



**Diffuse reflective sensor, Sn=50mm, 4L, 10-30VDC, dark, NPN, PNP, M18, metal, line 2m**

**Part no.** E58-18DP50-HD  
**Catalog No.** 135670  
**Alternate Catalog No.** E58-18DP50-HD

## Delivery program

|                           |       |    |                                            |
|---------------------------|-------|----|--------------------------------------------|
| Basic function            |       |    | Optical sensors                            |
| Product range             |       |    | E58 Harsh Duty Series                      |
| For connection of:        |       |    | 2 m connection cable                       |
| Design (outer dimensions) |       | mm | M18 x 1                                    |
| Rated operational voltage | $U_e$ |    | 10 - 30 V DC                               |
| Rated switching distance  | $S_n$ | mm | 50                                         |
| 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  | 50                                                                                                          |
| Range                     |       | mm  | 0.05                                                                                                        |
| 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:        |       |     | 2 m connection cable                                                                                        |

|          |  |                 |
|----------|--|-----------------|
| 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 (ecI@ss10.0.1-27-27-09-04 [AKP253013]) |  |    |                        |
| Adjustment range                                                                                                                                                                                                                |  | mm | 0 - 50                 |
| Operating distance                                                                                                                                                                                                              |  | mm | 0 - 0                  |
| Triangulation                                                                                                                                                                                                                   |  |    | Background fade-out    |
| Pre failure notice                                                                                                                                                                                                              |  |    | No                     |
| With time function                                                                                                                                                                                                              |  |    | No                     |
| Rated switching distance                                                                                                                                                                                                        |  | mm | 50                     |
| Max. switching distance                                                                                                                                                                                                         |  | mm | 57                     |
| 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                                                                                                                                                                                                     |  |    | Cable                  |
| 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                  |

