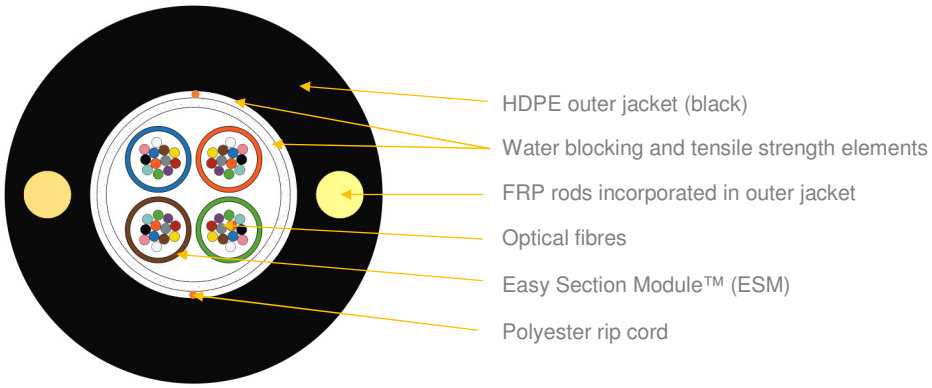
Single HDPE jacket duct cable with Easy Section Modules™
MDC-FM *(modulo 6)*



*schematic drawing of 48F configuration, not to scale

APPLICATION:

Duct cable
FTTH access networks
Fully dielectric cable

DESIGN:

1,0mm ESM™ modules with 6 fibres in each module
Dry design, no filling compound inside ESM™
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)	Nominal weight (±10%)	Max allowed tension	Max static tension
	Fibres	Fibres per module	Total elements	Active modules	[mm]	[kg/km]	[N]	[N]
1M x 6F	6	6	1	1	7,0	36	800	400
2M x 6F	12	6	2	2	7,0	37	800	400
4M x 6F	24	6	4	4	7,0	40	800	400
6M x 6F	36	6	6	6	7,9	49	1000	500
8M x 6F	48	6	8	8	9,0	55	1000	500
12M x 6F	72	6	12	12	10,2	70	1600	800
16M x 6F	96	6	16	16	10,2	77	1600	800
24M x 6F	144	6	24	24	11,5	94	1800	900
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-E11, 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

Test	Specification	Method	Requirements
Tensile strength	IEC60794-1-21 Method E1	**Mandrel diameter**: ≥ 30 x OD **Load**: as provided in table above	**Fibre strain:** < 0.5%(during test) ≤ 0.05%(after test) Δα reversible (after test)
		Mandrel diameter: ≥ 30 x OD **Sustained Load**: as provided in table above	**Fibre strain:** ≤ 0.25%
Crush resistance	IEC60794-1-21 Method E3	**Load:** 2000 N / 10 cm / 5 minutes **Plate size:** 100 mm x 100mm **Number of pts**: 3 (500mm apart)	Δα ≤ 0.05dB @ 1550nm (after test) No jacket cracking and fibre breakage

Impact resistance	IEC60794-1-21 Method E4	**Impact energy**: 5J **Radius**: 300 mm **Distance**: 1m **No. of impacts**: 3 at different points 500mm apart	Δα≤0.1dB @ 1550nm (after test) No jacket cracking and fibre breakage
Torsion	IEC60794-1-21 Method E7	**Cable length to be twisted:** 1m **No. of cycles:** 5 **Twist angle:** ± 180° **Load:** 50N	Δα≤0.1dB @ 1550nm (after test) No jacket cracking and fibre breakage
Bending	IEC60794-1-21 Method E11	**Mandrel radius**: 12 x OD / 5 turns (wrapped and unwrapped) / 10 flexing cycles *All fibres to be monitored*	Δα≤0.05dB @ 1550nm (after test) No jacket cracking and fibre breakage
Water penetration	IEC 60794-1-22 Method F5A	**Water head**: 1m **Sample length**: 3m (3 samples of each cable) **Time**: 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 (hot foil, ink jet, laser or other suitable available method depending on availability) 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 MDC-FM 48F SM G652D 8M6F "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. 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.