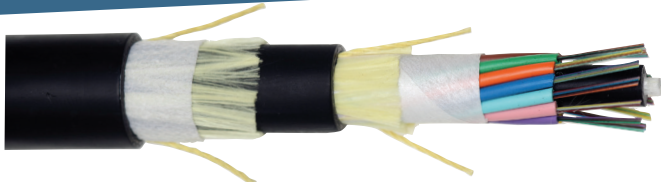




## ezLINK™ Oil & Gas Utility Riser LSZH Loose Tube (dry)

Industrial / Chemical Resistant / Indoor-Outdoor Low-Smoke / Zero-Halogen Cables



*Multiuse indoor/outdoor cables for heavy duty industrial applications involving cable trays and spaces where extreme mechanical durability is vital. Riser flame rating & low smoke without the use of halogenated materials provides life-safety benefits.*

### Overview

Prysmian's ezLINK™ indoor/outdoor gel free industrial heavy duty riser LSZH loose tube designs provide flame-rated network solutions for network applications in harsh mechanical / environmental locations. These cables combine a robust, flame retardant LSZH jacket material, flexible dry buffer tubes and swellable water blocking with Prysmian's extensive portfolio of single-mode optical fibers. Because of its application diversity, this advanced product eliminates the necessity/expense for traditional cable transition points once required in legacy systems. This design has been evaluated for tray cable applications using standards such as CSA 22.2 No 230, UL 1277 and NFPA 70.

### Product Snapshot

|                            |  |
|----------------------------|--|
| <b>Applications</b>        | Versatile heavy duty indoor-outdoor cable designed for industrial communication and control systems. Riser rating with complementary reduced smoke and hazardous emissions capability. |
| <b>Constructions</b>       | Dielectric (dual jacket)   |
| <b>Flame Ratings</b>       | Riser - low smoke (OFNR-LS / FT4 ST1)  |
| <b>Fiber Count</b>         | 2 to 288 fibers  |
| <b>Fiber Types</b>         | Single-mode (ESMF, bend-insensitive)<br>Multimode (62.5/125-OM1)   |
| <b>Performance</b>         | TIA/EIA-568, ANSI/ICEA S-83-596, ANSI/ICEA S-104-696, UL 1666, UL 1277, CSA 22.2 No. 230 & 232; Telcordia GR-409, Telcordia GR-20, CE RoHS Compliant                                   |
| <b>Registered Supplier</b> | ISO 9001, ISO 14001, TL 9000, and OHSAS 18001  |



### Features and Benefits

- 4500N compressive loading performance
- Ideal for applications with more severe hazards such as industrial complexes, transportation systems and tunnel networks
- Fiber identification using TIA standardized color coding
- Chemical resistant
- Dry buffer tubes simplifies access and reduces prep time
- Flame-retardant, black UV-resistant LSZH outer jacket
- Flexible kink-resistant buffer tubes for routing and storage
- Available with bend-insensitive single-mode optical fibers
- Meets CSA C22.2 No. 230 abnormal low temperature - impact test at -25° C

#### Temperature Range

|                       |                                      |
|-----------------------|--------------------------------------|
| Shipping and Storage: | -58° F to +158° F (-50° C to +70° C) |
| Installation:         | -22° F to +140° F (-30° C to +60° C) |
| Operation:            | -58° F to +158° F (-50° C to +70° C) |

#### Mechanical Specifications

|                            |                   |
|----------------------------|-------------------|
| Maximum installation load: | 1000 lbf (4450 N) |
| Maximum operation load:    | 300 lbf (1330 N)  |



## ezLINK™ Oil & Gas | Riser LSZH | High Crush | Loose Tube (dry)

Industrial | Chemical Resistant | Tray Rated | Indoor/Outdoor Cables

### Ordering Guide

The Prysmian Group part number incorporates several significant attributes involving cable design and optical performance. The appropriate part number can be configured using the process described below.

**Example: ezLINK™ I/O Oil & GAS Heavy Duty Riser LSZH with Dry Buffer Tubes | 48 62.5/125 multimode fibers (printed in feet)**

|                          |                         |                       |                         |                     |                      |                      |
|--------------------------|-------------------------|-----------------------|-------------------------|---------------------|----------------------|----------------------|
| <b>1</b> LENGTH MARKINGS | <b>2</b> PRODUCT FAMILY | <b>3</b> CONSTRUCTION | <b>4</b> FIBER GROUPING | <b>5</b> FIBER TYPE | <b>6</b> FIBER COUNT | <b>7</b> FIBER GRADE |
| F                        | IRZHF                   | BLANK                 | 12                      | G6                  | 048                  | M2                   |

| CABLE INFORMATION        |  |
|--------------------------|--|
| <b>1</b> LENGTH MARKINGS | F = Feet or M = Meters   |
| <b>2</b> PRODUCT FAMILY  | Riser-Low Smoke Zero Halogen   FT4 ST1<br>ezLINK I/O Oil & Gas Heavy Duty Riser LSZH w/Dry Buffer Tubes<br>IRZHF = I/O Oil & Gas Riser LSZH Tray HD (double jacket)<br>OFNR-LS / FT4 ST1 |
| <b>3</b> CONSTRUCTION    | (blank) = Not available with interlock armor   |
| <b>4</b> FIBER GROUPING  | 12 = 12f per unit or tube  |

| FIBER INFORMATION    |  |                       |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
|----------------------|--|-----------------------|-----------------|-----------------|---------------------|-----------------|-------------------|---------------------|----------------|---------------|---------------------|----------------|-----------------------|-----------|--|--|---------------------|-----------------|------------|--------------|----------|--------------|
| <b>5</b> FIBER TYPE  | <p><b>SINGLE-MODE</b></p> <p>HB = Single-Mode (ITU G.652 C &amp; D) Low Water Peak<br/>ES = Enhanced Single-Mode (ITU G.652 C &amp; D)<br/>CE = Corning™ SMF28e+ Single-Mode<br/>B1 = Bend-Insensitive Single-Mode (ITU G.657.A1 &amp; G.652.D)<br/>B2 = Bend-Insensitive Single-Mode (ITU G.657.A2 &amp; .B2, &amp; G.652.D)</p> <table border="1"> <thead> <tr> <th>MULTIMODE</th> <th>Wavelength (nm)</th> <th>Bandwidth (MHz)</th> <th>1 GbE Dist (m)</th> <th>10 GbE Dist (m)</th> </tr> </thead> <tbody> <tr> <td>G6 = OM1 (62.5µm)</td> <td>850/1300</td> <td>200/500</td> <td>300/550</td> <td>33/___</td> </tr> </tbody> </table>   | MULTIMODE             | Wavelength (nm) | Bandwidth (MHz) | 1 GbE Dist (m)      | 10 GbE Dist (m) | G6 = OM1 (62.5µm) | 850/1300            | 200/500        | 300/550       | 33/___              |                |                       |           |  |  |                     |                 |            |              |          |              |
| MULTIMODE            | Wavelength (nm)  | Bandwidth (MHz)       | 1 GbE Dist (m)  | 10 GbE Dist (m) |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| G6 = OM1 (62.5µm)    | 850/1300   | 200/500               | 300/550         | 33/___          |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| <b>6</b> FIBER COUNT | 002 to 288 fibers  |                       |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| <b>7</b> FIBER GRADE | <table border="1"> <thead> <tr> <th colspan="3">SINGLE-MODE</th> </tr> <tr> <th>Attenuation (dB/km)</th> <th>Wavelength (nm)</th> <th>Fiber Type</th> </tr> </thead> <tbody> <tr> <td>E1 = 0.40/0.40/0.30</td> <td>1310/1383/1550</td> <td>HB, ES, or CE</td> </tr> <tr> <td>E3 = 0.35/0.35/0.25</td> <td>1310/1383/1550</td> <td>HB, ES, B1, B2, or CE</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">MULTIMODE</th> </tr> <tr> <th>Attenuation (dB/km)</th> <th>Wavelength (nm)</th> <th>Fiber Type</th> </tr> </thead> <tbody> <tr> <td>M2 = 3.5/1.0</td> <td>850/1300</td> <td>OM1 (62.5µm)</td> </tr> </tbody> </table> <p>Other cable constructions and fiber performance grades available on request.</p> | SINGLE-MODE           |                 |                 | Attenuation (dB/km) | Wavelength (nm) | Fiber Type        | E1 = 0.40/0.40/0.30 | 1310/1383/1550 | HB, ES, or CE | E3 = 0.35/0.35/0.25 | 1310/1383/1550 | HB, ES, B1, B2, or CE | MULTIMODE |  |  | Attenuation (dB/km) | Wavelength (nm) | Fiber Type | M2 = 3.5/1.0 | 850/1300 | OM1 (62.5µm) |
| SINGLE-MODE          |  |                       |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| Attenuation (dB/km)  | Wavelength (nm)  | Fiber Type            |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| E1 = 0.40/0.40/0.30  | 1310/1383/1550   | HB, ES, or CE         |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| E3 = 0.35/0.35/0.25  | 1310/1383/1550   | HB, ES, B1, B2, or CE |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| MULTIMODE            |  |                       |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| Attenuation (dB/km)  | Wavelength (nm)  | Fiber Type            |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |
| M2 = 3.5/1.0         | 850/1300   | OM1 (62.5µm)          |                 |                 |                     |                 |                   |                     |                |               |                     |                |                       |           |  |  |                     |                 |            |              |          |              |

### Nominal Design Parameters

#### ezLINK™ Oil & Gas Utility Heavy Duty Riser Dielectric (Double Jacket) | IRZHF Series | OFNR-LS / FT4 ST1

| Fiber Count | # of Buffer Tubes Outer/Inner Layer | Fibers Per Unit | Diameter inches (mm) | Cable Weight lb/kft (kg/km) | Bend Radius Load inches (cm) | Bend Radius No Load inches (cm) |
|-------------|-------------------------------------|-----------------|----------------------|-----------------------------|------------------------------|---------------------------------|
| 2 to 72     | 6                                   | 12              | 0.66 (16.7)          | 177 (263)                   | 13.2 (33.4)                  | 6.6 (16.7)                      |
| 74 to 84    | 7                                   | 12              | 0.69 (17.5)          | 194 (288)                   | 13.8 (35.0)                  | 6.9 (17.5)                      |
| 86 to 96    | 8                                   | 12              | 0.72 (18.3)          | 212 (315)                   | 14.4 (36.6)                  | 7.2 (18.3)                      |
| 98 to 108   | 9                                   | 12              | 0.76 (19.4)          | 238 (354)                   | 15.3 (38.9)                  | 7.6 (19.4)                      |
| 110 to 120  | 10                                  | 12              | 0.79 (20.0)          | 253 (376)                   | 15.8 (40.0)                  | 7.9 (20.0)                      |
| 122 to 132  | 11                                  | 12              | 0.82 (20.9)          | 276 (410)                   | 16.5 (41.8)                  | 8.2 (20.9)                      |
| 134 to 144  | 12                                  | 12              | 0.85 (21.7)          | 299 (445)                   | 17.1 (43.4)                  | 8.5 (21.7)                      |
| 146 to 216  | 12 / 6                              | 12              | 0.88 (22.3)          | 287 (427)                   | 17.6 (44.6)                  | 8.8 (22.3)                      |
| 218 to 264  | 14 / 8                              | 12              | 0.94 (23.9)          | 327 (486)                   | 18.9 (47.8)                  | 9.5 (23.9)                      |
| 266 to 288  | 15 / 9                              | 12              | 0.98 (25.0)          | 355 (529)                   | 19.7 (50.0)                  | 9.9 (25.0)                      |

Note: Cable damage may occur if installation temperature limits are exceeded; therefore, Prysmian Group recommends storing I/O cables in appropriate temperature conditions ≥ 24 hours prior to placement.

© DRAKA & PRYSMIAN - Brands of The Prysmian Group. 2017 All Right Reserved. The information contained within this document must not be copied, reprinted or reproduced in any form, either wholly or in part, without the written consent of Prysmian Group. The information is believed correct at the time of issue. Prysmian Group reserves the right to amend any specifications without notice. These specifications are not contractually valid unless specifically authorized by Prysmian Group. Issued June 2017.

### Prysmian Group

700 Industrial Drive | Lexington, SC 29072

+1-800-879-9862 | +1-800-669-0808 | website: [na.prysmiangroup.com/telecom](http://na.prysmiangroup.com/telecom)