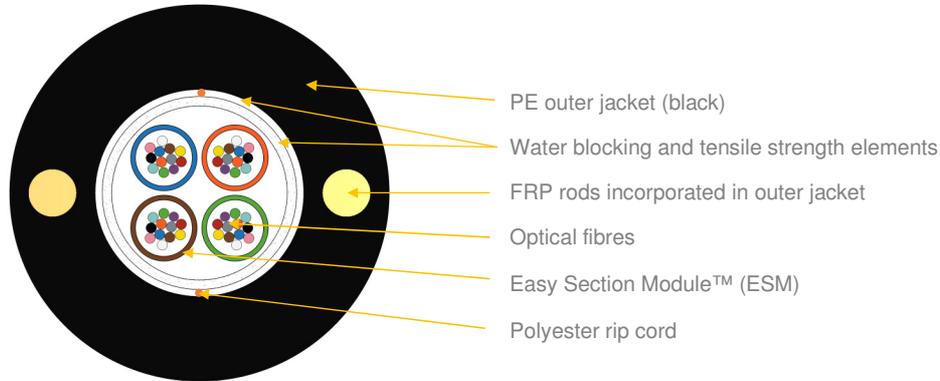


## Single HDPE jacket duct cable with Easy Section Modules™ MDC-FM (modulo 12)



\*schematic drawing of 48F configuration, not to scale

### APPLICATION:

Duct cable  
FTTH access networks  
Fully dielectric

### DESIGN:

Highly resistant, UV stabilized HDPE outer sheath  
1,3mm ESM™ modules with 12 fibres each  
Water swellable and tensile strength elements  
FRP rods embedded into outer jacket as a strength and anti-buckling elements  
Polyester ripcord, two pieces on opposite sides

### DESIGNS:

Variant	Quantity [pcs]				Ø nominal (typ. ±0,3) [mm]	Nominal weight (±10%) [kg/km]	Max allowed tension [N]	Max static tension [N]
	Fibres	Fibres per module	Total elements	Active modules				
1M x 12F	12	12	1	1	5,9 (max 6,4)	30	800	400
2M x 12F	24	12	2	2	7,0 (max 7,5)	40	800	400
3M x 12F	36	12	3	3	7,2 (max 7,7)	42	800	400
4M x 12F	48	12	4	4	7,9 (max 8,4)	49	1000	500
6M x 12F	72	12	6	6	9,0 (max 9,5)	55	1600	800
8M x 12F	96	12	8	8	10,2 (max 10,7)	85	1800	900
12M x 12F	144	12	12	12	11,2 (max 11,7)	110	2200	1100
16M x 12F	192	12	16	16	13,0 (max 13,5)	140	2300	1100
18M x 12F	216	12	18	18	14,0 (max 14,5)	155	2500	1200
24M x 12F	288	12	24	24	14,5 (max 15,0)	147	2700	1300

Other variants, designs, mechanical and environmental properties available on demand

### MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Bending performance:	15 x D (10 cycles)	IEC 60794-1-21-E6, Δα reversible
Temperature range:		IEC 60794-1-22-F1,
Installation	-5... +40 [°C]	
Operation	-30... +60 [°C]	Δα≤0,1 dB/km
Transport & Storage	-40... +70 [°C]	Δα reversible

Type:	MDC-FM	REV: 0
Issued:	29/09/2021	KP
Project:	079-21	

Test	Specification	Method	Requirements
Tensile strength	IEC60794-1-21 Method E1	<b>Mandrel diameter:</b> ≥ 30 x OD <b>Load:</b> as provided in table above	<b>Fibre strain:</b> < 0.5%(during test) ≤ 0.05%(after test) Δα reversible (after test)
		<b>Mandrel diameter:</b> ≥ 30 x OD <b>Sustained Load:</b> as provided in table above	<b>Fibre strain:</b> ≤ 0.25%
Crush resistance	IEC60794-1-21 Method E3	<b>Load:</b> 2000 N / 10 cm / 5 minutes <b>Plate size:</b> 100 mm x 100mm <b>Number of pts:</b> 3 (500mm apart)	Δα ≤ 0.05dB @ 1550nm (after test) No jacket cracking and fibre breakage
Impact resistance	IEC60794-1-21 Method E4	<b>Impact energy:</b> 5J <b>Radius:</b> 300 mm <b>Distance:</b> 1m <b>No. of impacts:</b> 3 at different points 500mm apart	Δα ≤ 0.1dB @ 1550nm (after test) No jacket cracking and fibre breakage
Torsion	IEC60794-1-21 Method E7	<b>Cable length to be twisted:</b> 1m <b>No. of cycles:</b> 5 <b>Twist angle:</b> ± 180° <b>Load:</b> 50N	Δα ≤ 0.1dB @ 1550nm (after test) No jacket cracking and fibre breakage
Bending	IEC60794-1-21 Method E11	<b>Mandrel radius:</b> 12 x OD / 5 turns (wrapped and unwrapped) / 10 flexing cycles <i>All fibres to be monitored</i>	Δα ≤ 0.05dB @ 1550nm (after test) No jacket cracking and fibre breakage
Water penetration	IEC 60794-1-22 Method F5B	<b>Water head:</b> 1m <b>Sample length:</b> 3m (3 samples of each cable) <b>Time:</b> 24 hrs	No water leakage

#### 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 is applied at 1-meter intervals:

“LENGTH MARKING”

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. Identification information will be placed on the drum.

#### DELIVERY LENGTH

Cable length on one reel is 4000m ±5%. Can be changed upon arrangement and it depends on fibre count.

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