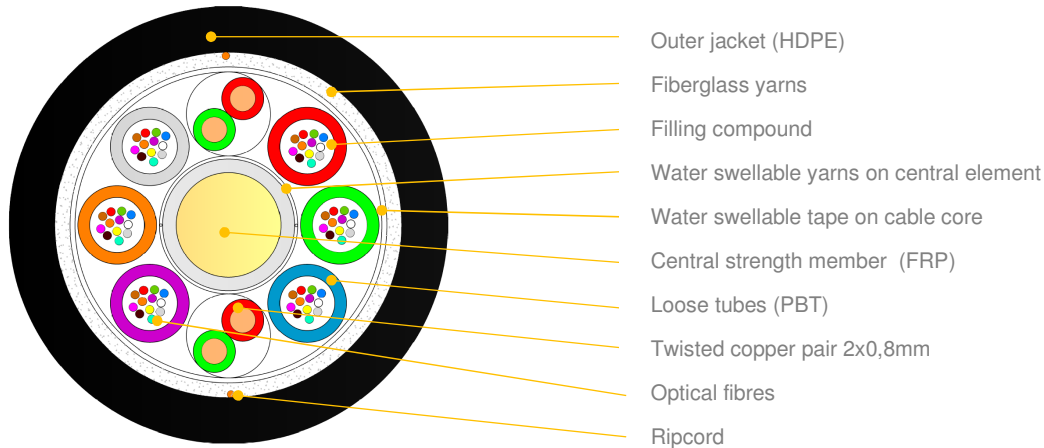


Basic duct cable with multitube structure and copper wires reinforced with fiberglass yarns - BDC-DID



*schematic drawing, not to scale

APPLICATION:

For installation into existing ducts

DESIGN:

Central strength member (FRP)
Optical fibres
Loose tubes (PBT 2,5mm) with filling compound
Twisted copper wires (2x0,8mm)
Water swellable yarns and tape to prevent moisture ingress into the cable
Fiberglass yarns as strain relief
Black UV stabilized outer jacket

CONFIGURATION:

Version	Quantity [pcs]				Ø nominal (±5%) [mm]	Nominal weight (±10%) [kg/km]	Max allowed tension [N]	Max static tension [N]
	Fibres	Fibres per tube	Total elements	Active tubes				
1T x 12F + 1x2x0,8Cu	12	12	6	1	11,5	110	2700	1400
1T x 12F + 2x2x0,8Cu	12	12	6	1	11,5	112	2700	1400
1T x 12F + 3x2x0,8Cu	12	12	6	1	11,5	120	2700	1400
1T x 12F + 4x2x0,8Cu	12	12	6	1	11,5	127	2700	1400
1T x 12F + 5x2x0,8Cu	12	12	6	1	11,5	135	2700	1400
-	-	-	-	-	-	-	-	-
2T x 12F + 2x2x0,8Cu	24	12	6	2	11,5	106	2700	1400
2T x 12F + 3x2x0,8Cu	24	12	6	2	11,5	113	2700	1400
2T x 12F + 4x2x0,8Cu	24	12	6	2	11,5	121	2700	1400
2T x 12F + 5x2x0,8Cu	24	12	6	2	11,5	128	2700	1400
-	-	-	-	-	-	-	-	-
3T x 12F + 1x2x0,8Cu	36	12	6	3	11,5	107	2700	1400
3T x 12F + 2x2x0,8Cu	36	12	6	3	11,5	114	2700	1400
3T x 12F + 3x2x0,8Cu	36	12	6	3	11,5	122	2700	1400
-	-	-	-	-	-	-	-	-
4T x 12F + 1x2x0,8Cu	48	12	6	4	11,5	108	2700	1400
4T x 12F + 2x2x0,8Cu	48	12	6	4	11,5	115	2700	1400
-	-	-	-	-	-	-	-	-
5T x 12F + 1x2x0,8Cu	60	12	6	5	11,5	109	2700	1400
-	-	-	-	-	-	-	-	-
1T x 12F + 7x2x0,8Cu	12	12	8	1	13,1	162	2900	1900
2T x 12F + 6x2x0,8Cu	24	12	8	2	13,1	161	2900	1900
3T x 12F + 5x2x0,8Cu	36	12	8	3	13,1	160	2900	1900
4T x 12F + 4x2x0,8Cu	48	12	8	4	13,1	159	2900	1900
5T x 12F + 3x2x0,8Cu	60	12	8	5	13,1	157	2900	1900
6T x 12F + 2x2x0,8Cu	72	12	8	6	13,1	156	2900	1900
7T x 12F + 1x2x0,8Cu	84	12	8	7	13,1	155	2900	1900

Other variants available on demand

Type:	BDC-DID	REV: 1.3
Issued:	15/01/2015	SK
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MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Crush performance:	2000 [N/10 cm]	IEC 60794-1-21-E3, $\Delta\alpha\leq 0,05$ dB
Bending radius:	Static: 15 x D Dynamic: 20 x D	IEC 60794-1-21-E11, $\Delta\alpha\leq 0,05$ dB
Water penetration:	3m sample, 1m head, 24h	IEC 60794-1-22-F5, no leakage
Temperature range:	Installation: -15... +55 [°C] Operation: -40... +70 [°C] Transport & Storage: -40... +70 [°C]	IEC 60794-1-22-F1, $\Delta\alpha\leq 0,05$ dB/km

*all values for single mode fibres and 1550nm wavelength

The customer (as a system designer) is responsible for selection of the amount, and a cross section of copper wires suitable for his needs in such a way that the current load does not result in exceeding the maximum allowed fibre operating temperature (+ 70 °C) or permissible operating temperature of insulated conductors.

TECHNICAL COOPER WIRE CHARACTERISTICS

Standard	PN-EN 50290-1-1:2002
Max resistance of wire loop	75 Ω /km@20°C
Insulation resistance	1500M Ω ·km
Material of conductor	Copper
Nominal diameter of conductor	0,8mm
Nominal diameter of insulation	1,3mm
Insulation material	PE

OPTICAL FIBRE AND LOOSE TUBES COLOUR IDENTIFICATION

For optical fibres and loose tube identification information please see DSH_Colors_CODE_XXXX document.

FIBRE PARAMETERS

For selected post-production optical fibres parameters please see DSH_OFP document.

MARKING

The following print (hot stamped / laser printing) is applied at 1-meter intervals:

- Supplier: FIBRAIN
- Standard code (Product type, fibre type, fibre count)
- Year of manufacture: xxxx
- Length marking in meters
- Cable ID / Drum No

Example:

FIBRAIN BDC-DID T25 72F SM G652D 6T12F + 2x2x0.8 Cu "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is $\pm 0,5\%$. Remarking is in accordance with Bellcore GR 20 and supersedes earlier markings. Occasional loss of marking is possible. Cables can be supplied with a range of single mode or multimode fibres and customized print.

PACKING

Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Rotation direction arrow will be marked on the drum together with identification information.

DELIVERY LENGTH

2000 – 8000 meters $\pm 5\%$, with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.

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