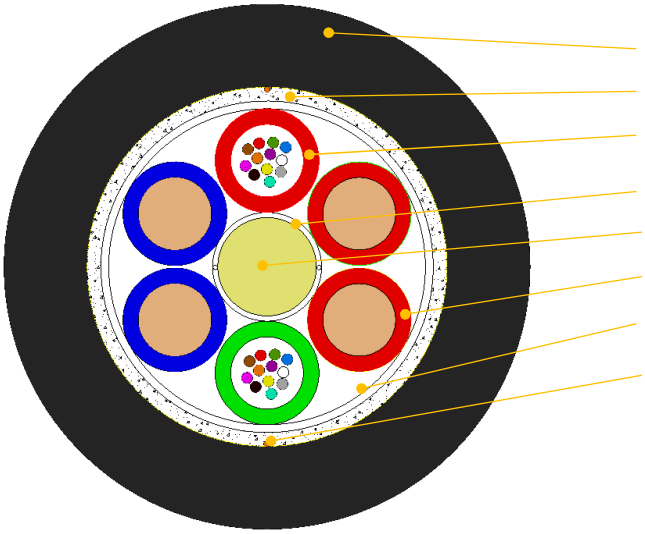
Type:	BDC-DIP T34	REV: 1
Issued:	07/08/2015	PB
Modified:	20/11/2017	AM

Basic duct cable with multitube structure and copper conductors reinforced with fiberglass yarns - BDC-DIP



*schematic drawing, not to scale

APPLICATION:

For installation into existing duct or directly buried
Good resistance to traction and compression

STRUCTURE AND COMPOSITION:

FRP strength and anti-buckling element
Insulated stranded copper conductors 2,5mm2 (Ø 3.6mm)
Loose tubes with filling compound (PBT Ø 3.4mm)
Tape and dry yarns to prevent moisture into the cable
Fiberglass yarns as strain relief elements
UV stabilized PE outer sheath
Other outer sheaths materials available

CABLE DESIGNS:

Variant	Quantity [pcs]				Ø nominal (±5%)	Nominal weight (±10%)	Max allowed tension	Max static tension
	Fibres	Fibres per tube	Total elements	Active tubes	[mm]	[kg/km]	[N]	[N]
1T x 4F + 2 x 2,5mm2	4	4	6	1	14,5	175	2900	1800
1T x 12F + 2 x 2,5mm2	12	12	6	1	14,5	163	2800	1700
1T x 12F + 3 x 2,5mm2	12	12	6	1	14,5	186	2800	1700
1T x 12F + 4 x 2,5mm2	12	12	6	1	14,5	210	2800	1700
1T x 12F + 5 x 2,5mm2	12	12	6	1	14,5	233	2800	1700
-								
2T x 12F + 1 x 2,5mm2	24	12	6	2	14,5	166	2800	1700
2T x 12F + 2 x 2,5mm2	24	12	6	2	14,5	189	2800	1700
2T x 12F + 3 x 2,5mm2	24	12	6	2	14,5	212	2800	1700
2T x 12F + 4 x 2,5mm2	24	12	6	2	14,5	235	2800	1700
-								
3T x 12F + 1 x 2,5mm2	36	12	6	3	14,5	168	2800	1700
3T x 12F + 2 x 2,5mm2	36	12	6	3	14,5	191	2800	1700
3T x 12F + 3 x 2,5mm2	36	12	6	3	14,5	214	2800	1700
-								
4T x 12F + 1 x 2,5mm2	48	12	6	4	14,5	170	2800	1700
4T x 12F + 2 x 2,5mm2	48	12	6	4	14,5	194	2800	1700
-								
5T x 12F + 1 x 2,5mm2	60	12	6	5	14,5	173	2800	1700
-								
1T x 12F + 7 x 2,5mm2	12	12	8	1	16,9	329	2800	1700
1T x 12F + 6 x 2,5mm2	12	12	8	1	16,9	352	2800	1700
2T x 12F + 5 x 2,5mm2	24	12	8	2	16,9	308	2800	1700
2T x 12F + 6 x 2,5mm2	24	12	8	2	16,9	331	2800	1700
3T x 12F + 4 x 2,5mm2	36	12	8	3	16,9	287	2800	1700
3T x 12F + 5 x 2,5mm2	36	12	8	3	16,9	310	2800	1700
4T x 12F + 3 x 2,5mm2	48	12	8	4	16,9	266	2800	1700
4T x 12F + 4 x 2,5mm2	48	12	8	4	16,9	287	2800	1700
Other fibre counts available on demand. Copper wires colours to consult.								

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Crush performance:	2700 [N/10 cm]		IEC 60794-1-2-E3, Δα≤0,05 dB
Bending radius:	Static: 15 x D Dynamic: 20 x D		IEC 60794-1-2-E11, Δα≤0,05 dB
Water penetration:	3m sample, 1m head, 24h		IEC 60794-1-2-F5, no leakage
Temperature range:	Installation: Operation: Transport & Storage:	-15... +55 [℃] -40… +70 [℃] -40… +70 [℃]	IEC 60794-1-2-F1, Δα≤0,05 dB/km

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

Max DC resistance	8,06 Ω/km@20℃
Conductor material	Bare copper
Conductor cross section	2,5mm^2
Insulated conductor dia.	3,6mm
Insulation material	PVC

OPTICAL FIBRES AND LOOSE TUBES COLOUR IDENTIFICATION

Fibres and tubes identification information see **DSH_Colors_CODE_XXXX** document.

FIBRES PARAMETERS

Optical fibres parameters see **DSH_OFP** document.

MARKING

The following print (white / hot foil) 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-DIP T34 24F SM G652D 2T12F + 4x2,5CU H07V-K 450/750V "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is ±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

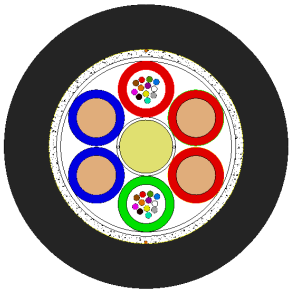
Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Rotation direction arrow will be marked on the drum together with identification information.

DELIVERY LENGTH

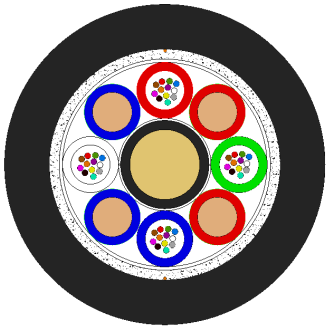
2000 – 8000 meters ± 5%, with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.

ANNEX – DRAWINGS:

6 Elements Cable



8 Elements Cable



*schematic drawing, not to scale