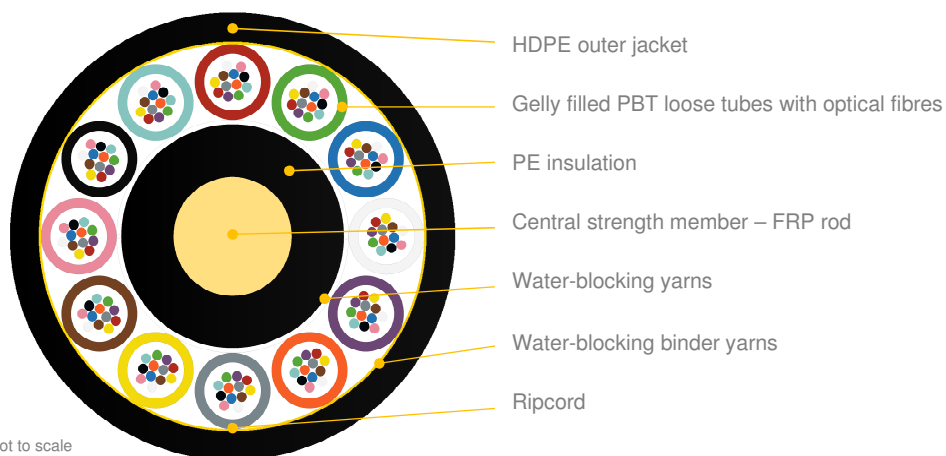


**MetroJET MK-LXS8 - Multi loose tube microcable (up to 144F)**



\*Schematic drawing, not to scale

**APPLICATION**

Microduct cabling air-blowing system application  
 Metro networks  
 Flexible network design  
 Distribution network

**DESIGN**

HDPE, UV stabilized outer jacket with low coefficient of friction  
 SZ stranded cable core  
 Gelly filled loose tubes with up to 12 optical fibres  
 Dummy fillers – if applicable  
 Water-blocking binder yarns  
 Ripcord – two pieces on opposite sides  
 Smallest outer diameter for blowing into 10mm (ID) ducts

**VARIANTS**

Variant	Quantity [pcs]				Ø nominal (±5%) [mm]	Nominal weight (±10%) [kg/km]
	Fibres	Fibres per tube	Total elements	Active tubes		
12T x 4F	48	4	12	12	7.8	47
12T x 6F	72	6	12	12	7.8	48
12T x 8F	96	8	12	12	7.8	49
12T x 10F	120	10	12	12	7.8	50
12T x 12F	144	12	12	12	7.8	52

<b>Suggested Duct - Ø (min)</b>	16/12mm, 14/12mm, 12/10mm, 14/10mm				
<b>Temperature Range</b>	Transport & Storage:	- 40 to + 70°C	<b>Minimum Bending Radius</b>		
	Installation:	- 15 to + 55°C		Under Maximum Tension:	15 x cable Ø
	Operation:	- 40 to + 60°C		Without Tension:	10 x cable Ø

**TECHNICAL AND ENVIRONMENTAL CABLE CHARACTERISTICS**

Test	Standard	Conditions	Requirements*
Tensile strength	IEC60794-1-21 Method E1	<b>Max allowed tension:</b> 1500 N	$\Delta\epsilon_r \leq 0.33\%$ , $\Delta\alpha$ reversible No significant damage to fibre unit
		<b>Max operating tension:</b> 550N	$\Delta\epsilon_r \leq 0.05\%$ , $\Delta\alpha \leq 0.05$ dB/km No significant damage to fibre unit
Crush	IEC 60794-1-21 Method E3	<b>Load:</b> 1000N/10cm <b>Time:</b> 1min	$\Delta\alpha$ reversible, No significant damage to fibre unit
Impact	IEC 60794-1-21 Method E4	<b>Impact energy:</b> 5J <b>Radius:</b> 300 mm <b>No. of impacts:</b> 3 ( 500mm apart)	$\Delta\alpha$ reversible, No jacket cracking and fibre breakage
Torsion	IEC 60794-1-21 Method E7	<b>Cable length to be twisted:</b> 2m <b>No. of cycles:</b> 10 <b>Twist angle:</b> $\pm 180^\circ$	$\Delta\alpha \leq 0.05$ dB/km, No jacket cracking and fibre breakage
Repeated bending	IEC 60794-1-21 Method E6	<b>Radius:</b> 10 x OD	No jacket cracking and fibre breakage

Type:	Metrojet MK-LXS8	REV: 1.8
Construction:	29/07/2015	PB
Modify:	04/03/2024	NJ

Cable bend	IEC 60794-1-21 Method E11	<b>Mandrel radius:</b> 15 x OD <b>No. of turns:</b> 4 <b>No. of cycles:</b> 3	$\Delta\alpha \leq 0.05$ dB/km, No jacket cracking and fibre breakage
Temperature cycling	IEC 60794-1-22 Method F1	<b>1st cycle:</b> +23 °C → -30 °C(Ta1) → +60 °C(Tb1) → -40 °C(Ta2) → +70 °C(Tb2) <b>2nd cycle:</b> -30 °C(Ta1) → -40 °C(Ta2) → +60 °C(Tb1) → +70 °C(Tb2) → +23 °C Soak time: 8 h	For TA2 and TB2 $\Delta\alpha \leq 0,05$ dB/km For TA1 and TB1 $\Delta\alpha \leq 0,05$ dB/km
Water penetration	IEC 60794-1-22 Method F5B	<b>Water head:</b> 1m <b>Sample length:</b> 3m <b>Time:</b> 24h	No water leakage

(\*) values for single-mode fibres, all optical measurements performed at @1550nm

### 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\_OFDP document.

### MARKING

The following print (inkjet / laser or other suitable printing method) 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 METROJET MK-LXS8 144F SM G657A1 12T12F "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 are shipped on disposable wooden or treated wooden drums. Both ends of the cable are capped and at least one is accessible for testing. Identification information is placed on a drum. Typical spool length is 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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