



Diffuse reflective sensor,  $S_n=100\text{mm}$ , 4L, 10-30VDC, dark, NPN, PNP, M18, metal, M12



Powering Business Worldwide™

**Part no.** E58-18DP100-HDP  
**Catalog No.** 135665  
**Alternate Catalog No.** E58-18DP100-HDP  
**EL-Nummer (Norway)** 0004315341

## Delivery program

|                           |       |    |                                            |
|---------------------------|-------|----|--------------------------------------------|
| Basic function            |       |    | Optical sensors                            |
| Product range             |       |    | E58 Harsh Duty Series                      |
| For connection of:        |       |    | Plug-in connection M12 x 1                 |
| Design (outer dimensions) |       | mm | M18 x 1                                    |
| Rated operational voltage | $U_e$ |    | 10 - 30 V DC                               |
| Rated switching distance  | $S_n$ | mm | 100                                        |
| Description               |       |    | with background suppression (Perfect Prox) |
| Connection                |       |    | 4-wire                                     |
| Function                  |       |    | Reflected-light beam                       |
| Type of light             |       |    | Visible red                                |
| Material                  |       |    | Stainless steel                            |
| Switching type            |       |    | NPN<br>PNP                                 |
| Switching principle       |       |    | Dark switching                             |

### Information relevant for export to North America

Product Standards UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking

UL File No. E166051

UL Category Control No. NRKH, NRKH7

CSA File No. UL report applies to both Canada and US

CSA Class No. –

North America Certification UL listed, certified by UL for use in Canada

Max. Voltage Rating 30 V DC

Degree of Protection IEC: IP68, IP69K; UL/CSA Type: 1, 2, 3, 3R, 3S, 4, 4x, 6, 6P, 12, 12K, 13

## Technical data

### General

|                             |  |   |                            |
|-----------------------------|--|---|----------------------------|
| Standards                   |  |   | IEC/EN 60947-5-2           |
| Ambient temperature         |  |   | -40 - +55                  |
| Mechanical shock resistance |  | g | 100<br>Shock duration 3 ms |
| Degree of Protection        |  |   | IP69                       |

### Characteristics

|                           |       |     |                                                                                                             |
|---------------------------|-------|-----|-------------------------------------------------------------------------------------------------------------|
| Rated switching distance  |       |     |                                                                                                             |
| Rated switching distance  | $S_n$ | mm  | 100                                                                                                         |
| Range                     |       | mm  | 0.1                                                                                                         |
| Rated operational voltage | $U_e$ |     | 10 - 30 V DC                                                                                                |
| Maximum load current      | $I_e$ | mA  | < PNP: 100<br>NPN: 250                                                                                      |
| Response time             |       | ms  | 1                                                                                                           |
| Switching state display   |       | LED | Red                                                                                                         |
| Protective functions      |       |     | Short-circuit protective device<br>Protection against polarity reversal<br>Protection against wire breakage |
| Connection                |       |     | 4-wire                                                                                                      |
| Style                     |       |     |                                                                                                             |
| Design (outer dimensions) |       | mm  | M18 x 1                                                                                                     |

|                    |  |                            |
|--------------------|--|----------------------------|
| For connection of: |  | Plug-in connection M12 x 1 |
| Material           |  | Stainless steel            |

## Design verification as per IEC/EN 61439

|                                        |    |     |
|----------------------------------------|----|-----|
| Technical data for design verification |    |     |
| Operating ambient temperature min.     | °C | -40 |
| Operating ambient temperature max.     | °C | 55  |

## Technical data ETIM 7.0

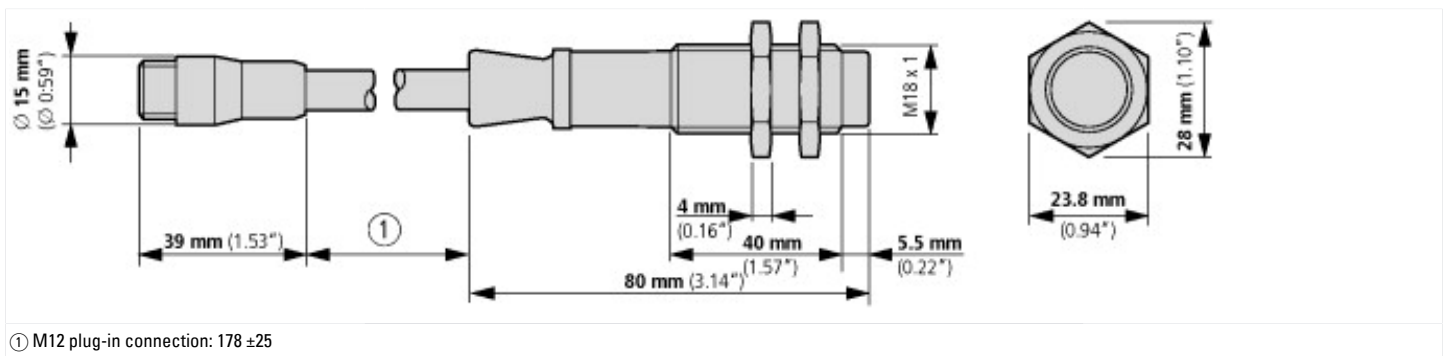
|                                                                                                                                                                                                                                 |    |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------|
| Sensors (EG000026) / Light scanner with background masking (EC002719)                                                                                                                                                           |    |                        |
| Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Light scanner w. background masking (ec1@ss10.0.1-27-27-09-04 [AKP253013]) |    |                        |
| Adjustment range                                                                                                                                                                                                                | mm | 0 - 100                |
| Operating distance                                                                                                                                                                                                              | mm | 0 - 0                  |
| Triangulation                                                                                                                                                                                                                   |    | Background fade-out    |
| Pre failure notice                                                                                                                                                                                                              |    | No                     |
| With time function                                                                                                                                                                                                              |    | No                     |
| Rated switching distance                                                                                                                                                                                                        | mm | 100                    |
| Max. switching distance                                                                                                                                                                                                         | mm | 127                    |
| Max. output current                                                                                                                                                                                                             | mA | 250                    |
| Reflector included                                                                                                                                                                                                              |    | No                     |
| Analogue output 0 V ... 10 V                                                                                                                                                                                                    |    | No                     |
| Analogue output 0 mA ... 20 mA                                                                                                                                                                                                  |    | No                     |
| Analogue output 4 mA ... 20 mA                                                                                                                                                                                                  |    | No                     |
| Analogue output -10 V ... +10 V                                                                                                                                                                                                 |    | No                     |
| With other analogue output                                                                                                                                                                                                      |    | No                     |
| Setting procedure                                                                                                                                                                                                               |    | Other                  |
| With communication interface analogue                                                                                                                                                                                           |    | No                     |
| With communication interface AS-Interface                                                                                                                                                                                       |    | No                     |
| With communication interface CANopen                                                                                                                                                                                            |    | No                     |
| With communication interface DeviceNet                                                                                                                                                                                          |    | No                     |
| With communication interface Ethernet                                                                                                                                                                                           |    | No                     |
| With communication interface INTERBUS                                                                                                                                                                                           |    | No                     |
| With communication interface PROFIBUS                                                                                                                                                                                           |    | No                     |
| With communication interface RS-232                                                                                                                                                                                             |    | No                     |
| With communication interface RS-422                                                                                                                                                                                             |    | No                     |
| With communication interface RS-485                                                                                                                                                                                             |    | No                     |
| With communication interface SSD                                                                                                                                                                                                |    | No                     |
| With communication interface SSI                                                                                                                                                                                                |    | No                     |
| Number of semiconductor outputs with signalling function                                                                                                                                                                        |    | 2                      |
| Number of contact energized outputs with signalling function                                                                                                                                                                    |    | 0                      |
| Number of protected semiconductor outputs                                                                                                                                                                                       |    | 0                      |
| Number of protected contact energized outputs                                                                                                                                                                                   |    | 0                      |
| Type of interface for safety communication                                                                                                                                                                                      |    | Other                  |
| Type of electric connection                                                                                                                                                                                                     |    | Connector M12          |
| Type of switching output                                                                                                                                                                                                        |    | PNP/NPN                |
| Type of switch function                                                                                                                                                                                                         |    | Other                  |
| Operation agent-safety class                                                                                                                                                                                                    |    | Safety class 2         |
| Explosion safety category for gas                                                                                                                                                                                               |    | None                   |
| Explosion safety category for dust                                                                                                                                                                                              |    | None                   |
| Construction type housing                                                                                                                                                                                                       |    | Cylinder, screw-thread |
| Width sensor                                                                                                                                                                                                                    | mm | 0                      |
| Diameter sensor                                                                                                                                                                                                                 | mm | 18                     |
| Height of sensor                                                                                                                                                                                                                | mm | 0                      |
| Length of sensor                                                                                                                                                                                                                | mm | 80                     |
| Sensing mode                                                                                                                                                                                                                    |    | Dark switching         |

|                                                       |                 |          |
|-------------------------------------------------------|-----------------|----------|
| Material of optical surface                           |                 | Glass    |
| Material housing                                      |                 | Metal    |
| Max. output current at protected output               | mA              | 0        |
| Min. reflector distance                               | mm              | 0        |
| Ambient temperature                                   | °C              | -40 - 55 |
| Time of reaction                                      | ms              | 1        |
| Transmission range of the safety field                | m               | 0        |
| Switching frequency                                   | Hz              | 500      |
| Type of safety acc. IEC 61496-1                       |                 |          |
| "Switching voltage of OSSD at state ""high""          | V               | 30       |
| Rated control supply voltage Us at AC 50HZ            | V               | 0 - 0    |
| Rated control supply voltage Us at AC 60HZ            | V               | 0 - 0    |
| Rated control supply voltage Us at DC                 | V               | 10 - 30  |
| Voltage type                                          |                 | DC       |
| With monitoring function downstream switching devices |                 | No       |
| Laser protection class                                |                 | None     |
| Wavelength of the sensor                              | nm              | 660      |
| Type of light                                         |                 | Other    |
| Light dot                                             | mm <sup>2</sup> | 0        |
| AWG-number                                            |                 | 0        |
| Material of cable sheath                              |                 | Other    |
| With restart blockage                                 |                 | No       |
| Suitable for safety functions                         |                 | No       |
| Degree of protection (IP)                             |                 | IP67     |

## Approvals

|                             |  |                                                                           |
|-----------------------------|--|---------------------------------------------------------------------------|
| Product Standards           |  | UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking                        |
| UL File No.                 |  | E166051                                                                   |
| UL Category Control No.     |  | NRKH, NRKH7                                                               |
| CSA File No.                |  | UL report applies to both Canada and US                                   |
| CSA Class No.               |  | -                                                                         |
| North America Certification |  | UL listed, certified by UL for use in Canada                              |
| Max. Voltage Rating         |  | 30 V DC                                                                   |
| Degree of Protection        |  | IEC: IP68, IP69K; UL/CSA Type: 1, 2, 3, 3R, 3S, 4, 4x, 6, 6P, 12, 12K, 13 |

## Dimensions



## Assets (links)

### Declaration of CE Conformity

00002425

### Instruction Leaflets

IL05305003Z2018\_05

## Additional product information (links)

### IL05305003Z E58 Series Harsh Environment Optical Sensors

IL05305003Z E58 Series Harsh Environment Optical Sensors [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05305003Z2018\\_05.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305003Z2018_05.pdf)

