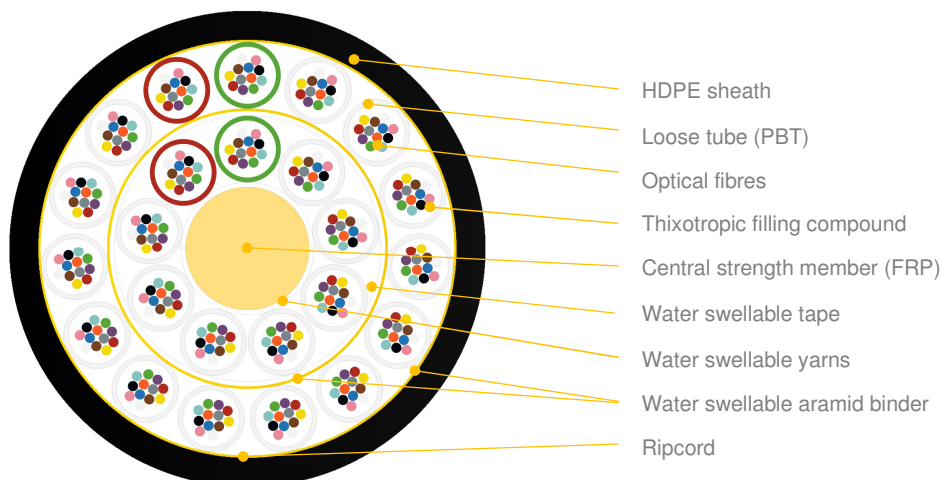


## MetroJET MK-LXS10 loose tube microcable



\*schematic drawing, not to scale

### DESIGN:

FRP strength and anti-buckling element  
 Dry yarns to prevent moisture ingress into the cable  
 SZ stranded cable core  
 Loose tubes (PBT Ø 1,4mm) with thixotropic filling compound  
 PBT fillers (loose tubes with mechanical fibre - when applicable)  
 Water-swellable aramid binder  
 Polyester ripcord  
 UV stabilized black HDPE sheath

Variant	Quantity [pcs]				Ø nominal (±3%) [mm]	Nominal weight (±5%) [kg/km]	Max allowed tension [N] / ε≤0,33%	Max static tension [N] / ε≤0,05%
	Fibres	Fibres per tube	Total elements	Active tubes				
	24T x 12F	288	12	24				

### MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Temperature range:

Installation: -15... +55 [°C]  
 Operation: -30... +70 [°C]  
 Transport & Storage: -40... +70 [°C]

Cable bending radius:

12 x cable diameter (during operation)  
 20 x cable diameter (during installation)

Test	Specification	Method	Requirements
Tensile strength	IEC60794-1-21 Method E1	<b>Sustained load:</b> 250N	$\Delta\epsilon_i \leq 0.05\%$ $\Delta\alpha \leq 0.05\text{dB @ } 1550\text{nm}$ (after test) No significant damage to fibre unit
		<b>Extended load:</b> 1000N or $\Delta\epsilon_i \leq 0.33\%$	$\Delta\epsilon_i < 0.33\%$ (during test) $\Delta\epsilon_i \leq 0.05\%$ (after test) $\Delta\alpha \leq 0.05\text{dB @ } 1550\text{nm}$ (after test) No significant damage to fibre unit
Crush resistance	IEC60794-1-21 Method E3	<b>Load:</b> 500 N / 10 cm	$\Delta\alpha \leq 0.1\text{dB @ } 1550\text{nm}$ (after test) No jacket cracking and fibre breakage
Impact resistance	IEC60794-1-21 Method E4	<b>Impact energy:</b> 2J	$\Delta\alpha \leq 0.1\text{dB @ } 1550\text{nm}$ (after test) No jacket cracking and fibre breakage
Torsion	IEC60794-1-21 Method E7	<b>Cable length to be twisted:</b> 2m <b>No. of cycles:</b> 10 <b>Twist angle:</b> ±180°	$\Delta\alpha \leq 0.1\text{dB @ } 1550\text{nm}$ (after test) No jacket cracking and fibre breakage
Bending	IEC60794-1-21 Method E11	<b>Mandrel radius:</b> 20 x OD / 4 turns / 3 cycles	$\Delta\alpha \leq 0.1\text{dB @ } 1550\text{nm}$ (after test) No jacket cracking and fibre breakage
Repeated bending	IEC60794-1-21 Method E6	<b>Sheave Radius:</b> 20 x OD	$\Delta\alpha \leq 0.1\text{dB @ } 1550\text{nm}$ (after test) No jacket cracking and fibre breakage

Type:	Metrojet MK-LXS10	REV: 0
Issued:	29/09/2021	KP
Project:	079-21	

Water penetration	IEC 60794-1-22 Method F5B	Water head: 1m Sample length: 3m Time: 24 hrs	No water leakage
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**FIBRE PARAMETERS**

For selected post-production optical fibres parameters please see DSH\_OFP document.

**OPTICAL FIBRE AND MODULES COLOUR IDENTIFICATION**

For optical fibres and modules identification information please see DSH\_Colors\_CODE\_XXXX document.

**MARKING**

The following print (inkjet, laser or other suitable printing method) is applied at 1-meter intervals:

**Example:** FIBRAIN MK-LXS10 T14 288F SM G657A1 24T 12F "YEAR OF MANUFACTURE" "LASER SYMBOL" "LENGTH MARKING" "BATCH NUMBER"

The accuracy of marking is  $\pm 0,5\%$ . Remarketing 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.

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