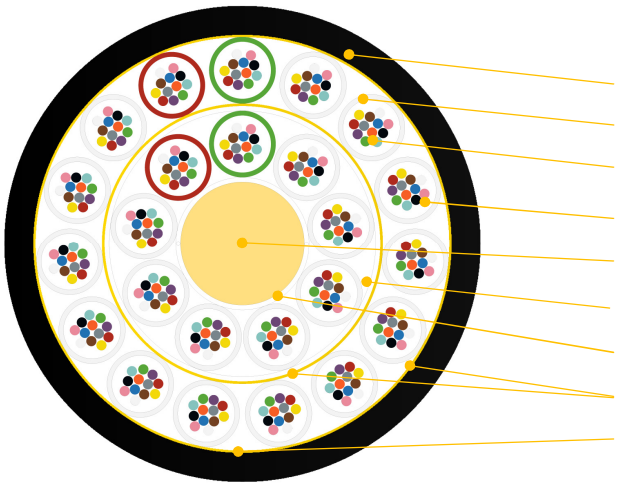
MetroJET MK-LXS10 loose tube microcable



*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 filing compound and ITU-T G.652D optical fibres
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%)	Nominal weight (±5%)	Max allowed tension	Max static tension
	Fibres	Fibres per tube	Total elements	Active tubes	[mm]	[kg/km]	[N] / ε≤0,33%	[N] / ε≤0,05%
24T x 12F	288	12	24	24	9,3	72	1000	250

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Temperature range:

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

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

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

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 (ink jet, laser or other suitable method depending on availability) is applied at 1-meter intervals:

Example: FIBRAIN METROJET MK-LXS10 288F SM G652D 24T12F "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. Rotation direction arrow will be marked on the drum together with identification information.

DELIVERY LENGTH

2000 – 8000 meters ± 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.