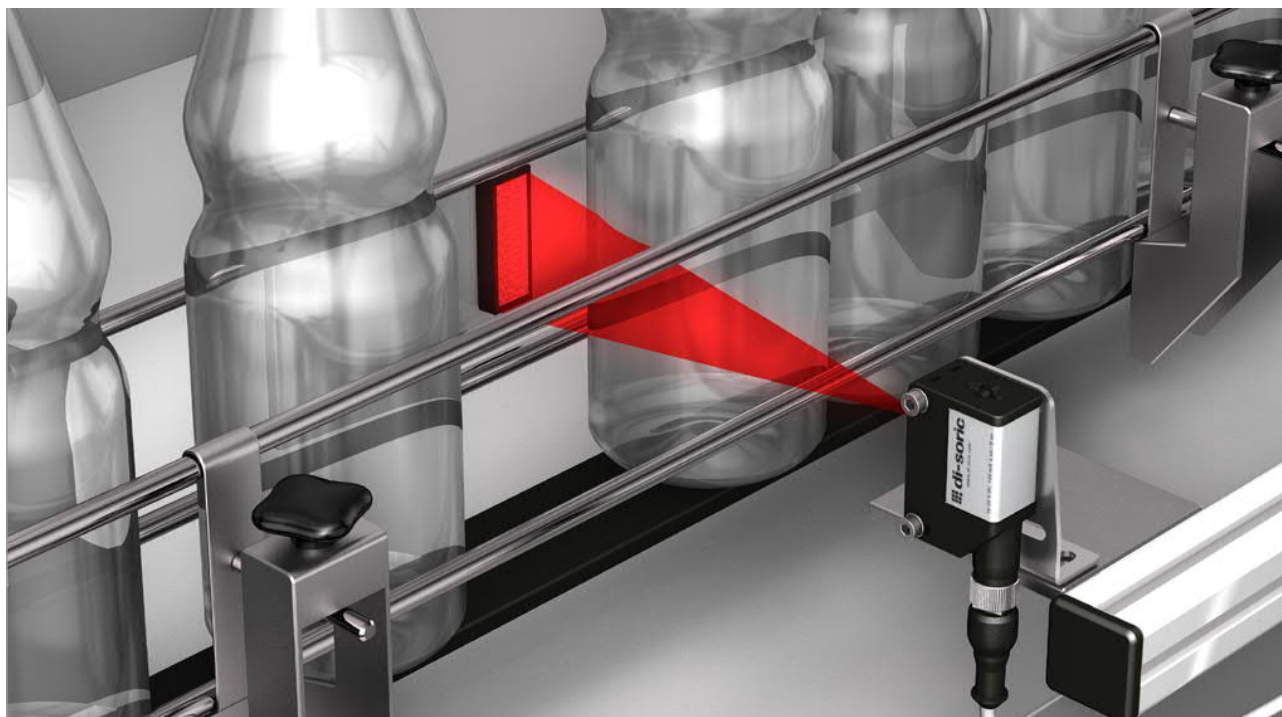


## Light barriers and diffuse sensors



The light barriers and light sensors from di-soric have been developed in several models and functional principles for many task areas in automation technology. The products are suited for fast, secure object detection and are distinguished by the highest functional safety. Various operating principles, sensors, reflection or through-beam sensors are available.



 **di-soric**

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## O-20 MINIATURE

The very small, powerful light barriers and sensors in the O-20 series can be easily integrated. The devices, which are available as sensors, reflective or through-beam sensors, detect the smallest parts in the entire active zone.



### Technical data (typ.)

**+20°C, 24 VDC**

For more information, visit

[www.di-soric.com](http://www.di-soric.com)

|                                                                                     | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked)                                                        | Laser class | Switching output    | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description                       |
|-------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|-------------------------------------------------------------------------------------|-------------|---------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|-------------------------------------------|
| O-20 Miniature Reflection energetic light sensors                                   |                                           |                             |                                    |                                |                                                                                     |             |                     |                             |                          |                  |                                          |                                            |                                           |
|    | 20 to 50                                  | 22 x 13<br>x 8,5            | Potenti-<br>ometer                 | –                              |    | 1           | pnp, 50 mA<br>NO/NC | -10 to<br>+55               | 1,000                    | Plastic          | 2,0 m<br>M8                              | –<br>TK ... /4                             | LT 21 K 50 P3<br>LT 21 K 50 P3-K-T4       |
|                                                                                     | 20 to 70                                  | 22 x 13<br>x 8,5            | Potenti-<br>ometer                 | –                              |    | 1           | pnp, 50 mA<br>NO/NC | -10 to<br>+55               | 1,000                    | Plastic          | 2,0 m<br>M8                              | –<br>TK ... /4                             | LLT 21 K 70 P3<br>LLT 21 K 70 P3-K-T4     |
|    | 45 to 300                                 | 22 x 13<br>x 8,5            | Potenti-<br>ometer                 | –                              |    | 1           | pnp, 50 mA<br>NO/NC | -10 to<br>+55               | 1,000                    | Plastic          | 2,0 m<br>M8                              | –<br>TK ... /4                             | LT 21 K 300 P3<br>LT 21 K 300 P3-K-T4     |
|                                                                                     |                                           |                             |                                    |                                |                                                                                     |             |                     |                             |                          |                  |                                          |                                            |                                           |
| O-20 Miniature Reflection light barriers                                            |                                           |                             |                                    |                                |                                                                                     |             |                     |                             |                          |                  |                                          |                                            |                                           |
|  | 0 to 4,000                                | 22 x 13<br>x 8,5            | Potenti-<br>ometer                 | –                              |  | 1           | pnp, 50 mA<br>NO/NC | -10 to<br>+55               | 1,000                    | Plastic          | 2,0 m<br>M8                              | –<br>TK ... /4                             | LT 21 K 4000 P3<br>LT 21 K 4000 P3-K-T4   |
|                                                                                     |                                           |                             |                                    |                                |                                                                                     |             |                     |                             |                          |                  |                                          |                                            |                                           |
| O-20 Miniature through-beam barriers                                                |                                           |                             |                                    |                                |                                                                                     |             |                     |                             |                          |                  |                                          |                                            |                                           |
|  | 0 to 1,000                                | 19 x 12<br>x 8,5            | –                                  | T/R                            |  | 1           | pnp, 50 mA<br>NO/NC | -10 to<br>+55               | 1,000                    | Plastic          | 2,0 m<br>M8                              | –<br>TK ... /4                             | LES 21 K 1000 P3<br>LES 21 K 1000 P3-K-T4 |
|                                                                                     |                                           |                             |                                    |                                |                                                                                     |             |                     |                             |                          |                  |                                          |                                            |                                           |

## O-21 MINIATURE

The very small and efficient light barriers and sensors in the O-21 miniature series with IO-Link can be easily integrated. The reflection sensors with background suppression are suited for detecting small and flat objects. The reflection sensors feature a high functional reserve.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                                                                                                                             | Scan width / range setting range (mm) | Housing design size (mm) | Sensitivity setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output  | Ambient temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length, Plug connector | Connection cable (optionally available) | Product description |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------|---------------------------------|--------------------------------|------------------------------|-------------|-------------------|--------------------------|--------------------------|------------------|---------------------------------------|-----------------------------------------|---------------------|
| <b>O-21 Miniature</b> Reflection energetic light sensors                 |                                       |                          |                                 |                                |                              |             |                   |                          |                          |                  |                                       |                                         |                     |
|                                                                            | 0 to 180                              | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO    | -25 to +60               | 1,000                    | Plastic          | PVC, 2.0 m                            | –                                       | OT21-PS-2C          |
|                                                                                                                                                             |                                       |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OT21-NS-2C          |
|                                                                                                                                                             | 0 to 180                              | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO    | -25 to +60               | 1,000                    | Plastic          | –                                     | –                                       | OT21-PS-0.3T3       |
|                                                                                                                                                             |                                       |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OT21-NS-0.3T3       |
| <b>O-21 Miniature</b> Reflection light sensors background suppression  |                                       |                          |                                 |                                |                              |             |                   |                          |                          |                  |                                       |                                         |                     |
|                                                                          | 15 (10 to 80)                         | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO/NC | -25 to +60               | 1,000                    | Plastic          | PVC, 2.0 m                            | –                                       | OH21-15PS-2C        |
|                                                                                                                                                             | 15                                    |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OH21-15NS-2C        |
|                                                                                                                                                             | 15 (10 to 80)                         | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO/NC | -25 to +60               | 1,000                    | Plastic          | –                                     | –                                       | OH21-15PS-0.3-T3    |
|                                                                                                                                                             | 15                                    |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OH21-15NS-0.3T3     |
|                                                                                                                                                             | 50 (10 to 80)                         | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO/NC | -25 to +60               | 1,000                    | Plastic          | PVC, 2.0 m                            | –                                       | OH21-50PS-2C        |
|                                                                                                                                                             | 50                                    |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OH21-50NS-2C        |
|                                                                                                                                                             | 50 (10 to 80)                         | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO/NC | -25 to +60               | 1,000                    | Plastic          | –                                     | –                                       | OH21-50PS-0.3T3     |
|                                                                                                                                                             | 50                                    |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OH21-50NS-0.3T3     |
|                                                                                                                                                             | 80 (10 to 80)                         | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO/NC | -25 to +60               | 1,000                    | Plastic          | PVC, 2.0 m                            | –                                       | OH21-80PS-2C        |
|                                                                                                                                                             | 80                                    |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OH21-80NS-2C        |
|                                                                                                                                                             | 80 (10 to 80)                         | 28.1 x 8.1 x 14.4        | IO-Link                         | –                              | Red                          |             | pnp, 100 mA NO/NC | -25 to +60               | 1,000                    | Plastic          | –                                     | –                                       | OH21-80PS-0.3T3     |
|                                                                                                                                                             | 80                                    |                          | –                               |                                |                              |             | nnp, 100 mA, NO   |                          |                          |                  |                                       |                                         | OH21-80NS-0.3T3     |

|                                                                                                                              | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) /Receiver (R) | Transmission light (clocked) | Laser class | Switching output   | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|-------------------------------|------------------------------|-------------|--------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|---------------------|
| O-21 Miniature  Reflection light barriers |                                           |                             |                                    |                               |                              |             |                    |                             |                          |                  |                                          |                                            |                     |
|                                             | 20 to 1,800                               | 28,1 x 8,1<br>x 14,4        | IO-Link                            | –                             | Red                          |             | pnp, 100 mA<br>NO  | -25 to<br>+60               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | –                                          | OR21-PS-2C          |
|                                                                                                                              |                                           |                             | –                                  |                               |                              |             | nnp, 100 mA,<br>NO |                             |                          |                  |                                          |                                            | OR21-NS-2C          |
|                                                                                                                              | 20 to 1,800                               | 28,1 x 8,1<br>x 14,4        | IO-Link                            | –                             | Red                          |             | pnp, 100 mA<br>NO  | -25 to<br>+60               | 1,000                    | Plastic          | –                                        | –                                          | OR21-PS-0.3T3       |
|                                                                                                                              |                                           |                             | –                                  |                               |                              |             | nnp, 100 mA,<br>NO |                             |                          |                  |                                          |                                            | OR21-NS-0.3T3       |
| O-21 Miniature  through-beam barriers     |                                           |                             |                                    |                               |                              |             |                    |                             |                          |                  |                                          |                                            |                     |
|                                             | 0 to 3,000                                | 28,1 x 8,1<br>x 14,4        | IO-Link                            | S                             | Red                          |             | pnp, 100 mA<br>NO  | -25 to<br>+60               | 1,000                    | Plastic          | PVC, 2,0                                 | –                                          | OS21-2C             |
|                                                                                                                              |                                           |                             | –                                  |                               |                              |             | nnp, 100 mA,<br>NO |                             |                          |                  |                                          |                                            | OS21-0.3T3          |
|                                                                                                                              | 0 to 3,000                                | 28,1 x 8,1<br>x 14,4        | IO-Link                            | E                             | Red                          |             | pnp, 100 mA<br>NO  | -25 to<br>+60               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | –                                          | OE21-PS-2C          |
|                                                                                                                              |                                           |                             | –                                  |                               |                              |             | nnp, 100 mA,<br>NO |                             |                          |                  |                                          |                                            | OE21-NS-2C          |
|                                                                                                                              | 0 to 3,000                                | 28,1 x 8,1<br>x 14,4        | IO-Link                            | E                             | Red                          |             | pnp, 100 mA<br>NO  | -25 to<br>+60               | 1,000                    | Plastic          | –                                        | –                                          | OE21-PS-0.3T3       |
|                                                                                                                              |                                           |                             | –                                  |                               |                              |             | nnp, 100 mA,<br>NO |                             |                          |                  |                                          |                                            | OE21-NS-0.3T3       |

## O-30 UNIVERSAL

The efficient light barriers and sensors in the O-30 Universal series are versatile. With their compact design and mounting hole spacing of 25.4 mm, the sensors can be integrated quickly and easily. The user-friendly and robust devices with short response times and good functional reserves are suited for many applications in packaging technology and assembly and handling technology.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                                                     | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) /Receiver (R) | Transmission light (clocked) | Laser class | Switching output    | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description  |
|-------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|-------------------------------|------------------------------|-------------|---------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|----------------------|
| O-30 Miniature Reflection energetic light sensors                                   |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  |                                          |                                            |                      |
|    | 10 to 100                                 | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | pnp, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OT 31 K 100 P3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OT 31 K 100 P3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OT 31 K 100 P3-3     |
|    | 10 to 100                                 | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | npn, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OT 31 K 100 N3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OT 31 K 100 N3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OT 31 K 100 N3-3     |
|  | 0 to 400                                  | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | pnp, 100mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OT 31 K 400 P3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OT 31 K 400 P3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OT 31 K 400 P3-3     |
|  | 0 to 400                                  | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | npn, 100mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OT 31 K 400 N3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OT 31 K 400 N3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OT 31 K 400 N3-3     |
|  | 0 to 1,000                                | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | pnp, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OT 31 K 1000 P3-T4   |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OT 31 K 1000 P3-K-T3 |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OT 31 K 1000 P3-3    |
|  | 0 to 1,000                                | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | npn, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OT 31 K 1000 N3-T4   |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OT 31 K 1000 N3-K-T3 |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OT 31 K 1000 N3-3    |
| O-30 Miniature Reflection light sensors background suppression                      |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  |                                          |                                            |                      |
|  | 30 to 200                                 | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | pnp, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OH 31 K 200 P3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OH 31 K 200 P3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OH 31 K 200 P3-3     |
|  | 30 to 200                                 | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Red                          |             | npn, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OH 31 K 200 N3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OH 31 K 200 N3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OH 31 K 200 N3-3     |
|  | 30 to 400                                 | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Infrared                     |             | pnp, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OH 30 K 400 P3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OH 30 K 400 P3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OH 30 K 400 P3-3     |
|  | 30 to 400                                 | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                             | Infrared                     |             | npn, 100mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Plastic          | M8                                       | TK ... /4                                  | OH 30 K 400 N3-T4    |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 0.2 m / M8                               | TK ...                                     | OH 30 K 400 N3-K-T3  |
|                                                                                     |                                           |                             |                                    |                               |                              |             |                     |                             |                          |                  | 2.0 m                                    | —                                          | OH 30 K 400 N3-3     |

|                                                                                                      | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output     | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description    |
|------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|----------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|------------------------|
| O-30 Miniature    |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                        |
|                     | 50 to 1,500                               | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OR 31 K 1500 P3-T4     |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OR 31 K 1500 P3-K-T3   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OR 31 K 1500 P3-3      |
|                     | 50 to 1,500                               | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OR 31 K 1500 N3-T4     |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OR 31 K 1500 N3-K-T3   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OR 31 K 1500 N3-3      |
|                     | 400 to 4,000                              | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OR 31 K 4000 P3-T4     |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OR 31 K 4000 P3-K-T3   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OR 31 K 4000 P3-3      |
|                   | 400 to 4,000                              | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OR 31 K 4000 N3-T4     |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OR 31 K 4000 N3-K-T3   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OR 31 K 4000 N3-3      |
|                   | 20 to 5,000                               | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OR 31 K 5000 P3-T4     |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OR 31 K 5000 P3-K-T3   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OR 31 K 5000 P3-3      |
|                   | 20 to 5,000                               | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OR 31 K 5000 N3-T4     |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OR 31 K 5000 N3-K-T3   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2 m                                      | —                                          | OR 31 K 5000 N3-3      |
| O-30 Universal  |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                        |
|                   | 0 to 20,000                               | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OES 31 K 20000 P3-T4   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OES 31 K 20000 P3-K-T3 |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OES 31 K 20000 P3-3    |
|                   | 0 to 20,000                               | 31 x 21<br>x 13             | Potenti-<br>ometer                 | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+70               | 2,000                    | Plastic          | M8                                       | TK ... /4                                  | OES 31 K 20000 N3-T4   |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 0.2 m/M8                                 | TK ...                                     | OES 31 K 20000 N3-K-T3 |
|                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  | 2.0 m                                    | —                                          | OES 31 K 20000 N3-3    |

## O-40 STANDARD

The compact light barriers and sensors in the O-40 Standard series are suited for medium ranges in a broad field of application. The sensors are reliable, economic and cost-efficient. The universal slotted-hole fastening makes flexible mounting possible.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                         | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output                       | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description                        |
|---------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|----------------------------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|--------------------------------------------|
| <b>O-40 Standard Reflection energetic light sensors</b> |                                           |                             |                                    |                                |                              |             |                                        |                             |                          |                  |                                          |                                            |                                            |
|                                                         | 10 to 600                                 | 38 x 27<br>x 15             | Potenti-<br>ometer                 | —                              | Red                          |             | pnp, 100 mA<br>NO<br>pnp, 100 mA<br>NC | -25 to<br>+60               | 500                      | Plastic          | M8                                       | TK ...                                     | OT 6-41 K 0.6 P1-T3<br>OT 6-41 K 0.6 P2-T3 |
|                                                         | 100 to 1,000                              | 41 x 31.5<br>x 16           | Teach                              | —                              | Red                          |             | Push-pull, 200 mA<br>NO/NC             | -25 to<br>+60               | 1,000                    | Metal            | M8                                       | TK ...                                     | OTT 41 M 1 G3-T3                           |
| <b>O-40 Standard Reflection light barriers</b>          |                                           |                             |                                    |                                |                              |             |                                        |                             |                          |                  |                                          |                                            |                                            |
|                                                         | 400 to 4,000                              | 38 x 27<br>x 15             | Potenti-<br>ometer                 | —                              | Red                          |             | pnp, 100 mA<br>NC<br>pnp, 100 mA<br>NO | -25 to<br>+60               | 500                      | Plastic          | M8                                       | TK ...                                     | OR 6-41 K 4 P1-T3<br>OR 6-41 K 4 P2-T3     |

## O-40E EXTENDED

The devices in the O-40E Extended series for medium ranges have a robust metallic housing with a metallic plug and are used in the detection of standard or small parts. These light barriers detect with LED or with laser variants (laser class 1) that are safe for the eye.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                                       | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output                      | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description |
|-----------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|---------------------------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|---------------------|
| <b>O-40E Extended Reflection light sensors background suppression</b> |                                           |                             |                                    |                                |                              |             |                                       |                             |                          |                  |                                          |                                            |                     |
|                                                                       | 30 to 350                                 | 40 x 30<br>x 15             | Potenti-<br>ometer                 | —                              | Laser, red                   | 1           | Push-pull, 200 mA<br>NO/NC antivalent | -10 to<br>+50               | 1,000                    | Metal            | M8                                       | TK ... /4                                  | LH 41 M 350 G4L-T4  |

## O-50 METAL

The robust and highly efficient light barriers in the O-50 Metal series work with visible red light LEDs or with laser light that is safe for the eye (laser class 1). They are robust and have a metallic housing and metallic plug. The sensors have maximum functional reserve and are used for long ranges.

### Technical data (typ.) +20°C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



| O-50 Metal Reflection energetic light sensors                                     |             |              |               |   |                                                                                                 |   |                   |            |              |       |     |        |                       |  |
|-----------------------------------------------------------------------------------|-------------|--------------|---------------|---|-------------------------------------------------------------------------------------------------|---|-------------------|------------|--------------|-------|-----|--------|-----------------------|-------------------------------------------------------------------------------------|
|  | 15 to 150   | 50 x 40 x 15 | Potentiometer | — | Red                                                                                             |   | pnp, 200 mA NO/NC | -10 to +60 | 1,000        | Metal | M12 | VK ... | OTV 51 M 150 P3K-IBS  |                                                                                     |
|                                                                                   | 100 to 500  |              |               |   |                                                                                                 |   |                   |            |              |       |     |        | OTV 51 M 500 P3K-IBS  |                                                                                     |
|                                                                                   | 100 to 600  | 50 x 40 x 15 | Potentiometer | — | Infrared                                                                                        |   | pnp, 200 mA NO/NC | -10 to +60 | 1,000        | Metal | M12 | VK ... | OTV 50 M 600 P3K-IBS  |                                                                                     |
|                                                                                   | 50 to 1,200 |              |               |   |                                                                                                 |   |                   |            |              |       |     |        | OTV 50 M 1200 P3K-IBS |                                                                                     |
|                                                                                   | 75 to 200   | 50 x 40 x 15 | Potentiometer | — | <br>Laser, red | 1 | pnp, 200 mA NO/NC | -10 to +50 | 2,000<br>500 | Metal | M12 | VK ... | LTV 51 M 200 P3K-IBS  |                                                                                     |
|                                                                                   | 100 to 600  |              |               |   |                                                                                                 |   |                   |            |              |       |     |        | LTV 51 M 600 P3K-IBS  |                                                                                     |

| O-50 Metal Reflection light sensors background suppression                          |           |              |               |   |                                                                                                   |   |                         |            |     |       |     |        |                       |  |
|-------------------------------------------------------------------------------------|-----------|--------------|---------------|---|---------------------------------------------------------------------------------------------------|---|-------------------------|------------|-----|-------|-----|--------|-----------------------|---------------------------------------------------------------------------------------|
|  | 50 to 200 | 50 x 40 x 15 | Potentiometer | — | <br>Laser, red | 1 | Push-pull, 200 mA NO/NC | -10 to +50 | 500 | Metal | M12 | VK ... | LHT 51 M 200 G3-B4(1) |                                                                                       |
|                                                                                     |           |              |               |   |                                                                                                   |   |                         |            |     |       |     |        |                       |                                                                                       |
|  | 50 to 200 | 50 x 40 x 15 | Potentiometer | — | <br>Laser, red | 1 | Push-pull, 200 mA NO/NC | -10 to +50 | 500 | Metal | M12 | VK ... | LLH 51 M 200 G3-B4    |                                                                                       |

| O-50 Metal Reflection light barriers                                                |                 |              |               |   |                                                                                                   |   |                   |            |       |       |     |        |                        |  |
|-------------------------------------------------------------------------------------|-----------------|--------------|---------------|---|---------------------------------------------------------------------------------------------------|---|-------------------|------------|-------|-------|-----|--------|------------------------|---------------------------------------------------------------------------------------|
|  | 40 to 2,000     | 50 x 40 x 15 | Potentiometer | — | Red                                                                                               |   | pnp, 200 mA NO/NC | -10 to +60 | 1,000 | Metal | M12 | VK ... | ORV 51 M 2000 P3K-IBS  |                                                                                       |
|                                                                                     | 300 to 5,000    | 50 x 40 x 15 | Potentiometer | — | Red                                                                                               |   | pnp, 200 mA NO/NC | -10 to +60 | 1,000 | Metal | M12 | VK ... | ORV 51 M 5000 P3K-IBS  |                                                                                       |
|                                                                                     | 100 to 1,000    |              |               |   |                                                                                                   |   |                   |            |       |       |     |        | LRV 51 M 1000 P3K-IBS  |                                                                                       |
|                                                                                     | 200 to 2,000    | 50 x 40 x 15 | Potentiometer | — | <br>Laser, red | 1 | pnp, 200 mA NO/NC | 0 to +50   | 2,000 | Metal | M12 | VK ... | LRV 51 M 2000 P3K-IBS  |                                                                                       |
|                                                                                     | 1,000 to 10,000 |              |               |   |                                                                                                   |   |                   |            |       |       |     |        | LRV 51 M 10000 P3K-IBS |                                                                                       |
|  | 50 to 500       | 50 x 40 x 15 | Potentiometer | — | <br>Laser, red | 1 | pnp, 200 mA NO/NC | 5 to +50   | 750   | Metal | M12 | VK ... | LLRV 51 M 500 P3K-IBS  |                                                                                       |

| O-50 Metal Reflection light barriers                                                |             |              |               |   |     |  |                   |            |         |       |     |        |                        |  |
|-------------------------------------------------------------------------------------|-------------|--------------|---------------|---|-----|--|-------------------|------------|---------|-------|-----|--------|------------------------|---------------------------------------------------------------------------------------|
|  | 0 to 10,000 | 50 x 40 x 15 | Potentiometer | T | Red |  | —                 | -25 to +60 |         | Metal | M12 | VK ... | OSV 51 M 10000-IBS     |                                                                                       |
|                                                                                     |             |              |               | E | Red |  | pnp, 200 mA NO/NC | -25 to +60 | 100/200 | Metal | M12 | VK ... | OEV 51 M 10000-P3K-IBS |                                                                                       |

## O-81 LASER

The laser light sensors in the O-81 Laser series are used for precise detection of objects using red light lasers. The sensors can be adjusted precisely and distinguished by their high resolution and functional reserve. The robust devices with a metallic housing and metallic plug can be operated intuitively by way of potentiometers and NO-NC switches.



### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)

|                                                                                   | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked)                                                                    | Laser class | Switching output                                  | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description  |
|-----------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|----------------------|
| O-81 Metal Reflection Light sensors background suppression                        |                                           |                             |                                    |                                |                                                                                                 |             |                                                   |                             |                          |                  |                                          |                                            |                      |
|  | 40 to 400                                 | 76 x 30<br>x 18             | Potenti-<br>ometer                 | —                              | <br>Laser, red | 1           | Antivalent, 200 mA<br>NO/NC                       | -10 to<br>+60               | 1,000                    | Metal            | M12                                      | VK ... /4                                  | LHT 81 M 300 G4L-IBS |
|                                                                                   |                                           |                             |                                    |                                |                                                                                                 |             | 200 mA,<br>NO switching output<br>NC alarm output |                             |                          |                  |                                          |                                            | LHT 81 M 300 G6L-IBS |
|                                                                                   | 40 to 400                                 | 76 x 30<br>x 18             | Potenti-<br>ometer                 | —                              | <br>Laser, red | 1           | Antivalent, 200 mA<br>NO/NC                       | -20 to<br>+60               | 1,000                    | Metal            | M12                                      | VK ... /4                                  | LHT 81 M 400 G4L-IBS |
|                                                                                   |                                           |                             |                                    |                                |                                                                                                 |             | 200 mA,<br>NO switching output<br>NC alarm output |                             |                          |                  |                                          |                                            | LHT 81 M 400 G6L-IBS |

## O-Q10 MINIATURE

The devices in O-Q10 Miniature series are the first choice for applications that require compact laser through-beam barriers for small parts detection. The robust devices with a metallic housing and metallic plug consistently satisfy the safe laser protection class 1.



### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)

|                                                                                     | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked)                                                                      | Laser class | Switching output  | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description     |
|-------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------|-------------|-------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|-------------------------|
| O-Q10 Miniature through-beam barriers                                               |                                           |                             |                                    |                                |                                                                                                   |             |                   |                             |                          |                  |                                          |                                            |                         |
|  | 0 to 500                                  | 10 x 10<br>x 60             | —                                  | T                              | <br>Laser, red | 1           | —                 | 0 to +50                    | 2,000                    | Metal            | M8                                       | TK ...                                     | OLSQ 10 M 500-TSSL      |
|                                                                                     |                                           |                             |                                    | E                              |                                                                                                   |             | pnp, 200 mA<br>NC |                             |                          |                  |                                          |                                            | OLEQ 10 M 500 P1K-TSSL  |
|                                                                                     |                                           |                             |                                    | E                              |                                                                                                   |             | pnp, 200 mA<br>NO |                             |                          |                  |                                          |                                            | OLEQ 10 M 500 P2K-TSSL  |
|                                                                                     | 0 to 2,000                                | 10 x 10<br>x 60             | —                                  | T                              | <br>Laser, red | 1           | —                 | 0 to +50                    | 2,000                    | Metal            | M8                                       | TK ...                                     | OLSQ 10 M 2000-TSSL     |
|                                                                                     |                                           |                             |                                    | E                              |                                                                                                   |             | pnp, 200 mA<br>NC |                             |                          |                  |                                          |                                            | OLEQ 10 M 2000 P1K-TSSL |
|                                                                                     |                                           |                             |                                    | E                              |                                                                                                   |             | pnp, 200 mA<br>NO |                             |                          |                  |                                          |                                            | OLEQ 10 M 2000 P2K-TSSL |

## O-M5

The devices in the O-M5 series are the smallest diffuse sensors from di-soric in a threaded model. The sensors are distinguished by their precise detection of objects and are ideal for mounting in confined space conditions.

### Technical data (typ.) +20°C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                | Scan width / range, setting range (mm) | Housing design Size (mm) | Sensitivity setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output | Ambient temperature (°C) | Switching frequency (Hz) | Housing material    | Cable material/length, Plug connector | Connection cable (optionally available) | Product description |
|------------------------------------------------|----------------------------------------|--------------------------|---------------------------------|--------------------------------|------------------------------|-------------|------------------|--------------------------|--------------------------|---------------------|---------------------------------------|-----------------------------------------|---------------------|
| <b>O-M5 Reflection energetic light sensors</b> |                                        |                          |                                 |                                |                              |             |                  |                          |                          |                     |                                       |                                         |                     |
|                                                | ... 10                                 | M5                       | —                               | —                              | Red light                    |             | pnp, 100 mA NO   | -25 to +65               | 1000                     | Stainless steel V2A | 2,0 m                                 | —                                       | OTM05-10PS-2R       |
|                                                |                                        |                          |                                 |                                |                              |             |                  |                          |                          |                     | M8                                    | TK ...                                  | OTM05-10PS-T3       |
|                                                | ... 20                                 | M5                       | —                               | —                              | Red light                    |             | pnp, 100 mA NO   | -25 to +65               | 1000                     | Stainless steel V2A | 2,0 m                                 | —                                       | OTM05-20PS-2R       |
|                                                |                                        |                          |                                 |                                |                              |             |                  |                          |                          |                     | M8                                    | TK ...                                  | OTM05-20PS-T3       |
|                                                | ... 50                                 | M5                       | —                               | —                              | Red light                    |             | pnp, 100 mA NO   | -25 to +65               | 1000                     | Stainless steel V2A | 2,0 m                                 | —                                       | OTM05-50PS-2R       |
|                                                |                                        |                          |                                 |                                |                              |             |                  |                          |                          |                     | M8                                    | TK ...                                  | OTM05-50PS-T3       |

## O-M8

The compact laser light sensors are used for the detection of small parts and are designed for the safe laser class 1. This avoids injuries to the human eye.

### Technical data (typ.) +20°C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                  | Scan width / range, setting range (mm) | Housing design Size (mm) | Sensitivity setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output | Ambient temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length, Plug connector | Connection cable (optionally available) | Product description    |
|----------------------------------|----------------------------------------|--------------------------|---------------------------------|--------------------------------|------------------------------|-------------|------------------|--------------------------|--------------------------|------------------|---------------------------------------|-----------------------------------------|------------------------|
| <b>O-M8 Through-beam sensors</b> |                                        |                          |                                 |                                |                              |             |                  |                          |                          |                  |                                       |                                         |                        |
|                                  | 0 to 2,000                             | M8 x 70                  | —                               | T                              |                              | 1           | —                | 0 to +50                 | 2,000                    | Stainless steel  | M8                                    | TK ...                                  | OLS 08 V 2000-TSSL     |
|                                  |                                        |                          |                                 | E                              |                              |             | pnp, 200 mA NO   |                          |                          |                  |                                       |                                         | OLE 08 V 2000 P2K-TSSL |

## O-M18 STANDARD

The light barriers and light sensors in the O-M18 Standard series are ideal devices for economical and cost-efficient applications. The sensors are alternatively available in a straight model or with 90° angled optics. The plastic or metallic housing is distinguished by its short construction.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                  | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output     | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description    |
|--------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|----------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|------------------------|
| <b>O-M18 Standard Diffuse reflective sensors</b> |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                        |
|                                                  | 320                                       | M18 x 68                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK... /4                                   | OT 18 FKR 320 P3-B4    |
|                                                  | 320                                       | M18 x 68                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | M12                                      | VK... /4                                   | OT 18 FMR 320 P3-B4    |
|                                                  | 320                                       | M18 x 58                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OT 18 FKR 320 P3       |
|                                                  | 320                                       | M18 x 58                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OT 18 FMR 320 P3       |
|                                                  | 400                                       | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK... /4                                   | OT 18 FK 400 P3-B4     |
|                                                  | 400                                       | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | M12                                      | VK... /4                                   | OT 18 FM 400 P3-B4     |
|                                                  | 400                                       | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OT 18 FK 400 P3        |
|                                                  | 400                                       | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OT 18 FM 400 P3        |
|                                                  | 400                                       | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK... /4                                   | OT 18 FK 400 N3-B4     |
|                                                  | 400                                       | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | M12                                      | VK... /4                                   | OT 18 FM 400 N3-B4     |
|                                                  | 400                                       | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OT 18 FK 400 N3        |
|                                                  | 400                                       | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OT 18 FM 400 N3        |
| <b>O-M18 Standard Retroreflective sensors</b>    |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                        |
|                                                  | 3,000                                     | M18 x 83                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+70               | 250                      | Metal            | M12                                      | VK... /4                                   | OR 18-1 M 3000 P4-B4   |
|                                                  | 3,000                                     | M18 x 83                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+70               | 250                      | Metal            | M12                                      | VK... /4                                   | OR 18-1 M 3000 N4-B4   |
|                                                  | 3,600                                     | M18 x 68                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK... /4                                   | OR 18-1 FKR 3600 P3-B4 |
|                                                  | 3,600                                     | M18 x 68                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | M12                                      | VK... /4                                   | OR 18-1 FMR 3600 P3-B4 |
|                                                  | 3,600                                     | M18 x 58                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OR 18-1 FKR 3600 N3-B4 |
|                                                  | 3,600                                     | M18 x 58                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OR 18-1 FMR 3600 N3-B4 |
|                                                  | 3,600                                     | M18 x 58                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OR 18-1 FKR 3600 P3    |
|                                                  | 3,600                                     | M18 x 58                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OR 18-1 FMR 3600 P3    |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK... /4                                   | OR 18-1 FKR 3600 N3    |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | M12                                      | VK... /4                                   | OR 18-1 FMR 3600 N3    |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OR 18-1 FKR 3600 N3    |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OR 18-1 FMR 3600 N3    |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK... /4                                   | OR 18-1 FK 5700 P3-B4  |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | M12                                      | VK... /4                                   | OR 18-1 FM 5700 P3-B4  |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2.0 m                            | —                                          | OR 18-1 FK 5700 N3-B4  |
|                                                  | 5,700                                     | M18 x 55                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Metal            | PVC,<br>2.0 m                            | —                                          | OR 18-1 FM 5700 N3-B4  |

|                                                                                                                                      | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output     | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description   |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|----------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|-----------------------|
| <b>O-M18 Standard Retroreflective sensors</b>     |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                       |
|                                                     | 5,700                                     | M18 x 45                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OR 18-1 FK 5700 P3    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OR 18-1 FM 5700 P3    |
|                                                                                                                                      | 5,700                                     | M18 x 45                    | Potentiometer                      | —                              | Red                          |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OR 18-1 FK 5700 N3    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OR 18-1 FM 5700 N3    |
| <b>O-M18 Standard Diffuse reflective sensors</b>  |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                       |
|                                                     | 600                                       | M18 x 68                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK ... /4                                  | OT 18 FKR 600 P3-B4   |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FMR 600 P3-B4   |
|                                                                                                                                      | 600                                       | M18 x 68                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK ... /4                                  | OT 18 FKR 600 N3-B4   |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FMR 600 N3-B4   |
|                                                     | 600                                       | M18 x 58                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OT 18 FKR 600 P3      |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FMR 600 P3      |
|                                                                                                                                      | 600                                       | M18 x 58                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OT 18 FKR 600 N3      |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FMR 600 N3      |
|                                                   | 800                                       | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK ... /4                                  | OT 18 FK 800 P3-B4    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FM 800 P3-B4    |
|                                                                                                                                      | 800                                       | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK ... /4                                  | OT 18 FK 800 N3-B4    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FM 800 N3-B4    |
|                                                   | 800                                       | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OT 18 FK 800 P3       |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FM 800 P3       |
|                                                                                                                                      | 800                                       | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OT 18 FK 800 N3       |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OT 18 FM 800 N3       |
| <b>O-M18 Miniature Through-beam sensors</b>     |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                       |
|                                                   | 8,000                                     | M18 x 68                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK ... /4                                  | OES 18 FKR 8000 P3-B4 |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FMR 8000 P3-B4 |
|                                                                                                                                      | 8,000                                     | M18 x 68                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | M12                                      | VK ... /4                                  | OES 18 FKR 8000 N3-B4 |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FMR 8000 N3-B4 |
|                                                   | 8,000                                     | M18 x 58                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OES 18 FKR 8000 P3    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FMR 8000 P3    |
|                                                                                                                                      | 8,000                                     | M18 x 58                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 1,000                    | Plastic          | PVC,<br>2,0 m                            | —                                          | OES 18 FKR 8000 N3    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FMR 8000 N3    |
|                                                   | 10,000                                    | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 333                      | Plastic          | M12                                      | VK ... /4                                  | OES 18 FK 10000 P3-B4 |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FM 10000 P3-B4 |
|                                                                                                                                      | 10,000                                    | M18 x 55                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 333                      | Plastic          | M12                                      | VK ... /4                                  | OES 18 FK 10000 N3-B4 |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FM 10000 N3-B4 |
|                                                   | 10,000                                    | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | pnp, 100 mA<br>NO/NC | -25 to<br>+55               | 333                      | Plastic          | PVC,<br>2,0 m                            | —                                          | OES 18 FK 10000 P3    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FM 10000 P3    |
|                                                                                                                                      | 10,000                                    | M18 x 45                    | Potentiometer                      | —                              | Infrared                     |             | npn, 100 mA<br>NO/NC | -25 to<br>+55               | 333                      | Plastic          | PVC,<br>2,0 m                            | —                                          | OES 18 FK 10000 N3    |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                      |                             |                          | Metal            |                                          |                                            | OES 18 FM 10000 N3    |

## O-M18E EXTENDED

The light sensors in the O-M18E Extended series can be used universally and are the first choice in challenging applications. The devices have a robust metallic housing and score points with their high functional reserve and efficient background suppression.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                                                                                                                            | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output     | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|----------------------|-----------------------------|--------------------------|------------------|------------------------------------------|--------------------------------------------|---------------------|
| <b>O-M18E Extended</b> Reflection light sensors background suppression  |                                           |                             |                                    |                                |                              |             |                      |                             |                          |                  |                                          |                                            |                     |
|                                                                           | 30 to 130                                 | M18 x 80                    | Potentiometer                      | —                              | Red                          |             | pnp, 100 mA<br>NO/NC | -25 to<br>+70               | 1,000                    | Metal            | M12                                      | VK.../4                                    | OH 18-1 M 130 P4-B4 |
|                                                                                                                                                            |                                           |                             |                                    |                                |                              |             | nnp, 100 mA<br>NO/NC |                             |                          |                  |                                          |                                            | OH 18-1 M 130 N4-B4 |

## O-D4

The devices in the O-D4 series are the smallest light sensors that di-soric offers in a cylindrical model. They guarantee the precise detection of objects and are ideal for mounting anywhere space is scarce.

### Technical data (typ.) +20 °C, 24 VDC

For more information, visit [www.di-soric.com](http://www.di-soric.com)



|                                                                                                                                      | Scan width / range,<br>setting range (mm) | Housing design<br>Size (mm) | Sensitivity<br>setting by means of | Transmitter (T) / Receiver (R) | Transmission light (clocked) | Laser class | Switching output  | Ambient<br>temperature (°C) | Switching frequency (Hz) | Housing material          | Cable material/length,<br>Plug connector | Connection cable<br>(optionally available) | Product description |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------|------------------------------------|--------------------------------|------------------------------|-------------|-------------------|-----------------------------|--------------------------|---------------------------|------------------------------------------|--------------------------------------------|---------------------|
| <b>O-D4</b> Reflection energetic light sensors  |                                           |                             |                                    |                                |                              |             |                   |                             |                          |                           |                                          |                                            |                     |
|                                                   | ... 10                                    | Ø 4,0                       | —                                  | —                              | Red light                    |             | pnp, 100 mA<br>NO | -25 to<br>+65               | 1000                     | Stainless<br>steel<br>V2A | 2,0 m                                    | —                                          | OTD04-10PS-2R       |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                   |                             |                          |                           | M8                                       | TK ...                                     | OTD04-10PS-T3       |
|                                                                                                                                      | ... 20                                    | Ø 4,0                       | —                                  | —                              | Red light                    |             | pnp, 100 mA<br>NO | -25 to<br>+65               | 1000                     | Stainless<br>steel<br>V2A | 2,0 m                                    | —                                          | OTD04-20PS-2R       |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                   |                             |                          |                           | M8                                       | TK ...                                     | OTD04-20PS-T3       |
|                                                                                                                                      | ... 50                                    | Ø 4,0                       | —                                  | —                              | Red light                    |             | pnp, 100 mA<br>NO | -25 to<br>+65               | 1000                     | Stainless<br>steel<br>V2A | 2,0 m                                    | —                                          | OTD04-50PS-2R       |
|                                                                                                                                      |                                           |                             |                                    |                                |                              |             |                   |                             |                          |                           | M8                                       | TK ...                                     | OTD04-50PS-T3       |

## O-Z-M MECHANICAL ACCESSORIES FOR LIGHT BARRIERS AND LIGHT SENSORS

Specific fastening angles, sensor brackets and wobble plates make adjustment and assembly of optical sensors easy.

| To be used for                                                                                                                                                                                                                                                                                                                                     |                | Product description |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|
| Fastening angles for light barriers and light sensors                                                                                                                                                                                                                                                                                              |                |                     |
| <br>                                                                                                                                                                             | O-20 Miniature | BW 22/22            |
|                                                                                                                                                                                                                                                                                                                                                    |                | BW 30               |
| <br><br><br> | O-30 Universal | BW 31-36            |
|                                                                                                                                                                                                                                                                                                                                                    |                | BW 31-39            |
|                                                                                                                                                                                                                                                                                                                                                    |                | BW 31-41            |
|                                                                                                                                                                                                                                                                                                                                                    |                | BW 31-56            |
| <br>                                                                                                                                                                         | O-40E Extended | BW 41               |
|                                                                                                                                                                                                                                                                                                                                                    |                | BW 41-80            |
|                                                                                                                                                                                                                                                                 | O-50 Metal     | BW 50               |
| <br>                                                                                                                                                                         | O-81 Laser     | BW LHT 81           |
|                                                                                                                                                                                                                                                                                                                                                    |                | SHB-LHT-81          |
| Sensor brackets for light barriers and light sensors                                                                                                                                                                                                                                                                                               |                |                     |
|                                                                                                                                                                                                                                                                 | O-20 Miniature | SH-S20              |
|                                                                                                                                                                                                                                                                 | O-40           | SH-S41-SN           |
| Wobble plates for light barriers and light sensors                                                                                                                                                                                                                                                                                                 |                |                     |
|                                                                                                                                                                                                                                                                 | O-Q10<br>O-Q15 | TP-Q                |
|                                                                                                                                                                                                                                                                 | O-Q10<br>O-Q15 | TP-Q90              |