

16.03.2023

**Product Datasheet**  
 Fiber Optic Cable: J-B(2ZN)H  
 Riser MT LSZH G.657.A1 400N (ANSI)

**Order information**

Design	Part number
Riser MT LSZH 12 (1x12) G.657.A1 400N Ø 6.5 mm (ANSI)*	562594
Riser MT LSZH 24 (2x12) G.657.A1 400N Ø 6.5 mm (ANSI)*	562595
Riser MT LSZH 48 (4x12) G.657.A1 400N Ø 8.5 mm (ANSI)*	562596

\* The design is preliminary; its technical parameters are subject to revision. The lead time for this design should be agreed separately.

**Product Pros**



Euroclass Eca confirmed



All-dielectric



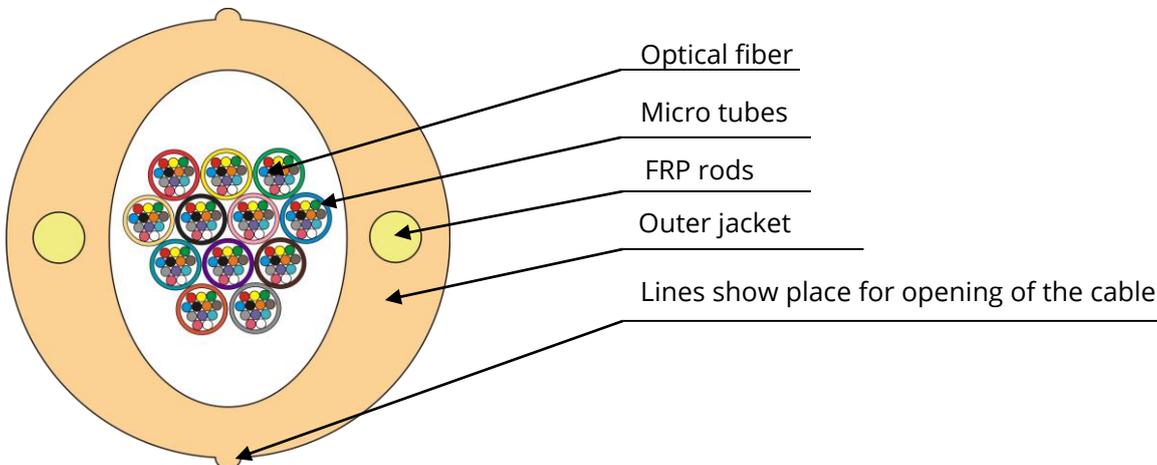
Flame-retardant



UV-resistant

**Application and design**

Installation into indoor/outdoor cable conduits and trays



Cable consists of bundle of micro tubes with optical fibers. Outer jacket is made of halogen-free material. Two strength members (FRP rods) are located inside the jacket. Jacket colors are available upon request.

**Color identification of loose tubes and optical fibers is according to ANSI/TIA-598-D-2014**

- |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Blue  | Orange  | Green   | Brown   | Slate   | White   | Red   | Black   | Yellow  | Violet  | Rose  | Aqua  |

Other colors upon request

## Cable marking example

Marking is made on each meter of cable

Fiber optic cable	= INCAB EUROPE =	Riser	LSZH	12	1	x	12	G.657.A1	400N	Ø 6.5mm	BATCH	2023	= 00001 m =
		1	2	3	4		5	6		7	8	9	10
													11

1	Cable name	7	Installation tension
2	Jacket type	8	Cable diameter
3	Fiber count	9	Batch number
4	Number of loose tubes	10	Year of production
5	Fibers per loose tube	11	Meter marking
6	Fiber type		

## Design details

Fiber count	Cable diameter, ±0.5 mm	Cable weight, kg/km	Minimum bending radius, mm
12 (1x12)	6.5	44.6	65
24 (2x12)	6.5	46.3	65
48 (4x12)	8.5	66.2	85

Other designs upon request

## Operating parameters

Operating temperature	-30°C...+50°C
Installation temperature	-10°C...+50°C
Transportation and storage temperature	-50°C...+50°C
Design life	25 years (per fiber supplier)

## Optical fiber

Fiber type	«G.657.A1»
Fiber manufacturer	Corning®
ITU-T Recommendation	G.657.A1

### Dimensional Specifications

Core-Clad Concentricity	0.5 µm
Cladding Diameter	125 ±0.7 µm
Cladding Non-Circularity	0.7 %
Coating Diameter	242 ±5 µm

### Transmission Specifications

Attenuation in the cable (dB/km*):	
1310 nm wavelength (Typical** / Max.)	0.35 / 0.38
1550 nm wavelength (Typical** / Max.)	0.20 / 0.30

\* Local attenuation discontinuities caused by cable winding on a reel are allowed.

\*\* Typical attenuation is the real level of optical attenuation of at least 90% fibers after cabling.

Additional information about optical fibers on [www.incabeurope.com](http://www.incabeurope.com)

## Cable parameters

Parameter	Nominal value	Evaluation criterion
Tensile strength (IEC 60794-1-21 method E1)	400 N	
Crush (IEC 60794-1-21 method E3)	60 N/cm	
Repeated bending (IEC 60794-1-21 method E6)	20 cycles, bending radius $\pm 90^\circ$	- $\Delta\alpha^* \leq 0.10$ dB - no damage
Torsion (IEC 60794-1-21 method E7)	- 10 cycles - torsion angle $\pm 360^\circ$ length 4 m	
Impact (IEC 60794-1-21 method E4)	Impact energy 3 J	
Temperature cycling** (IEC 60794-1-22 method F1)	- temperature range from $-30^\circ\text{C}$ to $50^\circ\text{C}$ - 2 cycles - cycle period $\geq 16$ hours	$\Delta\alpha^* \leq 0.10$ dB/km

\* - attenuation increasing at standard wavelengths

\*\* - other temperature range upon request

## Safety standards compliance

Regulation (EU) No 305/2011	Construction Products Regulation (CPR), Euroclass Eca confirmed according to EN 50575:2014+A1:2016 Reaction to fire: Eca Dangerous substances: no
IEC 60332-3-22	Tests on electric and optical fiber cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A
IEC 60754-1	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content
IEC 60754-2	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity
IEC 61034-2	Measurement of smoke density of cables burning under defined conditions
RoHS: 2011/65/EU; 2015/863/EU	"Restriction on the use of certain Hazardous Substances"
REACH: 1907/2006/EU	"Registration, Evaluation, Authorisation and Restrictions of Chemicals"

## Reel packing and marking

Cables are supplied on non-returnable wooden reels. Reel diameter is not less than 40 diameters of the cable. Not less than 2 m of inside end of the cable is fixed to the reel flange. The cable ends are sealed with waterproof covers.

The label on the outer reel flange contains our trademark, cable type, customer's name and PO, reel number, production date, cable length, cable weight net/gross.

The following information is printed on the reel flange: manufacturer's name and website, rotation direction, cable end indication, shipping and handling summary, labels "Fragile" and "Handle with care".

Our cable passport shows: cable type, technical standard number, cable length, fiber type, fiber coloring, fibers per tube, tube identification coloring, final attenuation for all fibers, refractive index of the fiber, fiber manufacturer and production date.

Cable passport is affixed to the inner flange in a plastic bag. Additional information can be included on the passport upon request.

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