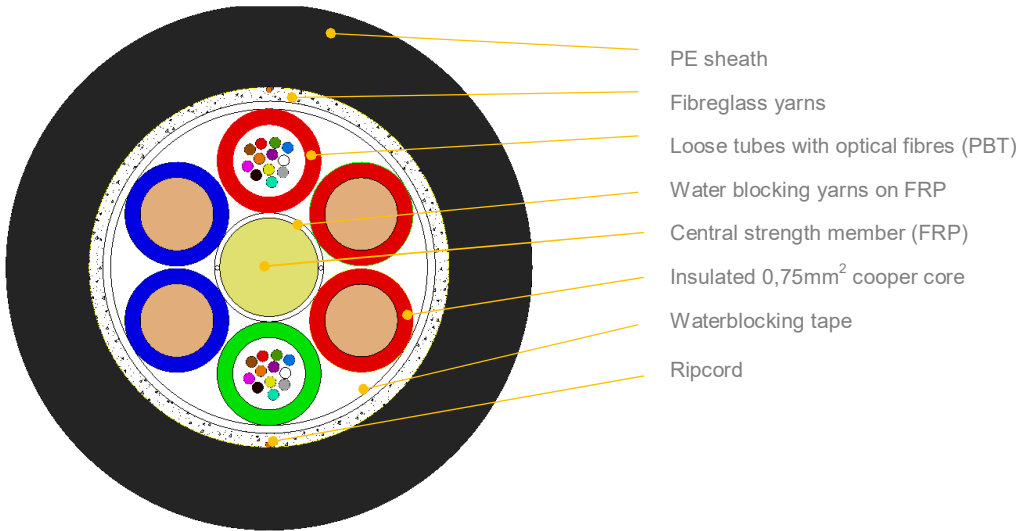


Type:	BDC-CIP T22 CU22	REV: 1
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## Basic duct cable with multitube structure and copper conductors reinforced with fiberglass yarns - BDC-CIP



\*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 cooper cores 0,75mm<sup>2</sup> (Ø 2.2mm)  
Loose tubes with filling compound (PBT Ø 2.2mm)  
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%) [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 + 2 x 0,75mm <sup>2</sup>	12	12	6	1	10,7	99	2700	1300
1T x 12F + 3 x 0,75mm <sup>2</sup>	12	12	6	1	10,7	107	2700	1300
1T x 12F + 4 x 0,75mm <sup>2</sup>	12	12	6	1	10,7	114	2700	1300
1T x 12F + 5 x 0,75mm <sup>2</sup>	12	12	6	1	10,7	122	2700	1300
-								
2T x 12F + 1 x 0,75mm <sup>2</sup>	24	12	6	2	10,7	93	2700	1300
2T x 12F + 2 x 0,75mm <sup>2</sup>	24	12	6	2	10,7	100	2700	1300
2T x 12F + 3 x 0,75mm <sup>2</sup>	24	12	6	2	10,7	108	2700	1300
2T x 12F + 4 x 0,75mm <sup>2</sup>	24	12	6	2	10,7	115	2700	1300
-								
3T x 12F + 1 x 0,75mm <sup>2</sup>	36	12	6	3	10,7	94	2700	1300
3T x 12F + 2 x 0,75mm <sup>2</sup>	36	12	6	3	10,7	101	2700	1300
3T x 12F + 3 x 0,75mm <sup>2</sup>	36	12	6	3	10,7	109	2700	1300
-								
4T x 12F + 1 x 0,75mm <sup>2</sup>	48	12	6	4	10,7	95	2700	1300
4T x 12F + 2 x 0,75mm <sup>2</sup>	48	12	6	4	10,7	102	2700	1300
-								
5T x 12F + 1 x 0,75mm <sup>2</sup>	60	12	6	5	10,7	96	2700	1300
-								
1T x 12F + 7 x 0,75mm <sup>2</sup>	12	12	8	1	12,1	155	2700	1300
1T x 12F + 6 x 0,75mm <sup>2</sup>	12	12	8	1	12,1	147	2700	1300
2T x 12F + 5 x 0,75mm <sup>2</sup>	12	12	8	1	12,1	141	2700	1300
2T x 12F + 6 x 0,75mm <sup>2</sup>	24	12	8	2	12,1	148	2700	1300
3T x 12F + 4 x 0,75mm <sup>2</sup>	36	12	8	3	12,1	134	2700	1300
3T x 12F + 5 x 0,75mm <sup>2</sup>	36	12	8	3	12,1	142	2700	1300
4T x 12F + 3 x 0,75mm <sup>2</sup>	48	12	8	4	12,1	128	2700	1300
4T x 12F + 4 x 0,75mm <sup>2</sup>	48	12	8	4	12,1	135	2700	1300

Other fibre counts available on demand. Cooper wires colours to consult.

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## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Crush performance:	2700 [N/10 cm]	IEC 60794-1-2-E3, $\Delta\alpha\leq 0,05$ dB
Bending radius:	Static: 15 x D Dynamic: 20 x D	IEC 60794-1-2-E11, $\Delta\alpha\leq 0,05$ dB
Water penetration:	3m sample, 1m head, 24h	IEC 60794-1-2-F5, no leakage
Temperature range:	Installation: -15... +55 [°C] Operation: -40... +70 [°C] Transport & Storage: -40... +70 [°C]	IEC 60794-1-2-F1, $\Delta\alpha\leq 0,05$ 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	24,5 $\Omega$ /km@20°C
Conductor material	Bare copper
Conductor cross section	0,75mm <sup>2</sup>
Insulated conductor dia.	2,2mm
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-CIP T22 24F SM G652D 2T12F + 4x0,75CU H05V-U 300/500V "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

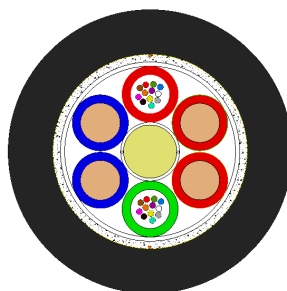
Cables will be shipped on disposable wooden or treated wooden drums. Both ends of the cable will be capped and accessible for testing. Rotation direction arrow will be marked on the drum together with identification information.

## DELIVERY LENGTH

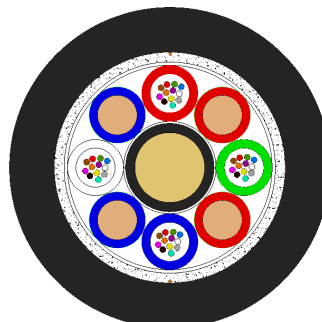
2000 – 8000 meters  $\pm 5\%$ , with possibility of supplying up to 5% of total contract quantity as short length cables which should be above 1000 meters long. Tolerance of 5 % of order quantity shall be allowed.

## ANNEX – DRAWINGS:

6 Elements Cable



8 Elements Cable



\*schematic drawing, not to scale

The information is believed to be correct at the time of issue. Fibrain reserves the right to change this specification without prior notice. This specification is not contractually valid unless specifically authorised by Fibrain. Buyer and/or user of this product has to make sure before using this product that it is suitable for the intended use. All questions of liability relating to this product are subject – in accordance with the prevailing – to the Terms of Sale of the selling Fibrain subsidiary.