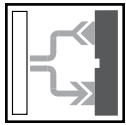


## Introduction to Fiber Optic Cables



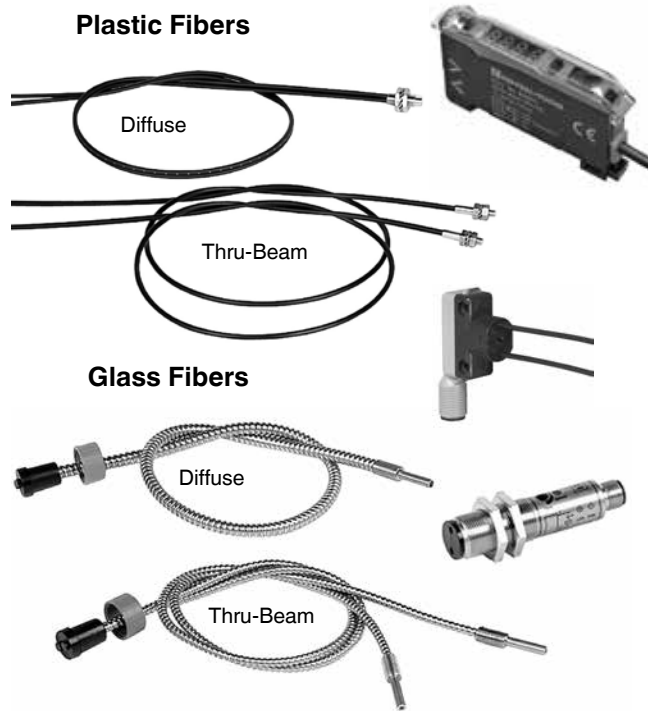
### Fiber Optic Diffuse and Thru-Beam Mode

In applications involving small targets or unfavorable conditions, fiber optic cables may be the sensible solution.

Glass fiber optic cables are constructed from tiny strands of glass that are bundled together inside an application-specific sheath. Plastic fiber optic cables are manufactured from a light conductive plastic monofilament material, which is protected by a PVC jacket.

When attached to the end of certain photoelectric sensors, they guide the light through the cable and out at the sensing head. A separate fiber attached to the receiver returns the light. Pepperl+Fuchs offers both glass and plastic fiber optic cables. The diameter of the glass fiber optic cables is generally larger than plastic and provides a longer sensing range. Pepperl+Fuchs' glass cables can withstand temperatures as high as 900 °F while the plastic cables are rated as high as 221 °F. The plastic cables are typically used due to their small size and narrow beam diameter. This enables easy detection of small parts such as pins on an IC chip. Plastic cables can be "cut-to-length" in the field; therefore, the correct length doesn't have to be specified when ordering. Obtaining the maximum light intensity possible in each application is accomplished by customizing the plastic cables to the shortest possible length. This reduces the inherent "light losses" that occur inside the cable. Pepperl+Fuchs offers three standard types of sheaths: stainless steel, silicone, and PVC.

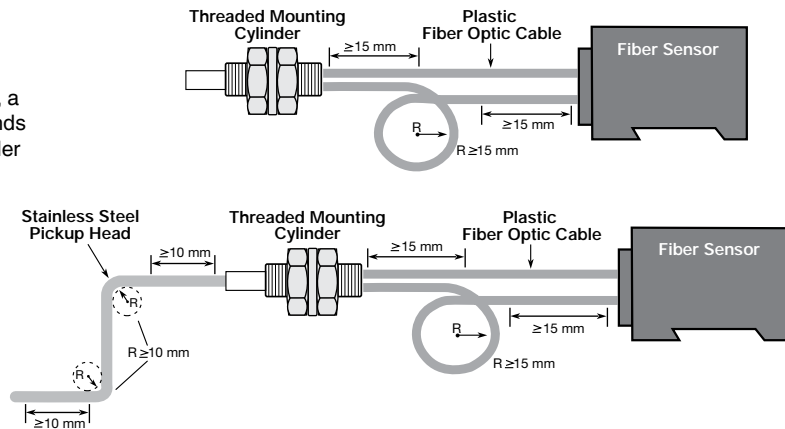
In diffuse mode sensing, a bifurcated cable (2 in 1) is used. Thru-beam requires two individual cables.



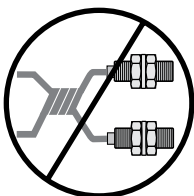
### Mounting and Fitting

When positioning plastic fiber optic cable, a minimum bending radius of 15 mm must be maintained. In addition, a straight section of  $\geq 15$  mm must be maintained at both ends of fiber optic cable between the threaded mounting cylinder and optical sensor.

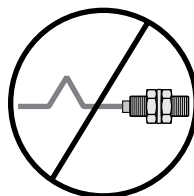
Some fiber optic cables have a flexible stainless steel pickup attached. In such a case, a minimum bending radius of 10 mm must be maintained. Also, to avoid damage to the pickup head light guide, a straight section of 10 mm must be maintained at both ends.



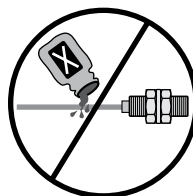
### Please Note!



Do not twist or kink plastic fiber optic cables.



Avoid contact with petroleum or organic solvents.



Excessive pulling will lead to severe damage.

## Specifications for Glass Fiber Optic Cables

(with Model Numbers L...)

|                                  | PVC Sheathing     | Stainless Steel Sheathing | Silicone Sheathing |
|----------------------------------|-------------------|---------------------------|--------------------|
| <b>Protection (IEC)</b>          | IP67              | IP40                      | IP67               |
| <b>Bending Radius</b>            | ≤ 30 mm           | ≤ 20 mm                   | ≤ 25 mm            |
| <b>Working Temperature Range</b> | -58 °F to +248 °F | -58 °F to +572 °F         | -58 °F to +356 °F  |

## Minimum Bend Radius for HPF and FE Cables

To help prevent possible damage to fiber optic cables, do not exceed the minimum bend radius.

|   |                    |
|---|--------------------|
| <b>Glass Stainless Steel Sheathing Cables</b> | 1 inch (25 mm)     |
| <b>Glass PVC Sheathing Cables</b>             | 0.75 inch (19 mm)  |
| <b>Plastic Cables - 1 mm diameter core</b>    | 1 inch (25 mm)     |
| <b>Plastic Cables - 0.5 mm diameter core</b>  | 0.5 inch (12.5 mm) |

## Temperature Ranges for HPF and FE Cables

|   |                                       |
|---|---------------------------------------|
| Plastic Fiber Optic Sensor Head   | -22 °F to +158 °F (-30 °C to +70 °C)  |
| Plastic Cable   | -22 °F to +158 °F (-30 °C to +70 °C)  |
| Plastic Cable Lens Accessories  | -22 °F to +158 °F (-30 °C to +70 °C)  |
| Glass Cable (PVC Sheathing)   | -40 °F to +250 °F (-40 °C to +120 °C) |
| Glass Cable (Stainless Steel Sheathing)                                     | -40 °F to +450 °F (-40 °C to +232 °C) |
| Glass Cable (High Temperature)  | -40 °F to +900 °F (-40 °C to +482 °C) |
| Glass Cable End Tips  | -40 °F to +585 °F (-40 °C to +307 °C) |
| Glass Cable for SU18, SU19, SU17.1, and ML17-LL (Stainless Steel Sheathing) | -67 °F to +392 °F (-55 °C to +200 °C) |
| Glass Cable for SU18, SU19, SU17.1, and ML17-LL (PVC Sheathing)             | -67 °F to +149 °F (-55 °C to +65 °C)  |

**Note:** SU19 Series sensing ranges are reduced by 50% in high-speed or glass modes.

## Plastic Fiber Optic Cables

### Diffuse Plastic Fiber Optic Cables

for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Nonthreaded Cylindrical |              |                |                    |                    |                |                 |
|-------------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number            | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| KLR-C04-1.0-2.0-K133    | 2 m          | 1 mm           | PVC                | SU18 High Power    | 25 mm          |                 |
|                         |              |                |                    | SU18 High Speed    | 7 mm           |                 |
|                         |              |                |                    | SU19               | 7 mm           |                 |
|                         |              |                |                    | SU17.1             | 21 mm          |                 |
|                         |              |                |                    | ML17-LL            | 4 mm           |                 |
|                         |              |                |                    | MHP-FR             | not compatible |                 |
| HPF-D005-H              | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 118 mm         |                 |
|                         |              |                |                    | SU18 High Speed    | 14 mm          |                 |
|                         |              |                |                    | SU19               | 14 mm          |                 |
|                         |              |                |                    | SU17.1             | 100 mm         |                 |
|                         |              |                |                    | ML17-LL            | 18 mm          |                 |
|                         |              |                |                    | MHP-FR             | not compatible |                 |
| KLR-C02-1.3-2.0-K86     | 2 m          | 1.3 mm         | PVC                | SU18 High Power    | 280 mm         |                 |
|                         |              |                |                    | SU18 High Speed    | 80 mm          |                 |
|                         |              |                |                    | SU19               | 80 mm          |                 |
|                         |              |                |                    | SU17.1             | 238 mm         |                 |
|                         |              |                |                    | ML17-LL            | 45 mm          |                 |
|                         |              |                |                    | MHP-FR             | not compatible |                 |
| KLR-C09-1.25-2.0-K77    | 2 m          | 1.25 mm        | PVC                | SU18 High Power    | 110 mm         |                 |
|                         |              |                |                    | SU18 High Speed    | 30 mm          |                 |
|                         |              |                |                    | SU19               | 30 mm          |                 |
|                         |              |                |                    | SU17.1             | 94 mm          |                 |
|                         |              |                |                    | ML17-LL            | 18 mm          |                 |
|                         |              |                |                    | MHP-FR             | not compatible |                 |
| KLR-C02-2.2-2.0-K85     | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 280 mm         |                 |
|                         |              |                |                    | SU18 High Speed    | 80 mm          |                 |
|                         |              |                |                    | SU19               | 80 mm          |                 |
|                         |              |                |                    | SU17.1             | 238 mm         |                 |
|                         |              |                |                    | ML17-LL            | 45 mm          |                 |
|                         |              |                |                    | MHP-FR             | 18 mm          |                 |
| KLR-C16-2.2-2.0-K72     | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 300 mm         |                 |
|                         |              |                |                    | SU18 High Speed    | 85 mm          |                 |
|                         |              |                |                    | SU19               | 85 mm          |                 |
|                         |              |                |                    | SU17.1             | 255 mm         |                 |
|                         |              |                |                    | ML17-LL            | 48 mm          |                 |
|                         |              |                |                    | MHP-FR             | 20 mm          |                 |

Plastic Fiber Optic Cables

Diffuse Plastic Fiber Optic Cables  
for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

| Threaded Cylindrical |              |                |                    |                    |                |                 |
|----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| HPF-D004-H           | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 118 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 16 mm          |                 |
|                      |              |                |                    | SU19               | 16 mm          |                 |
|                      |              |                |                    | SU17.1             | 100 mm         |                 |
|                      |              |                |                    | ML17-LL            | 13 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| KLR-C09-1.25-2.0-K76 | 2 m          | 1.25 mm        | PVC                | SU18 High Power    | 100 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 30 mm          |                 |
|                      |              |                |                    | SU19               | 30 mm          |                 |
|                      |              |                |                    | SU17.1             | 85 mm          |                 |
|                      |              |                |                    | ML17-LL            | 16 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| KLR-C02-1.3-2.0-K84  | 2 m          | 1.3 mm         | PVC                | SU18 High Power    | 280 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 80 mm          |                 |
|                      |              |                |                    | SU19               | 80 mm          |                 |
|                      |              |                |                    | SU17.1             | 238 mm         |                 |
|                      |              |                |                    | ML17-LL            | 45 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| KLR-C09-1.25-2.0-K74 | 2 m          | 1.25 mm        | PVC                | SU18 High Power    | 100 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 30 mm          |                 |
|                      |              |                |                    | SU19               | 30 mm          |                 |
|                      |              |                |                    | SU17.1             | 85 mm          |                 |
|                      |              |                |                    | ML17-LL            | 16 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| HPF-D002-H           | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 471 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 66 mm          |                 |
|                      |              |                |                    | SU19               | 66 mm          |                 |
|                      |              |                |                    | SU17.1             | 400 mm         |                 |
|                      |              |                |                    | ML17-LL            | 60 mm          |                 |
|                      |              |                |                    | MHP-FR             | 18 mm          |                 |
| HPF-D002-HL5         | 5 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 471 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 50 mm          |                 |
|                      |              |                |                    | SU19               | 50 mm          |                 |
|                      |              |                |                    | SU17.1             | 400 mm         |                 |
|                      |              |                |                    | ML17-LL            | 60 mm          |                 |
|                      |              |                |                    | MHP-FR             | 18 mm          |                 |

## Plastic Fiber Optic Cables

### Diffuse Plastic Fiber Optic Cables

for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Threaded Cylindrical (cont.) |              |                |                    |                    |               |                 |
|------------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number                 | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| KLR-C16-2.2-2.0-K71          | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 300 mm        |                 |
|                              |              |                |                    | SU18 High Speed    | 85 mm         |                 |
|                              |              |                |                    | SU19               | 85 mm         |                 |
|                              |              |                |                    | SU17.1             | 255 mm        |                 |
|                              |              |                |                    | ML17-LL            | 48 mm         |                 |
|                              |              |                |                    | MHP-FR             | 20 mm         |                 |
| HPF-D001-H                   | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 647 mm        |                 |
|                              |              |                |                    | SU18 High Speed    | 88 mm         |                 |
|                              |              |                |                    | SU19               | 88 mm         |                 |
|                              |              |                |                    | SU17.1             | 550 mm        |                 |
|                              |              |                |                    | ML17-LL            | 85 mm         |                 |
|                              |              |                |                    | MHP-FR             | 33 mm         |                 |
| HPF-D001-HL03                | 3 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 647 mm        |                 |
|                              |              |                |                    | SU18 High Speed    | 88 mm         |                 |
|                              |              |                |                    | SU19               | 88 mm         |                 |
|                              |              |                |                    | SU17.1             | 550 mm        |                 |
|                              |              |                |                    | ML17-LL            | 85 mm         |                 |
|                              |              |                |                    | MHP-FR             | 33 mm         |                 |

| Bendable Probe     |              |                |                    |                    |                |                 |
|--------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number       | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| HPF-D006           | 2 m          | 1 mm           | Black polyethylene | SU18 High Power    | 122 mm         |                 |
|                    |              |                |                    | SU18 High Speed    | 23 mm          |                 |
|                    |              |                |                    | SU19               | 23 mm          |                 |
|                    |              |                |                    | SU17.1             | 104 mm         |                 |
|                    |              |                |                    | ML17-LL            | 20 mm          |                 |
|                    |              |                |                    | MHP-FR             | not compatible |                 |
| KLR 00-2.2-2.0-K57 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 210 mm         |                 |
|                    |              |                |                    | SU18 High Speed    | 60 mm          |                 |
|                    |              |                |                    | SU19               | 60 mm          |                 |
|                    |              |                |                    | SU17.1             | 179 mm         |                 |
|                    |              |                |                    | ML17-LL            | 34 mm          |                 |
|                    |              |                |                    | MHP-FR             | 6 mm           |                 |



Plastic Fiber Optic Cables

Diffuse Plastic Fiber Optic Cables

for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

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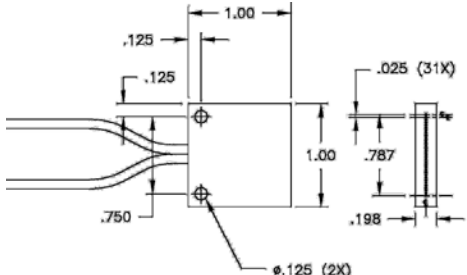
Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Rectangular          |              |                |                    |                    |                |                 |
|----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| KLR-C02-1.3-2.0-K130 | 2 m          | 1.3 mm         | PVC                | SU18 High Power    | 8 mm           |                 |
|                      |              |                |                    | SU18 High Speed    | 8 mm           |                 |
|                      |              |                |                    | SU19               | 8 mm           |                 |
|                      |              |                |                    | SU17.1             | 8 mm           |                 |
|                      |              |                |                    | ML17-LL            | 8 mm           |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| KHR-C02-1.0-2.0-K129 | 2 m          | 1 mm           | PVC                | SU18 High Power    | 10 mm          |                 |
|                      |              |                |                    | SU18 High Speed    | 10 mm          |                 |
|                      |              |                |                    | SU19               | 10 mm          |                 |
|                      |              |                |                    | SU17.1             | 10 mm          |                 |
|                      |              |                |                    | ML17-LL            | 10 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| KHR-A02-2.2-2.0-K127 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 175 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 50 mm          |                 |
|                      |              |                |                    | SU19               | 50 mm          |                 |
|                      |              |                |                    | SU17.1             | 149 mm         |                 |
|                      |              |                |                    | ML17-LL            | 28 mm          |                 |
|                      |              |                |                    | MHP-FR             | 12 mm          |                 |

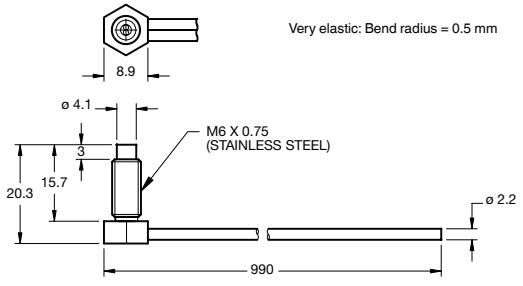
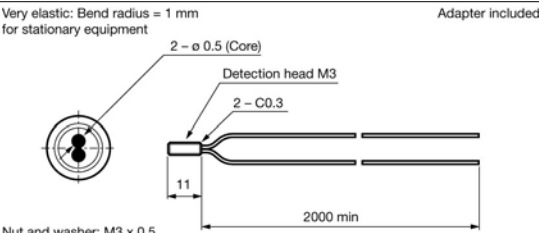
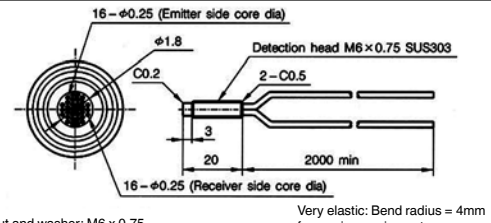
| Array                |              |                |                    |                    |               |                 |
|----------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| KLR-A32-2.2-2.0-K83  | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 120 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 35 mm         |                 |
|                      |              |                |                    | SU19               | 35 mm         |                 |
|                      |              |                |                    | SU17.1             | 102 mm        |                 |
|                      |              |                |                    | ML17-LL            | 19 mm         |                 |
|                      |              |                |                    | MHP-FR             | 8 mm          |                 |
| KLR-A32-2.2-2.0-K141 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 120 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 35 mm         |                 |
|                      |              |                |                    | SU19               | 35 mm         |                 |
|                      |              |                |                    | SU17.1             | 102 mm        |                 |
|                      |              |                |                    | ML17-LL            | 19 mm         |                 |
|                      |              |                |                    | MHP-FR             | 8 mm          |                 |

Plastic Fiber Optic Cables

Diffuse Plastic Fiber Optic Cables  
for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

| Array (cont.) |              |                |                    |                    |               |  |
|---------------|--------------|----------------|--------------------|--------------------|---------------|--|
| Model Number  | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm)  |
| HPF-D032      | 2 m          | 2.2 mm         | Plastic            | SU18 High Power    | 191 mm        |  |
|               |              |                |                    | SU18 High Speed    | 46 mm         |  |
|               |              |                |                    | SU19               | 46 mm         |  |
|               |              |                |                    | SU17.1             | 162 mm        |  |
|               |              |                |                    | ML17-LL            | 52 mm         |  |
|               |              |                |                    | MHP-FR             | 21 mm         |  |

(Inches)

| High Flex Cable |              |                |                    |                    |                |  |
|-----------------|--------------|----------------|--------------------|--------------------|----------------|--|
| Model Number    | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm)  |
| HPF-D070-H      | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 214 mm         |   |
|                 |              |                |                    | SU18 High Speed    | 34 mm          |  |
|                 |              |                |                    | SU19               | 34 mm          |  |
|                 |              |                |                    | SU17.1             | 182 mm         |  |
|                 |              |                |                    | ML17-LL            | 46 mm          |  |
|                 |              |                |                    | MHP-FR             | 12 mm          |  |
| HPF-D029        | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 29 mm          |  |
|                 |              |                |                    | SU18 High Speed    | 5 mm           |  |
|                 |              |                |                    | SU19               | 5 mm           |  |
|                 |              |                |                    | SU17.1             | 25 mm          |  |
|                 |              |                |                    | ML17-LL            | 11 mm          |  |
|                 |              |                |                    | MHP-FR             | not compatible |  |
| HPF-D012        | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 294 mm         |  |
|                 |              |                |                    | SU18 High Speed    | 47 mm          |  |
|                 |              |                |                    | SU19               | 47 mm          |  |
|                 |              |                |                    | SU17.1             | 250 mm         |  |
|                 |              |                |                    | ML17-LL            | 51 mm          |  |
|                 |              |                |                    | MHP-FR             | 18 mm          |  |



Plastic Fiber Optic Cables

Diffuse Plastic Fiber Optic Cables

for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Specialty Versions    |              |                |                    |                    |                |                 |
|-----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number          | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| HPF-D025              | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 29 mm          |                 |
|                       |              |                |                    | SU18 High Speed    | 29 mm          |                 |
|                       |              |                |                    | SU19               | 29 mm          |                 |
|                       |              |                |                    | SU17.1             | 17 mm          |                 |
|                       |              |                |                    | ML17-LL            | 29 mm          |                 |
|                       |              |                |                    | MHP-FR             | not compatible |                 |
| KLR 00-2.2-2.0-K40    | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 274 mm         |                 |
|                       |              |                |                    | SU18 High Speed    | 44 mm          |                 |
|                       |              |                |                    | SU19               | 44 mm          |                 |
|                       |              |                |                    | SU17.1             | 233 mm         |                 |
|                       |              |                |                    | ML17-LL            | 52 mm          |                 |
|                       |              |                |                    | MHP-FR             | 19 mm          |                 |
| KLR-C02-1.25-2.0-K147 | 2 m          | 1.25 mm        | PTFE               | SU18 High Power    | N/A            |                 |
|                       |              |                |                    | SU18 High Speed    | N/A            |                 |
|                       |              |                |                    | SU19               | N/A            |                 |
|                       |              |                |                    | SU17.1             | N/A            |                 |
|                       |              |                |                    | ML17-LL            | N/A            |                 |
|                       |              |                |                    | MHP-FR             | not compatible |                 |
| HPF-D027-L05          | 5 m          | 2.2 mm         | Fluorine           | SU18 High Power    | N/A            |                 |
|                       |              |                |                    | SU18 High Speed    | N/A            |                 |
|                       |              |                |                    | SU19               | N/A            |                 |
|                       |              |                |                    | SU17.1             | N/A            |                 |
|                       |              |                |                    | ML17-LL            | N/A            |                 |
|                       |              |                |                    | MHP-FR             | N/A            |                 |
| HPF-D014              | 2 m          | 2.2 mm         | Fluorine           | SU18 High Power    | 224 mm         |                 |
|                       |              |                |                    | SU18 High Speed    | 36 mm          |                 |
|                       |              |                |                    | SU19               | 36 mm          |                 |
|                       |              |                |                    | SU17.1             | 109 mm         |                 |
|                       |              |                |                    | ML17-LL            | 36 mm          |                 |
|                       |              |                |                    | MHP-FR             | 15 mm          |                 |



Plastic Fiber Optic Cables

Thru-beam Plastic Fiber Optic Cables

for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

All thru-beam mode plastic fiber optic cables are sold as pairs.

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Threaded Cylindrical (cont.) |              |                |                    |                    |               |                 |
|------------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number                 | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| HPF-T003                     | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 1294 mm       |                 |
|                              |              |                |                    | SU18 High Speed    | 213 mm        |                 |
|                              |              |                |                    | SU19               | 213 mm        |                 |
|                              |              |                |                    | SU17.1             | 1100 mm       |                 |
|                              |              |                |                    | ML17-LL            | 123 mm        |                 |
|                              |              |                |                    | MHP-FR             | 63 mm         |                 |
| HPF-T001                     | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 2470 mm       |                 |
|                              |              |                |                    | SU18 High Speed    | 370 mm        |                 |
|                              |              |                |                    | SU19               | 370 mm        |                 |
|                              |              |                |                    | SU17.1             | 2100 mm       |                 |
|                              |              |                |                    | ML17-LL            | 363 mm        |                 |
|                              |              |                |                    | MHP-FR             | 170 mm        |                 |
| FEF-PLT1                     | 1 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 25620 mm      |                 |
|                              |              |                |                    | SU18 High Speed    | 2867 mm       |                 |
|                              |              |                |                    | SU19               | 2867 mm       |                 |
|                              |              |                |                    | SU17.1             | 10488 mm      |                 |
|                              |              |                |                    | ML17-LL            | 3528 mm       |                 |
|                              |              |                |                    | MHP-FR             | 1300 mm       |                 |
| FEF-PLT1-L2                  | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 22859 mm      |                 |
|                              |              |                |                    | SU18 High Speed    | 2558 mm       |                 |
|                              |              |                |                    | SU19               | 2558 mm       |                 |
|                              |              |                |                    | SU17.1             | 19430 mm      |                 |
|                              |              |                |                    | ML17-LL            | 3148 mm       |                 |
|                              |              |                |                    | MHP-FR             | 1160 mm       |                 |
| FEF-PLT1-L5                  | 5 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 15853 mm      |                 |
|                              |              |                |                    | SU18 High Speed    | 1774 mm       |                 |
|                              |              |                |                    | SU19               | 1774 mm       |                 |
|                              |              |                |                    | SU17.1             | 13475 mm      |                 |
|                              |              |                |                    | ML17-LL            | 2183 mm       |                 |
|                              |              |                |                    | MHP-FR             | 804 mm        |                 |
| FEF-PLT1-L10                 | 10 m         | 2.2 mm         | Black polyethylene | SU18 High Power,   | 6503 mm       |                 |
|                              |              |                |                    | SU18 High Speed,   | 1049 mm       |                 |
|                              |              |                |                    | SU19               | 1049 mm       |                 |
|                              |              |                |                    | SU17.1             | 5530 mm       |                 |
|                              |              |                |                    | ML17-LL            | 1291 mm       |                 |
|                              |              |                |                    | MHP-FR             | 476 mm        |                 |
| KLE-C01-2.2-2.0-K116         | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 1500 mm       |                 |
|                              |              |                |                    | SU18 High Speed    | 450 mm        |                 |
|                              |              |                |                    | SU19               | 450 mm        |                 |
|                              |              |                |                    | SU17.1             | 1275 mm       |                 |
|                              |              |                |                    | ML17-LL            | 241 mm        |                 |
|                              |              |                |                    | MHP-FR             | 99 mm         |                 |

Plastic Fiber Optic Cables

All thru-beam mode plastic fiber optic cables are sold as pairs.

Thru-beam Plastic Fiber Optic Cables for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

Threaded Cylindrical (cont.)

| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
|----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| KLE-C04-1.0-2.0-K104 | 2 m          | 1 mm           | PVC                | SU18 High Power    | 300 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 70 mm          |                 |
|                      |              |                |                    | SU19               | 70 mm          |                 |
|                      |              |                |                    | SU17.1             | 255 mm         |                 |
|                      |              |                |                    | ML17-LL            | 48 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |
| KLE-C01-2.2-2.0-K115 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 1500 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 450 mm         |                 |
|                      |              |                |                    | SU19               | 450 mm         |                 |
|                      |              |                |                    | SU17.1             | 1275 mm        |                 |
|                      |              |                |                    | ML17-LL            | 241 mm         |                 |
|                      |              |                |                    | MHP-FR             | 99 mm          |                 |

Bendable Probe

| Model Number       | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|--------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| KLE 00-2.2-2.0-K55 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 872 mm        |                 |
|                    |              |                |                    | SU18 High Speed    | 228 mm        |                 |
|                    |              |                |                    | SU19               | 228 mm        |                 |
|                    |              |                |                    | SU17.1             | 1208 mm       |                 |
|                    |              |                |                    | ML17-LL            | 157 mm        |                 |
|                    |              |                |                    | MHP-FR             | 74 mm         |                 |

Side-view/Periscope

| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|----------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| HPF-T010             | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 964 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 150 mm        |                 |
|                      |              |                |                    | SU19               | 150 mm        |                 |
|                      |              |                |                    | SU17.1             | 820 mm        |                 |
|                      |              |                |                    | ML17-LL            | 116 mm        |                 |
|                      |              |                |                    | MHP-FR             | 73 mm         |                 |
| KHE-C01-2.2-2.0-K136 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 200 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 50 mm         |                 |
|                      |              |                |                    | SU19               | 50 mm         |                 |
|                      |              |                |                    | SU17.1             | 170 mm        |                 |
|                      |              |                |                    | ML17-LL            | 32 mm         |                 |
|                      |              |                |                    | MHP-FR             | 13 mm         |                 |

Plastic Fiber Optic Cables

Thru-beam Plastic Fiber Optic Cables for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

All thru-beam mode plastic fiber optic cables are sold as pairs.

Side-view/Periscope (cont.)

| Model Number          | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm)                                 |
|-----------------------|--------------|----------------|--------------------|--------------------|----------------|---|
| HPF-T050              | 330 mm       | 2.2 mm         | Plastic            | SU18 High Power    | 953 mm         |   |
|                       |              |                |                    | SU18 High Speed    | 153 mm         |   |
|                       |              |                |                    | SU19               | 153 mm         |   |
|                       |              |                |                    | SU17.1             | 810 mm         |   |
|                       |              |                |                    | ML17-LL            | 153 mm         |   |
|                       |              |                |                    | MHP-FR             | not compatible |   |
| KHE-C01-2.2-2.0-K140  | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 600 mm         |   |
|                       |              |                |                    | SU18 High Speed    | 150 mm         |   |
|                       |              |                |                    | SU19               | 150 mm         |   |
|                       |              |                |                    | SU17.1             | 510 mm         |   |
|                       |              |                |                    | ML17-LL            | 96 mm          |   |
|                       |              |                |                    | MHP-FR             | 39 mm          |   |
| KHTE-C01-2.2-2.0-K118 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 475 mm         | <p>Operating temperature: -55 °C to +115 °C</p> |
|                       |              |                |                    | SU18 High Speed    | 115 mm         |   |
|                       |              |                |                    | SU19               | 115 mm         |   |
|                       |              |                |                    | SU17.1             | 404 mm         |   |
|                       |              |                |                    | ML17-LL            | 76 mm          |   |
|                       |              |                |                    | MHP-FR             | 31 mm          |   |
| HPF-T007              | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 171 mm         |   |
|                       |              |                |                    | SU18 High Speed    | 28 mm          |   |
|                       |              |                |                    | SU19               | 28 mm          |   |
|                       |              |                |                    | SU17.1             | 145 mm         |   |
|                       |              |                |                    | ML17-LL            | 41 mm          |   |
|                       |              |                |                    | MHP-FR             | not compatible |   |

Rectangular

| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
|----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| KHE-A01-1.0-2.0-K138 | 2 m          | 1 mm           | PVC                | SU18 High Power    | 100 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 25 mm          |                 |
|                      |              |                |                    | SU19               | 25 mm          |                 |
|                      |              |                |                    | SU17.1             | 85 mm          |                 |
|                      |              |                |                    | ML17-LL            | 16 mm          |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |

Photoelectric Sensors, Standard Sensors, Fiber optic cables

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Plastic Fiber Optic Cables

All thru-beam mode plastic fiber optic cables are sold as pairs.

Thru-beam Plastic Fiber Optic Cables for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Array                |              |                |                    |                    |               |                 |
|----------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| HPF-T021WT           | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 4235 mm       |                 |
|                      |              |                |                    | SU18 High Speed    | 682 mm        |                 |
|                      |              |                |                    | SU19               | 682 mm        |                 |
|                      |              |                |                    | SU17.1             | 3600 mm       |                 |
|                      |              |                |                    | ML17-LL            | 568 mm        |                 |
|                      |              |                |                    | MHP-FR             | 54 mm         |                 |
| KLE-A16-2.2-2.0-K109 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 420 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 100 mm        |                 |
|                      |              |                |                    | SU19               | 100 mm        |                 |
|                      |              |                |                    | SU17.1             | 357 mm        |                 |
|                      |              |                |                    | ML17-LL            | 67 mm         |                 |
|                      |              |                |                    | MHP-FR             | 28 mm         |                 |
| KLE-A16-2.2-2.0-K110 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 420 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 100 mm        |                 |
|                      |              |                |                    | SU19               | 100 mm        |                 |
|                      |              |                |                    | SU17.1             | 357 mm        |                 |
|                      |              |                |                    | ML17-LL            | 67 mm         |                 |
|                      |              |                |                    | MHP-FR             | 28 mm         |                 |
| KLE-A32-2.8-2.0-K142 | 2 m          | 2.2 mm         | PVC                | SU18 High Power    | 140 mm        |                 |
|                      |              |                |                    | SU18 High Speed    | 35 mm         |                 |
|                      |              |                |                    | SU19               | 35 mm         |                 |
|                      |              |                |                    | SU17.1             | 119 mm        |                 |
|                      |              |                |                    | ML17-LL            | 22 mm         |                 |
|                      |              |                |                    | MHP-FR             | 9 mm          |                 |

| Slot         |              |                |                    |                    |               |                 |
|--------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| HPF-T022-H   | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 10.7 mm       |                 |
|              |              |                |                    | SU18 High Speed    | 10.7 mm       |                 |
|              |              |                |                    | SU19               | 10.7 mm       |                 |
|              |              |                |                    | SU17.1             | 10.7 mm       |                 |
|              |              |                |                    | ML17-LL            | 10.7 mm       |                 |
|              |              |                |                    | MHP-FR             | 10.7 mm       |                 |

Plastic Fiber Optic Cables

Thru-beam Plastic Fiber Optic Cables for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

All thru-beam mode plastic fiber optic cables are sold as pairs.

| Slot (cont.)          |              |                |                    |                    |                |                 |
|-----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number          | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| KLE-C02-1.25-2.0-K135 | 2 m          | 1.25 mm        | PVC                | SU18 High Power    | 10 mm          |                 |
|                       |              |                |                    | SU18 High Speed    | 10 mm          |                 |
|                       |              |                |                    | SU19               | 10 mm          |                 |
|                       |              |                |                    | SU17.1             | 10 mm          |                 |
|                       |              |                |                    | ML17-LL            | 10 mm          |                 |
|                       |              |                |                    | MHP-FR             | not compatible |                 |
| KLE-C02-1.25-2.0-K134 | 2 m          | 1.25 mm        | PVC                | SU18 High Power    | 5 mm           |                 |
|                       |              |                |                    | SU18 High Speed    | 5 mm           |                 |
|                       |              |                |                    | SU19               | 5 mm           |                 |
|                       |              |                |                    | SU17.1             | 5 mm           |                 |
|                       |              |                |                    | ML17-LL            | 5 mm           |                 |
|                       |              |                |                    | MHP-FR             | not compatible |                 |

| High Flex Cable |              |                |                    |                    |                |                 |
|-----------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number    | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| HPF-T009        | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 194 mm         |                 |
|                 |              |                |                    | SU18 High Speed    | 63 mm          |                 |
|                 |              |                |                    | SU19               | 63 mm          |                 |
|                 |              |                |                    | SU17.1             | 165 mm         |                 |
|                 |              |                |                    | ML17-LL            | 57 mm          |                 |
|                 |              |                |                    | MHP-FR             | not compatible |                 |
| HPF-T008        | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 194 mm         |                 |
|                 |              |                |                    | SU18 High Speed    | 31 mm          |                 |
|                 |              |                |                    | SU19               | 31 mm          |                 |
|                 |              |                |                    | SU17.1             | 165 mm         |                 |
|                 |              |                |                    | ML17-LL            | 49 mm          |                 |
|                 |              |                |                    | MHP-FR             | not compatible |                 |
| HPF-T024        | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 165 mm         |                 |
|                 |              |                |                    | SU18 High Speed    | 27 mm          |                 |
|                 |              |                |                    | SU19               | 27 mm          |                 |
|                 |              |                |                    | SU17.1             | 140 mm         |                 |
|                 |              |                |                    | ML17-LL            | 26 mm          |                 |
|                 |              |                |                    | MHP-FR             | not compatible |                 |
| HPF-T070-H      | 990 mm       | 2.2 mm         | Black polyethylene | SU18 High Power    | 957 mm         |                 |
|                 |              |                |                    | SU18 High Speed    | 154 mm         |                 |
|                 |              |                |                    | SU19               | 154 mm         |                 |
|                 |              |                |                    | SU17.1             | 813 mm         |                 |
|                 |              |                |                    | ML17-LL            | 164 mm         |                 |
|                 |              |                |                    | MHP-FR             | 67 mm          |                 |

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Plastic Fiber Optic Cables

All thru-beam mode plastic fiber optic cables are sold as pairs.

Thru-beam Plastic Fiber Optic Cables for SU18, SU19, SU17.1, ML17-LL, and MHP-FR Sensors

Specialty Versions

| Model Number | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
|--------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| HPF-T012     | 2 m          | 2.2 mm         | Black polyethylene | SU18 High Power    | 788 mm         |                 |
|              |              |                |                    | SU18 High Speed    | 127 mm         |                 |
|              |              |                |                    | SU19               | 127 mm         |                 |
|              |              |                |                    | SU17.1             | 670 mm         |                 |
|              |              |                |                    | ML17-LL            | 118 mm         |                 |
|              |              |                |                    | MHP-FR             | 59 mm          |                 |
| HPF-T023     | 2 m          | 1.0 mm         | Black polyethylene | SU18 High Power    | 4205 mm        |                 |
|              |              |                |                    | SU18 High Speed    | 677 mm         |                 |
|              |              |                |                    | SU19               | 677 mm         |                 |
|              |              |                |                    | SU17.1             | 3400 mm        |                 |
|              |              |                |                    | ML17-LL            | 467 mm         |                 |
|              |              |                |                    | MHP-FR             | not compatible |                 |

Glass Fiber Optic Cables

Diffuse Mode Glass Fiber Optic Cables SU18, SU19, SU17.1 and ML17-LL Sensors

Threaded Cylindrical

| Model Number        | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
|---------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| LMR 00-1.5-1.0-K154 | 990 mm       | 2.2 mm         | Stainless Steel    | SU18 High Power    | 185 mm         |                 |
|                     |              |                |                    | SU18 High Speed    | 30 mm          |                 |
|                     |              |                |                    | SU19               | 30 mm          |                 |
|                     |              |                |                    | SU17.1             | 157 mm         |                 |
|                     |              |                |                    | ML17-LL            | 109 mm         |                 |
|                     |              |                |                    | MHP-FR             | not compatible |                 |
| LMR 00-2.0-1.0-K156 | 1 m          | 2.29 mm        | Stainless Steel    | SU18 High Power    | 190 mm         |                 |
|                     |              |                |                    | SU18 High Speed    | 116 mm         |                 |
|                     |              |                |                    | SU19               | 116 mm         |                 |
|                     |              |                |                    | SU17.1             | 152 mm         |                 |
|                     |              |                |                    | ML17-LL            | 86 mm          |                 |
|                     |              |                |                    | MHP-FR             | not compatible |                 |



## Glass Fiber Optic Cables

### Diffuse Mode Glass Fiber Optic Cables SU18, SU19, SU17.1 and ML17-LL Sensors

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| Threaded Cylindrical (cont.) |              |                |                    |                    |                |                 |
|------------------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number                 | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LMR 00-2.0-2.0-K156          | 2 m          | 2.29 mm        | Stainless Steel    | SU18 High Power    | 190 mm         |                 |
|                              |              |                |                    | SU18 High Speed    | 116 mm         |                 |
|                              |              |                |                    | SU19               | 116 mm         |                 |
|                              |              |                |                    | SU17.1             | 152 mm         |                 |
|                              |              |                |                    | ML17-LL            | 86 mm          |                 |
|                              |              |                |                    | MHP-FR             | not compatible |                 |

| Bendable Probe      |              |                |                    |                    |                |                 |
|---------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number        | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LMR 00-1.5-1.1-K155 | 1143 mm      | 2.2 mm         | Stainless Steel    | SU18 High Power    | 160 mm         |                 |
|                     |              |                |                    | SU18 High Speed    | 76 mm          |                 |
|                     |              |                |                    | SU19               | 76 mm          |                 |
|                     |              |                |                    | SU17.1             | 136 mm         |                 |
|                     |              |                |                    | ML17-LL            | 85 mm          |                 |
|                     |              |                |                    | MHP-FR             | not compatible |                 |

| Side-view / Periscope |              |                |                    |                    |                |                 |
|-----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number          | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LMR 00-1.5-1.0-K157   | 990 mm       | 2.2 mm         | Stainless Steel    | SU18 High Power    | 160 mm         |                 |
|                       |              |                |                    | SU18 High Speed    | 76 mm          |                 |
|                       |              |                |                    | SU19               | 76 mm          |                 |
|                       |              |                |                    | SU17.1             | 136 mm         |                 |
|                       |              |                |                    | ML17-LL            | 85 mm          |                 |
|                       |              |                |                    | MHP-FR             | not compatible |                 |
| LCR 00-2.0-0.9-K158   | 914 mm       | 2 mm           | PVC                | SU18 High Power    | 190 mm         |                 |
|                       |              |                |                    | SU18 High Speed    | 116 mm         |                 |
|                       |              |                |                    | SU19               | 116 mm         |                 |
|                       |              |                |                    | SU17.1             | 152 mm         |                 |
|                       |              |                |                    | ML17-LL            | 86 mm          |                 |
|                       |              |                |                    | MHP-FR             | not compatible |                 |

Glass Fiber Optic Cables

Sold individually. To complete a thru-beam pair, two units are required.

Thru-Beam Mode Glass Fiber Optic Cables for SU18, SU19, SU17.1 and ML17-LL Sensors

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Threaded Cylindrical |              |                |                    |                    |                |                 |
|----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LME 00-1.0-1.0-K151  | 1 m          | 1.02 mm        | Stainless Steel    | SU18 High Power    | 892 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 144 mm         |                 |
|                      |              |                |                    | SU19               | 144 mm         |                 |
|                      |              |                |                    | SU17.1             | 616 mm         |                 |
|                      |              |                |                    | ML17-LL            | 197 mm         |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |

| Bendable Probe      |              |                |                    |                    |                |                 |
|---------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number        | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LME 00-1.2-1.0-K150 | 990 mm       | 2.2 mm         | Stainless Steel    | SU18 High Power    | 892 mm         |                 |
|                     |              |                |                    | SU18 High Speed    | 144 mm         |                 |
|                     |              |                |                    | SU19               | 144 mm         |                 |
|                     |              |                |                    | SU17.1             | 616 mm         |                 |
|                     |              |                |                    | ML17-LL            | 197 mm         |                 |
|                     |              |                |                    | MHP-FR             | not compatible |                 |

| Side-view /Periscope |              |                |                    |                    |                |                 |
|----------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LME 00-1.2-1.0-K153  | 990 mm       | 2.2 mm         | Stainless Steel    | SU18 High Power    | 892 mm         |                 |
|                      |              |                |                    | SU18 High Speed    | 144 mm         |                 |
|                      |              |                |                    | SU19               | 144 mm         |                 |
|                      |              |                |                    | SU17.1             | 616 mm         |                 |
|                      |              |                |                    | ML17-LL            | 197 mm         |                 |
|                      |              |                |                    | MHP-FR             | not compatible |                 |

| Array               |              |                |                    |                    |                |                 |
|---------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number        | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LCE 00-1.6-0.5-K152 | 520.7 mm     | 2.2 mm         | PVC                | SU18 High Power    | 2681 mm        |                 |
|                     |              |                |                    | SU18 High Speed    | 432 mm         |                 |
|                     |              |                |                    | SU19               | 432 mm         |                 |
|                     |              |                |                    | SU17.1             | 761 mm         |                 |
|                     |              |                |                    | ML17-LL            | 246 mm         |                 |
|                     |              |                |                    | MHP-FR             | not compatible |                 |

## Glass Fiber Optic Cables

### Diffuse Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

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| Cylindrical Sensing Head  |              |                |                    |                    |               |                 |        |
|---------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|--------|
| Model Number              | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |        |
| FE-BHS1S-3*               | 3 ft         | 0.69 mm        | Stainless Steel    | MHP-F Visible Red  | 5 mm          |                 |        |
| FE-BHS1S-5                | 5 ft         |                |                    | MHP-F Infrared     | 11 mm         |                 |        |
|                           |              |                |                    | RL(K)61-LL         | 20 mm         |                 |        |
|                           |              |                |                    | MPG Infrared       | 23 mm         |                 |        |
| FE-BHS3S-3*               | 3 ft         | 1.2 mm         | Stainless Steel    | MHP-F Visible Red  | 10 mm         |                 |        |
| FE-BHS3S-5                | 5 ft         |                |                    | MHP-F Infrared     | 30 mm         |                 |        |
|                           |              |                |                    | RL(K)61-LL         | 46 mm         |                 |        |
|                           |              |                |                    | MPG Infrared       | 51 mm         |                 |        |
| FE-BFS6S-3*               | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 48 mm         |                 |        |
| FE-BFS6S-5                | 5 ft         |                |                    | MHP-F Infrared     | 95 mm         |                 |        |
|                           |              |                |                    | RL(K)61-LL         | 170 mm        |                 |        |
|                           |              |                |                    | MPG Infrared       | 190 mm        |                 |        |
| FE-BTS6S-3*               | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 45 mm         |                 |        |
| FE-BTS6S-3HT <sup>†</sup> |              |                |                    | MHP-F Infrared     | 90 mm         |                 |        |
| FE-BTS6S-5                |              |                |                    | 5 ft               | RL(K)61-LL    |                 | 160 mm |
|                           |              |                |                    |                    | MPG Infrared  |                 | 180 mm |
| FE-BTS6S-5HT <sup>†</sup> |              |                |                    |                    |               |                 |        |
| FE-BTS6M-3*               | 3 ft         | 3.2 mm         | PVC                | MHP-F Visible Red  | 45 mm         |                 |        |
| FE-BTS6M-5                | 5 ft         |                |                    | MHP-F Infrared     | 90 mm         |                 |        |
|                           |              |                |                    | RL(K)61-LL         | 160 mm        |                 |        |
|                           |              |                |                    | MPG Infrared       | 180 mm        |                 |        |

\* Sensing ranges based on this model.

<sup>†</sup> High-temperature model.

Glass Fiber Optic Cables

Diffuse Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

Bendable Sensing Tip

| Model Number | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|--------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| FE-BPS4S-3*  | 3 ft         | 1.5 mm         | Stainless Steel    | MHP-F Visible Red  | 12 mm         |                 |
|              |              |                |                    | MHP-F Infrared     | 39 mm         |                 |
| FE-BPS4S-5   | 5 ft         |                |                    | RL(K)61-LL         | 69 mm         |                 |
|              |              |                |                    | MPG Infrared       | 77 mm         |                 |

Side View/Periscope Sensing Head

| Model Number  | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|---------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| FE-BNSRA5S-3* | 3 ft         | 2.3 mm         | Stainless Steel    | MHP-F Visible Red  | 32 mm         |                 |
|               |              |                |                    | MHP-F Infrared     | 62 mm         |                 |
| FE-BNSRA5S-5  | 5 ft         |                |                    | RL(K)61-LL         | 155 mm        |                 |
|               |              |                |                    | MPG Infrared       | 170 mm        |                 |
| FE-BNSRA5M-3  | 3 ft         | 2.3 mm         | PVC                | MHP-F Visible Red  | 32 mm         |                 |
|               |              |                |                    | MHP-F Infrared     | 62 mm         |                 |
|               |              |                |                    | RL(K)61-LL         | 155 mm        |                 |
|               |              |                |                    | MPG Infrared       | 170 mm        |                 |

\* Sensing ranges based on this model.

## Glass Fiber Optic Cables

### Diffuse Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Right Angle Sensing Head |              |                |                    |                    |               |                 |
|--------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number             | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| FE-BHSRA3S-3*            | 3 ft         | 1.2 mm         | Stainless Steel    | MHP-F Visible Red  | 6 mm          |                 |
|                          |              |                |                    | MHP-F Infrared     | 12 mm         |                 |
| FE-BHSRA3S-5             | 5 ft         |                |                    | RL(K)61-LL         | 27 mm         |                 |
|                          |              |                |                    | MPG Infrared       | 30 mm         |                 |
| FE-BAS6S-3*              | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 45 mm         |                 |
|                          |              |                |                    | MHP-F Infrared     | 97 mm         |                 |
| FE-BAS6S-5               | 5 ft         |                |                    | RL(K)61-LL         | 160 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 180 mm        |                 |
| FE-BTSAS6S-3*            | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 36 mm         |                 |
|                          |              |                |                    | MHP-F Infrared     | 80 mm         |                 |
| FE-BTSAS6S-5             | 5 ft         |                |                    | RL(K)61-LL         | 155 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 170 mm        |                 |
| FE-BTSAS6M-3*            | 3 ft         | 3.2 mm         | PVC                | MHP-F Visible Red  | 36 mm         |                 |
|                          |              |                |                    | MHP-F Infrared     | 80 mm         |                 |
| FE-BTSAS6M-5             | 5 ft         |                |                    | RL(K)61-LL         | 155 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 170 mm        |                 |
| FE-BASTS6S-3*            | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 52 mm         |                 |
|                          |              |                |                    | MHP-F Infrared     | 100 mm        |                 |
| FE-BASTS6S-5             | 5 ft         |                |                    | RL(K)61-LL         | 170 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 190 mm        |                 |

\* Sensing ranges based on this model.

Glass Fiber Optic Cables

Diffuse Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

| Array Sensing Head |              |                  |                    |                    |               |                 |
|--------------------|--------------|------------------|--------------------|--------------------|---------------|-----------------|
| Model Number       | Cable Length | Fiber Diameter   | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| FE-BRL6S-3*        | 3 ft         | 0.02" x 0.5"     | Stainless Steel    | MHP-F Visible Red  | 42 mm         |                 |
|                    |              |                  |                    | MHP-F Infrared     | 92 mm         |                 |
| FE-BRL6S-5         | 5 ft         |                  |                    | RL(K)61-LL         | 190 mm        |                 |
|                    |              |                  |                    | MPG Infrared       | 212 mm        |                 |
| FE-BRL6S-3RA*      | 3 ft         | 0.81 mm x 9.7 mm | Stainless Steel    | MHP-F Visible Red  | 40 mm         |                 |
|                    |              |                  |                    | MHP-F Infrared     | 86 mm         |                 |
| FE-BRL6S-5RA       | 5 ft         |                  |                    | RL(K)61-LL         | 190 mm        |                 |
|                    |              |                  |                    | MPG Infrared       | 210 mm        |                 |
| FE-BRL7S-3*        | 3 ft         | 0.01" x 1.5"     | Stainless Steel    | MHP-F Visible Red  | 46 mm         |                 |
|                    |              |                  |                    | MHP-F Infrared     | 104 mm        |                 |
| FE-BRL7S-5         | 5 ft         |                  |                    | RL(K)61-LL         | 205 mm        |                 |
|                    |              |                  |                    | MPG Infrared       | 230 mm        |                 |
| FE-BRL7M-3         | 3 ft         | 0.01" x 1.5"     | PVC                | MHP-F Visible Red  | 46 mm         |                 |
|                    |              |                  |                    | MHP-F Infrared     | 104 mm        |                 |
|                    |              |                  |                    | RL(K)61-LL         | 205 mm        |                 |
|                    |              |                  |                    | MPG Infrared       | 230 mm        |                 |

\* Sensing ranges based on this model.

## Glass Fiber Optic Cables

### Thru-Beam Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

Sold individually. To complete a thru-beam pair, two units are required.

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Cylindrical Sensing Head |              |                |                    |                    |               |                 |
|--------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number             | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| FE-IHS1S-3*              | 3 ft         | 0.69 mm        | Stainless Steel    | MHP-F Visible Red  | 90 mm         |                 |
| FE-IHS1S-5               | 5 ft         |                |                    | MHP-F Infrared     | 210 mm        |                 |
|                          |              |                |                    | RL(K)61-LL         | 460 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 510 mm        |                 |
| FE-IHS3S-3*              | 3 ft         | 1.2 mm         | Stainless Steel    | MHP-F Visible Red  | 95 mm         |                 |
| FE-IHS3S-5               | 5 ft         |                |                    | MHP-F Infrared     | 220 mm        |                 |
|                          |              |                |                    | RL(K)61-LL         | 470 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 520 mm        |                 |
| FE-IFS6S-3*              | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 320 mm        |                 |
| FE-IFS6S-5               | 5 ft         |                |                    | MHP-F Infrared     | 770 mm        |                 |
|                          |              |                |                    | RL(K)61-LL         | 470 mm        |                 |
|                          |              |                |                    | MPG Infrared       | 1300 mm       |                 |
| FE-ITS6S-3*              | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 300 mm        |                 |
| FE-ITS6S-3HT†            |              |                |                    | MHP-F Infrared     | 825 mm        |                 |
| FE-ITS6S-5               | 5 ft         |                |                    | RL(K)61-LL         | 1305 mm       |                 |
| FE-ITS6S-5HT†            |              |                |                    | MPG Infrared       | 1450 mm       |                 |
| FE-ITS6M-3*              | 3 ft         | 3.2 mm         | PVC                | MHP-F Visible Red  | 300 mm        |                 |
| FE-ITS6M-5               | 5 ft         |                |                    | MHP-F Infrared     | 825 mm        |                 |
|                          |              |                |                    | RL(K)61-LL         | 1305 mm       |                 |
|                          |              |                |                    | MPG Infrared       | 1450 mm       |                 |

| Bendable Sensing Tip |              |                |                    |                    |               |                 |
|----------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number         | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| FE-IPS4S-3*          | 3 ft         | 1.5 mm         | Stainless Steel    | MHP-F Visible Red  | 190 mm        |                 |
| FE-IPS4S-5           | 5 ft         |                |                    | MHP-F Infrared     | 560 mm        |                 |
|                      |              |                |                    | RL(K)61-LL         | 900 mm        |                 |
|                      |              |                |                    | MPG Infrared       | 1000 mm       |                 |

\* Sensing ranges based on this model.  
† High temperature model.

Glass Fiber Optic Cables

Sold individually. To complete a thru-beam pair, two units are required.

Thru-Beam Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

Side View/Periscope Sensing Head

| Model Number  | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|---------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| FE-INSRA5S-3* | 3 ft         | 2.3 mm         | Stainless Steel    | MHP-F Visible Red  | 180 mm        |                 |
|               |              |                |                    | MHP-F Infrared     | 400 mm        |                 |
| FE-INSRA5S-5  | 5 ft         |                |                    | RL(K)61-LL         | 730 mm        |                 |
|               |              |                |                    | MPG Infrared       | 810 mm        |                 |

Right Angle Sensing Head

| Model Number  | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|---------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| FE-IHSRA3S-3* | 3 ft         | 1.2 mm         | Stainless Steel    | MHP-F Visible Red  | 90 mm         |                 |
|               |              |                |                    | MHP-F Infrared     | 190 mm        |                 |
| FE-IHSRA3S-5  | 5 ft         |                |                    | RL(K)61-LL         | 485 mm        |                 |
|               |              |                |                    | MPG Infrared       | 540 mm        |                 |
| FE-IAS6S-3*   | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 340 mm        |                 |
|               |              |                |                    | MHP-F Infrared     | 950 mm        |                 |
| FE-IAS6S-5    | 5 ft         |                |                    | RL(K)61-LL         | 1305 mm       |                 |
|               |              |                |                    | MPG Infrared       | 1450 mm       |                 |
| FE-ITSAS6S-3* | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 260 mm        |                 |
|               |              |                |                    | MHP-F Infrared     | 660 mm        |                 |
| FE-ITSAS6S-5  | 5 ft         |                |                    | RL(K)61-LL         | 1150 mm       |                 |
|               |              |                |                    | MPG Infrared       | 1280 mm       |                 |
| FE-ITSAS6M-3* | 3 ft         | 3.2 mm         | PVC                | MHP-F Visible Red  | 260 mm        |                 |
|               |              |                |                    | MHP-F Infrared     | 660 mm        |                 |
| FE-ITSAS6M-5  | 5 ft         |                |                    | RL(K)61-LL         | 1150 mm       |                 |
|               |              |                |                    | MPG Infrared       | 1280 mm       |                 |
| FE-IASTS6S-3* | 3 ft         | 3.2 mm         | Stainless Steel    | MHP-F Visible Red  | 300 mm        |                 |
|               |              |                |                    | MHP-F Infrared     | 800 mm        |                 |
| FE-IASTS6S-5  | 5 ft         |                |                    | RL(K)61-LL         | 1170 mm       |                 |
|               |              |                |                    | MPG Infrared       | 1300 mm       |                 |

\* Sensing ranges based on this model.



Glass Fiber Optic Cables

Thru-Beam Mode Glass Fiber Optic Cables for RL(K)61-LL, MPG and MHP-F Sensors

Sold individually. To complete a thru-beam pair, two units are required.

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Array Sensing Head |              |                |                    |                    |               |                 |
|--------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number       | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| FE-IRL6S-3*        | 3 ft         | 0.02" x 0.5"   | Stainless Steel    | MHP-F Visible Red  | 280 mm        |                 |
|                    |              |                |                    | MHP-F Infrared     | 700 mm        |                 |
| FE-IRL6S-5         | 5 ft         | 0.02" x 0.5"   | Stainless Steel    | RL(K)61-LL         | 1080 mm       |                 |
|                    |              |                |                    | MPG Infrared       | 1200 mm       |                 |
| FE-IRL7S-3*        | 3 ft         | 0.01" x 1.5"   | Stainless Steel    | MHP-F Visible Red  | 310 mm        |                 |
|                    |              |                |                    | MHP-F Infrared     | 750 mm        |                 |
| FE-IRL7S-5         | 5 ft         | 0.01" x 1.5"   | Stainless Steel    | RL(K)61-LL         | 1125 mm       |                 |
|                    |              |                |                    | MPG Infrared       | 1250 mm       |                 |
| FE-IRL7S-3R        | 3 ft         | 0.01" x 1.5"   | Stainless Steel    | MHP-F Visible Red  | 300 mm        |                 |
|                    |              |                |                    | MHP-F Infrared     | 740 mm        |                 |
|                    |              |                |                    | RL(K)61-LL         | 1080 mm       |                 |
|                    |              |                |                    | MPG Infrared       | 1200 mm       |                 |

Glass Fiber Optic Cables

Diffuse Mode Glass Fiber Optic Cables for OCT300-M1K and VL18LL Sensors

| Cylindrical Sensing Head (cont.) |              |                |                    |                    |               |                 |
|----------------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number                     | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| LMR 18-1.1-0.5-K3                | 0.5 m        | 1.1 mm         | Stainless Steel    | OJ500-M1K          | 24 mm         |                 |
|                                  |              |                |                    | OCT500-M1A         | 24 mm         |                 |
|                                  |              |                |                    | OCT300-M1K         | 9 mm          |                 |
|                                  |              |                |                    | VL18LL             | 5 mm          |                 |
| LMR 18-2.3-0.25-K3               | 0.25 m       | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 85 mm         |                 |
|                                  |              |                |                    | OCT500-M1A         | 85 mm         |                 |
|                                  |              |                |                    | OCT300-M1K         | 37 mm         |                 |
|                                  |              |                |                    | VL18LL             | 25 mm         |                 |
| LMR 18-2.3-0.5-K3                | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 85 mm         |                 |
|                                  |              |                |                    | OCT500-M1A         | 85 mm         |                 |
|                                  |              |                |                    | OCT300-M1K         | 37 mm         |                 |
|                                  |              |                |                    | VL18LL             | 25 mm         |                 |
| LCR 18-3.2-0.5-K1                | 0.5 m        | 3.2 mm         | PVC                | OJ500-M1K          | 300 mm        |                 |
|                                  |              |                |                    | OCT500-M1A         | 300 mm        |                 |
|                                  |              |                |                    | OCT300-M1K         | 85 mm         |                 |
|                                  |              |                |                    | VL18LL             | variable      |                 |
| LMR 18-3.2-0.5-K1                | 0.5 m        | 3.2 mm         | Stainless Steel    | OJ500-M1K          | 153 mm        |                 |
| LMR 18-3.2-1.0-K1*               | 1 m          |                |                    | OCT500-M1A         | 153 mm        |                 |
| LMR 18-3.2-2.0-K1                | 2 m          |                |                    | OCT300-M1K         | 62 mm         |                 |
| LMR 18-3.2-3.0-K1                | 3 m          |                |                    | VL18LL             | 43 mm         |                 |
| LCR 18-3.2-0.5-K2*               | 0.5 m        | 3.2 mm         | PVC                | OJ500-M1K          | 185 mm        |                 |
| LCR 18-3.2-2.0-K2                | 2 m          |                |                    | OCT500-M1A         | 185 mm        |                 |
|                                  |              |                |                    | OCT300-M1K         | 74 mm         |                 |
|                                  |              |                |                    | VL18LL             | 44 mm         |                 |
| LMR 18-2.3-0.5-K2                | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 80 mm         |                 |
|                                  |              |                |                    | OCT500-M1A         | 80 mm         |                 |
|                                  |              |                |                    | OCT300-M1K         | 30 mm         |                 |
|                                  |              |                |                    | VL18LL             | 23 mm         |                 |
| LMR 18-2.3-0.5-K7                | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 80 mm         |                 |
|                                  |              |                |                    | OCT500-M1A         | 80 mm         |                 |
|                                  |              |                |                    | OCT300-M1K         | 30 mm         |                 |
|                                  |              |                |                    | VL18LL             | 23 mm         |                 |
| LMR 18-3.2-2.0-K4                | 2 m          | 3.2 mm         | Stainless Steel    | OJ500-M1K          | 173 mm        |                 |
|                                  |              |                |                    | OCT500-M1A         | 173 mm        |                 |
|                                  |              |                |                    | OCT300-M1K         | 65 mm         |                 |
|                                  |              |                |                    | VL18LL             | 40 mm         |                 |

\* Sensing ranges based on this model.

## Glass Fiber Optic Cables

### Diffuse Mode Glass Fiber Optic Cables for OCT300-M1K and VL18LL Sensors

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Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Right Angle Sensing Head |              |                |                    |                    |               |                 |
|--------------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| Model Number             | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
| LCR 18-2.7-1.0-K9        | 1 m          | 2.7 mm         | PVC                | OJ500-M1K          | 95 mm         |                 |
|                          |              |                |                    | OCT500-M1A         | 95 mm         |                 |
|                          |              |                |                    | OCT300-M1K         | 38 mm         |                 |
|                          |              |                |                    | VL18LL             | 25 mm         |                 |
| LMR 18-2.7-0.5-K9        | 0.5 m        | 2.7 mm         | Stainless Steel    | OJ500-M1K          | 95 mm         |                 |
|                          |              |                |                    | OCT500-M1A         | 95 mm         |                 |
|                          |              |                |                    | OCT300-M1K         | 38 mm         |                 |
|                          |              |                |                    | VL18LL             | 25 mm         |                 |
| LSR 18-2.3-0.5-K12       | 0.5 m        | 2.3 mm         | Silicone           | OJ500-M1K          | 75 mm         |                 |
|                          |              |                |                    | OCT500-M1A         | 75 mm         |                 |
|                          |              |                |                    | OCT300-M1K         | 30 mm         |                 |
|                          |              |                |                    | VL18LL             | 21 mm         |                 |

### Thru-Beam Mode Glass Fiber Optic Cables for OCT300-M1K and VL18LL Sensors

| Cylindrical Sensing Head |              |                |                    |                    |                |                 |
|--------------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number             | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LME 18-2.3-0.5-K3        | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 1300 mm        |                 |
|                          |              |                |                    | OCT500-M1A         | 1300 mm        |                 |
|                          |              |                |                    | OCT300-M1K         | 410 mm         |                 |
|                          |              |                |                    | VL18LL             | 360 mm         |                 |
| LCE 18-2.3-0.5-K2        | 0.5 m        | 2.3 mm         | PVC                | OJ500-M1K          | 1300 mm        |                 |
|                          |              |                |                    | OCT500-M1A         | 1300 mm        |                 |
|                          |              |                |                    | OCT300-M1K         | 410 mm         |                 |
|                          |              |                |                    | VL18LL             | 360 mm         |                 |
| LME 18-2.3-0.5-K2        | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 1300 mm        |                 |
| LME 18-2.3-1.0-K2*       | 1 m          |                |                    | OCT500-M1A         | 1300 mm        |                 |
| LME 18-2.3-2.0-K2        | 2 m          |                |                    | OCT300-M1K         | 410 mm         |                 |
|                          |              |                |                    | VL18LL             | 360 mm         |                 |
| LME 18-2.3-0.5-K4        | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 1300 mm        |                 |
|                          |              |                |                    | OCT500-M1A         | 1300 mm        |                 |
|                          |              |                |                    | OCT300-M1K         | 410 mm         |                 |
|                          |              |                |                    | VL18LL             | not compatible |                 |

\* Sensing ranges based on this model.

Glass Fiber Optic Cables

Thru-Beam Mode Glass Fiber Optic Cables  
for OCT300-M1K and VL18LL Sensors

| Right Angle Sensing Head |              |                |                    |                    |                |                 |
|--------------------------|--------------|----------------|--------------------|--------------------|----------------|-----------------|
| Model Number             | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range  | Dimensions (mm) |
| LCE 18-2.3-0.5-K9        | 0.5 m        | 2.3 mm         | PVC                | OJ500-M1K          | 830 mm         |                 |
|                          |              |                |                    | OCT500-M1A         | 830 mm         |                 |
|                          |              |                |                    | OCT300-M1K         | 240 mm         |                 |
|                          |              |                |                    | VL18LL             | 240 mm         |                 |
| LSE 18-1.1-0.5-K9        | 0.5 m        | 1.1 mm         | Silicone           | OJ500-M1K          | 275 mm         |                 |
|                          |              |                |                    | OCT500-M1A         | 275 mm         |                 |
|                          |              |                |                    | OCT300-M1K         | 97 mm          |                 |
|                          |              |                |                    | VL18LL             | 89 mm          |                 |
| LME 18-1.9-0.5-K9        | 0.5 m        | 1.9 mm         | Stainless Steel    | OJ500-M1K          | 1050 mm        |                 |
|                          |              |                |                    | OCT500-M1A         | 1050 mm        |                 |
|                          |              |                |                    | OCT300-M1K         | 310 mm         |                 |
|                          |              |                |                    | VL18LL             | 270 mm         |                 |
| LME 18-2.3-0.5-K10       | 0.5 m        | 2.3 mm         | Stainless Steel    | OJ500-M1K          | 830 mm         |                 |
|                          |              |                |                    | OCT500-M1A         | 830 mm         |                 |
|                          |              |                |                    | OCT300-M1K         | 308 mm         |                 |
|                          |              |                |                    | VL18LL             | not compatible |                 |

### Glass Fiber Optic Cables

#### Diffuse Mode Glass Fiber Optic Cables for MLV41-LL-IR and MLV41-LL-RT Sensors

2  
3

Photoelectric Sensors, Standard Sensors, Fiber optic cables

| Model Number       | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|--------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| LLR 04-1.6-0.5-G   | 0.5 m        | 1.6 mm         | Metal-Silicone     | MLV41-LL-IR        | 90 mm         |                 |
|                    |              |                |                    | MLV41-LL-RT        | 40 mm         |                 |
| LLR 04-1.9-1.0-WC5 | 1.0 m        | 1.9 mm         | Metal-Silicone     | MLV41-LL-IR        | 100 mm        |                 |
|                    |              |                |                    | MLV41-LL-RT        | 50 mm         |                 |
| LMR 04-0.5-0.5-Z1  | 0.5 m        | 0.5 mm         | Metal              | MLV41-LL-IR        | 7 mm          |                 |
|                    |              |                |                    | MLV41-LL-RT        | 6 mm          |                 |
| LMR 04-1.9-0.5-Z1  | 0.5 m        | 1.9 mm         | Metal              | MLV41-LL-IR        | 90 mm         |                 |
|                    |              |                |                    | MLV41-LL-RT        | 40 mm         |                 |
| LCR 04-1.6-0.5-Z1  | 0.5 m        | 1.6 mm         | PVC                | MLV41-LL-IR        | 80 mm         |                 |
|                    |              |                |                    | MLV41-LL-RT        | 40 m          |                 |
| LCR 04-1.6-1.0-Z1  | 1.0 m        | 1.6 mm         | PVC                | MLV41-LL-IR        | 100 mm        |                 |
|                    |              |                |                    | MLV41-LL-RT        | 50 mm         |                 |

Glass Fiber Optic Cables

Thru-Beam Mode Glass Fiber Optic Cables for MLV41-LL-IR and MLV41-LL-RT Sensors

| Model Number       | Cable Length | Fiber Diameter | Sheathing Material | Compatible Sensors | Sensing Range | Dimensions (mm) |
|--------------------|--------------|----------------|--------------------|--------------------|---------------|-----------------|
| LCE 04-1.1-0.5-WC3 | 0.5 m        | 1.1 mm         | PVC                | MLV41-LL-IR        | 100 mm        |                 |
|                    |              |                |                    | MLV41-LL-RT        | 50 mm         |                 |
| LCE 04-1.6-1.0-Z1  | 1.0 m        | 1.6 mm         | PVC                | MLV41-LL-IR        | 280 mm        |                 |
|                    |              |                |                    | MLV41-LL-RT        | 80 mm         |                 |
| LLE 04-1.6-1.0-G   | 1.0 m        | 1.6 mm         | Metal-Silicone     | MLV41-LL-IR        | 280 mm        |                 |
|                    |              |                |                    | MLV41-LL-RT        | 40 mm         |                 |

## Fiber Optic Cables Accessories

### Accessories for Plastic Fiber Optic Cables

(Dimensions in mm)

#### MHP-FOA

One-piece adapter that allows use of 2.2 mm diameter plastic fiber optic cables with MHP-FR sensors.



#### PFA-1MM

This adapter must be used to ensure proper connection of all 1 mm bundle diameter plastic fiber optic cables. Sold individually. Two units are required for a fiber optic cable. Adapter included with all 1 mm bundle diameter fiber optic cables.



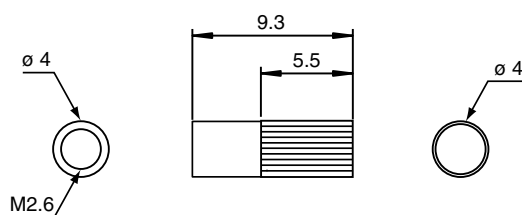
#### KL-CUT2

Plastic fiber optic cable cutter.



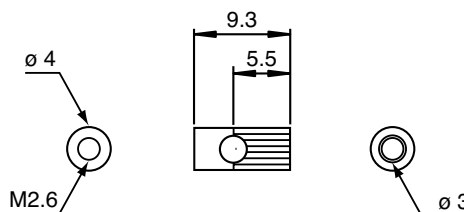
#### K-LA01

Lens for M2.6 threaded tip thru-beam plastic fiber optics, stainless steel, increases operating distance. Sold individually.



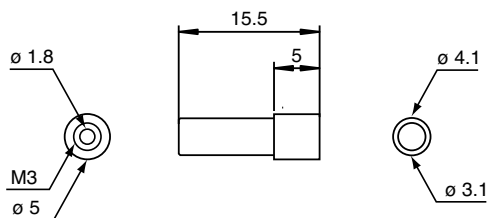
#### K-LA02

Right-angled lens for M2.6 threaded tip thru-beam plastic fiber optics, stainless steel. Sold individually.



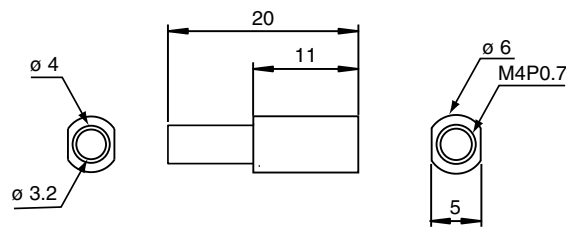
#### K-LA03

Lens for M3 threaded tip diffuse plastic fiber optics, plastic. Focuses light spot to 0.5 mm diameter.



#### K-LA04

Lens for M4 threaded tip diffuse plastic fiber optics, plastic. Focuses light spot to 0.7 mm diameter.



#### K-LA06

Collimation lens for M4 threaded tip diffuse fiber optics, plastic. Increases operating range up to eight times.

