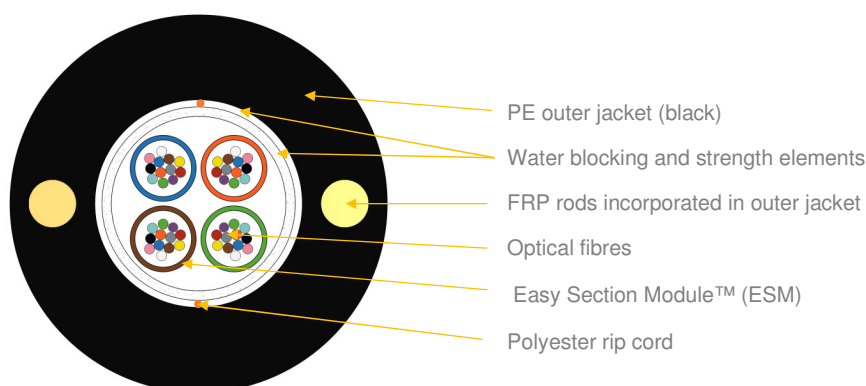


Type:	MDC-FM-FL	REV: 3.54
Issued:	15/03/2018	AM
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## Single HDPE jacket duct cable with Easy Section Modules™ MDC-FM



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

### APPLICATION:

Duct cable  
FTTH access networks  
Fully dielectric cable

### DESIGN:

1,3mm ESM™ modules with 12 fibres in each module  
Filling compound inside ESM™ modules  
Water swellable and tensile strength elements  
FRP rods as strength and anti-buckling elements  
(incorporated in outer jacket)  
UV resistant black HDPE sheath  
Polyester rip cord

### DESIGNS:

Variant	Quantity [pcs]				Ø nominal (typ. ±0,3) [mm]	Nominal weight (±10%) [kg/km]	Max allowed tension [N]	Max static tension [N]	Nominal sheath thickness [mm]
	Fibres	Fibres per module	Total elements	Active modules					
11M x 12F	132	12	11	11	11,2 (max 11,7)	100	2200	1100	2,4

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

### MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Bending performance: 15 x D (10 cycles) IEC 60794-1-2-E6, Δα reversible

Temperature range: IEC 60794-1-2-F1,

Installation -5... +40 [°C]

Operation -30... +60 [°C]

Transport & Storage -40... +70 [°C]

Δα≤0,1 dB/km

Δα reversible

Test	Specification	Method	Requirements
Tensile strength	IEC60794-1-2 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	IEC60794-1-2 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	IEC60794-1-2 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	IEC60794-1-2 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	IEC60794-1-2 Method E11	<b>Mandrel radius:</b> 12 x OD / 5 turns (wrapped and unwrapped) / 10 flexing cycles	Δα≤0.05dB @ 1550nm (after test) No jacket cracking and fibre breakage

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Water penetration	IEC 60794-1-2 Method F5B	<i>All fibres to be monitored</i> <b>Water head:</b> 1m <b>Sample length:</b> 3m (3 samples of each cable) <b>Time:</b> 24 hrs	No water leakage
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## OPTICAL FIBRES AND MODULES COLOUR IDENTIFICATION

Fibre number	1	2	3	4	5	6	7	8	9	10	11	12
Fibre colour (Couleur des fibres)	Red	Blue	Green	Yellow	Violet	White	Orange	Gray	Brown	Black	Aqua	Pink

## MODULES COLOUR CODE FOR CABLES WITH UP TO 12 TUBES

Module number	1	2	3	4	5	6	7	8	9	10	11
Module colour (Couleur des modules)	Blue	Green	Yellow	Violet	White	Orange	Gray	Brown	Black	Aqua	Pink

## MODULES COLOUR CODE FOR CABLES WITH UP TO 36 TUBES (WITH ADDITIONAL MARKING, WHICH CAN BE CUSTOMIZED)

### FIBRES PARAMETERS

For optical fibres parameters see **DSH\_OFp** document.

### MARKING

The following print (white / ink jet or hot stamping) is applied at 1-meter intervals:

Example: FREE No URGENCE 01 73 92 26 00 FIBRE LINE 2020 132 FO G.657 A2 "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. Identification information will be placed on the drum.

### DELIVERY LENGTH

Cable length on one reel is 4000m  $\pm 100$ m. Can be changed upon arrangement and it depends on fibre count.