



Diffuse reflective sensor,  $S_n=280\text{mm}$ , 4L, 10-30VDC, dark, NPN, PNP, M30, metal, M12



Powering Business Worldwide™

**Part no.** E58-30DPS280-HDP  
**Catalog No.** 135681  
**Alternate Catalog No.** E58-30DPS280-HDP  
**EL-Nummer (Norway)** 0004315345

## 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 | M30 x 1.5                                  |
| Rated operational voltage | $U_e$ |    | 10 - 30 V DC                               |
| Rated switching distance  | $S_n$ | mm | 280  |
| 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  | 280   |
| Range                     |       | mm  | 0.18  |
| Rated operational voltage | $U_e$ |     | 10 - 30 V DC  |
| Maximum load current      | $I_e$ | mA  | < 100   |
| Response time             |       | ms  | 1.6   |
| 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  | M30 x 1.5   |
| 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

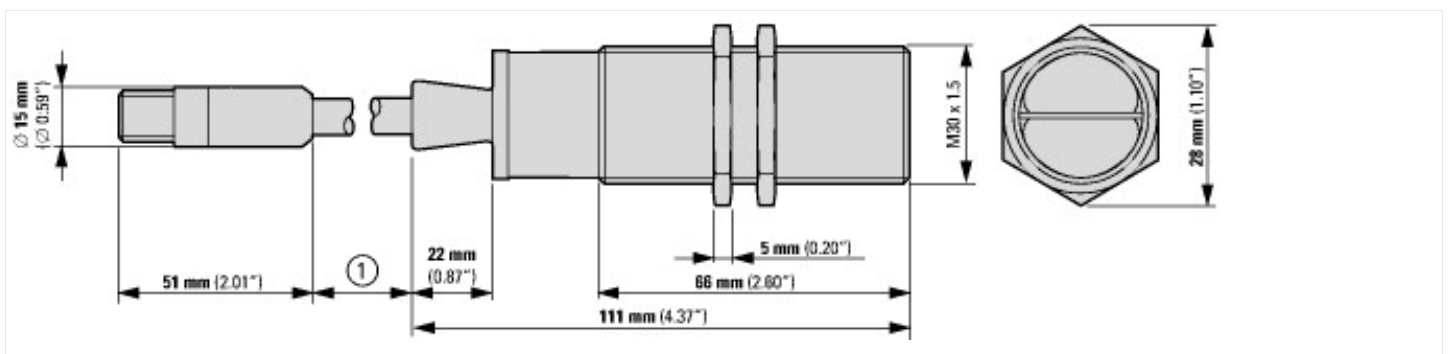
|   |    |                        |
|---|----|------------------------|
| Sensors (EG000026) / Light scanner with background masking (EC002719)   |    |                        |
| Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Light scanner w. background masking (ecl@ss10.0.1-27-27-09-04 [AKP253013]) |    |                        |
| Adjustment range  | mm | 0 - 280                |
| Operating distance  | mm | 0 - 0                  |
| Triangulation   |    | Background fade-out    |
| Pre failure notice  |    | No                     |
| With time function  |    | No                     |
| Rated switching distance  | mm | 280                    |
| Max. switching distance   | mm | 318                    |
| Max. output current   | mA | 100                    |
| 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 | 30                     |
| Height of sensor  | mm | 0                      |
| Length of sensor  | mm | 111                    |
| 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              | 1.6      |
| Transmission range of the safety field                | m               | 0        |
| Switching frequency                                   | Hz              | 312      |
| 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



① M12 plug-in connection: 178 ±25

## 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)

