

## Technical data sheet Optical distance sensor

Part no.: 50106733

ODSLR 96B M/V6-2000-S12



Figure can vary

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## Technical data

### Basic data

|                         |                |
|-------------------------|----------------|
| Series                  | 96             |
| Type of scanning system | Against object |

### Optical data

|                                      |                          |
|--------------------------------------|--------------------------|
| Light source 1                       | Laser, Red               |
| Laser class                          | 2, IEC / EN 60825-1:2014 |
| Light source 2                       | LED, Red                 |
| LED light wavelength                 | 624 nm                   |
| Light spot size [at sensor distance] | 2 mm x 6 mm              |
| Type of light spot geometry          | Rectangular              |

### Measurement data

|                                        |                      |
|----------------------------------------|----------------------|
| Measurement range                      | 60 ... 2,000 mm      |
| Resolution                             | 1.0 ... 5.0 mm       |
| Accuracy, short range                  | 2 %                  |
| Accuracy, distant range                | 1.5 %                |
| Accuracy, short range                  | 60 ... 200 mm        |
| Reference value, accuracy              | Measurement distance |
| Repeatability                          | 0.5 %                |
| Reference value repeatability          | Measurement distance |
| Measurement time                       | 1 ... 5 ms           |
| Temperature drift, relative            | 0.02 %/K             |
| Referencing                            | No                   |
| Black/white behavior                   | 1 %                  |
| Optical distance measurement principle | Triangulation        |

### Electrical data

|                    |                              |
|--------------------|------------------------------|
| Protective circuit | Polarity reversal protection |
|                    | Short circuit protected      |
|                    | Transient protection         |

### Performance data

|                      |                        |
|----------------------|------------------------|
| Supply voltage $U_B$ | 18 ... 30 V, DC        |
| Residual ripple      | 0 ... 15 %, From $U_B$ |
| Open-circuit current | 0 ... 150 mA           |

### Inputs

|                                    |            |
|------------------------------------|------------|
| Number of digital switching inputs | 1 Piece(s) |
|------------------------------------|------------|

### Switching inputs

#### Digital switching input 1

|          |              |
|----------|--------------|
| Function | Programmable |
|----------|--------------|

### Teach inputs

|                   |                      |
|-------------------|----------------------|
| Voltage type      | DC                   |
| Switching voltage | high: $\geq(U_B-2V)$ |

### Outputs

|                                     |            |
|-------------------------------------|------------|
| Number of analog outputs            | 1 Piece(s) |
| Number of digital switching outputs | 1 Piece(s) |

### Analog outputs

#### Analog output 1

|      |         |
|------|---------|
| Type | Voltage |
|------|---------|

### Switching outputs

|                   |                      |
|-------------------|----------------------|
| Switching voltage | high: $\geq(U_B-2V)$ |
|-------------------|----------------------|

#### Switching output 1

|                   |                       |
|-------------------|-----------------------|
| Switching element | Transistor, Push-pull |
|-------------------|-----------------------|

### Timing

### Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

#### Connection 1

|                    |                |
|--------------------|----------------|
| Function           | Signal IN      |
|                    | Signal OUT     |
|                    | Voltage supply |
| Type of connection | Connector      |
| Thread size        | M12            |
| Type               | Male           |
| Material           | Metal          |
| No. of pins        | 5 -pin         |
| Encoding           | A-coded        |

### Mechanical data

|                       |                              |
|-----------------------|------------------------------|
| Design                | Cubic                        |
| Dimension (W x H x L) | 30 mm x 90 mm x 70 mm        |
| Housing material      | Metal, Diecast zinc          |
| Lens cover material   | Glass                        |
| Net weight            | 380 g                        |
| Housing color         | Red                          |
| Type of fastening     | Through-hole mounting        |
|                       | Via optional mounting device |

### Operation and display

|                       |                   |
|-----------------------|-------------------|
| Type of display       | LED               |
|                       | OLED display      |
| Type of configuration | Software          |
| Operational controls  | Membrane keyboard |
|                       | PC software       |

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -20 ... 50 °C |
| Ambient temperature, storage   | -30 ... 70 °C |

### Certifications

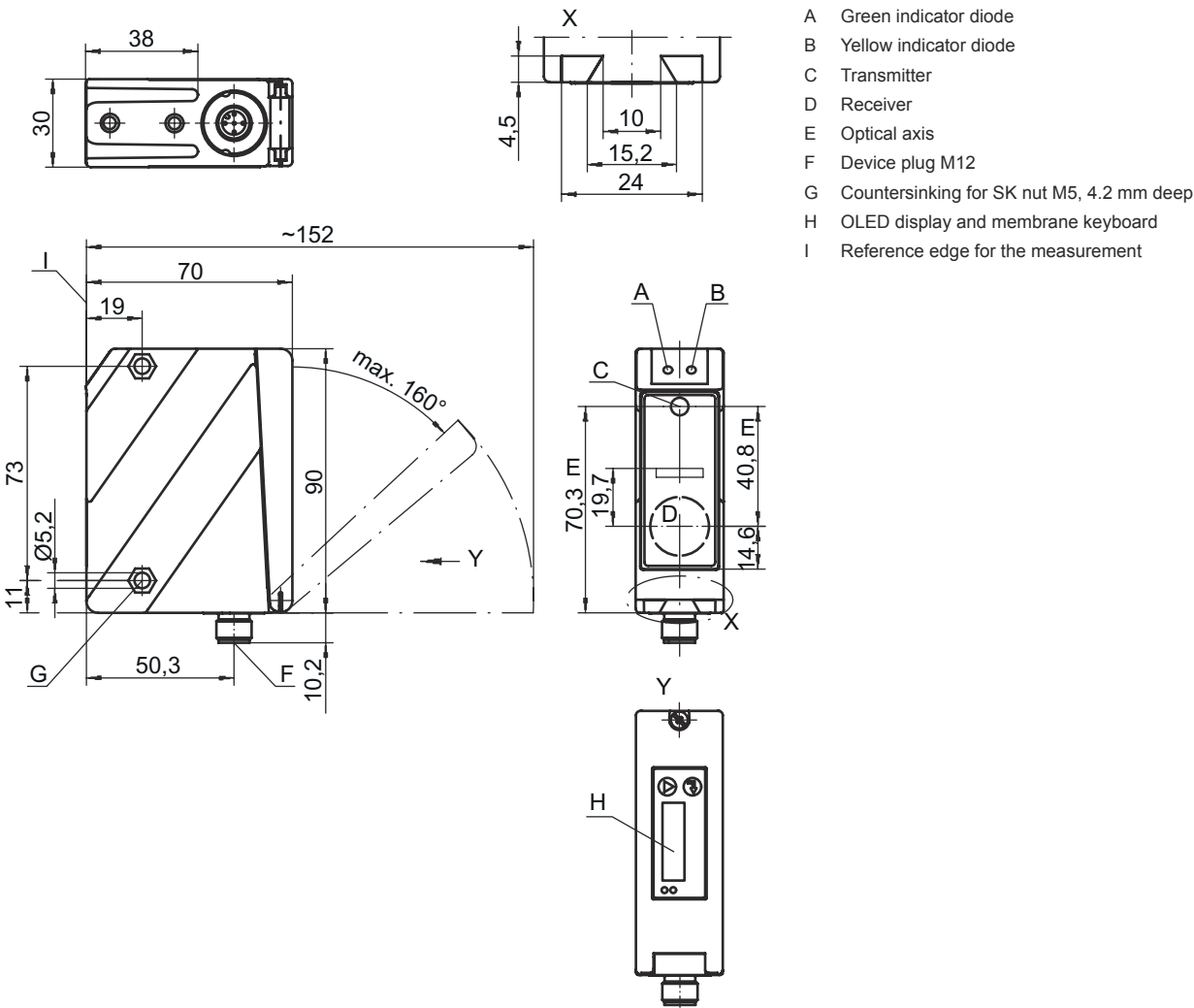
|                      |               |
|----------------------|---------------|
| Degree of protection | IP 67         |
|                      | IP 69K        |
| Protection class     | II            |
| Certifications       | c UL US       |
| Standards applied    | IEC 60947-5-2 |

### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 90318020 |
| eCl@ss 8.0            | 27270801 |
| eCl@ss 9.0            | 27270801 |
| ETIM 5.0              | EC001825 |
| ETIM 6.0              | EC001825 |

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

|                    |                |
|--------------------|----------------|
| Function           | Signal IN      |
|                    | Signal OUT     |
|                    | Voltage supply |
| Type of connection | Connector      |
| Thread size        | M12            |
| Type               | Male           |
| Material           | Metal          |
| No. of pins        | 5 -pin         |
| Encoding           | A-coded        |

## Accessories

### Connection technology - Connection cables

|                                                                                   | Part no. | Designation        | Article          | Description                                                                                                                                                  |
|-----------------------------------------------------------------------------------|----------|--------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50133855 | KD S-M12-5A-V1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 2,000 mm<br>Sheathing material: PVC |
|                                                                                   | 50133856 | KD S-M12-5A-V1-050 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PVC |
|                                                                                   | 50132077 | KD U-M12-5A-V1-020 | Connection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PVC  |
|                                                                                   | 50133842 | KD U-M12-5W-V1-020 | Connection cable | Connection 1: Connector, M12, Angled, Female, A-coded, 5 -pin<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PVC |

### Mounting technology - Mounting brackets

|                                                                                     | Part no. | Designation | Article         | Description                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|----------|-------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50025570 | BT 96       | Mounting device | Design of mounting device: Angle, L-shape<br>Fastening, at system: Through-hole mounting<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Rigid<br>Material: Metal |

### Mounting technology - Rod mounts

|                                                                                     | Part no. | Designation | Article         | Description                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|----------|-------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50082084 | BT 450.1-96 | Mounting device | Design of mounting device: Mounting system<br>Fastening, at system: For 10 mm rod<br>Mounting bracket, at device: Screw type<br>Type of mounting device: Turning, 360°, Adjustable<br>Material: Metal |

Accessories

Configuration devices

|                                                                                  | Part no. | Designation | Article               | Description                              |
|----------------------------------------------------------------------------------|----------|-------------|-----------------------|------------------------------------------|
|  | 50107223 | UPG 10      | Configuration adapter | Functions: Configuration and test device |

Note



A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.