



Retroreflective sensing sensor, Sn=3m, 4L, 10-30VDC, dark, NPN, PNP, quad 40, insulated material, M12



Powering Business Worldwide™

Part no. E65-SMPR3-HDD
Catalog No. 135719
Alternate Catalog No. E65-SMPR3-HDD

Delivery program

| | | | |
|---------------------------|----------------|----|--|
| Basic function | | | Optical sensors |
| Product range | | | E65 SM Series |
| For connection of: | | | Plug-in connection M12 x 1 |
| Design (outer dimensions) | | mm | 33 x 41 x 37 |
| Rated operational voltage | U _e | | 10 - 30 V DC |
| Rated switching distance | S _n | mm | 3000 |
| Description | | | polarized light for combination with reflector |
| Connection | | | 4-wire |
| Function | | | Reflex photoelectric sensor |
| Material | | | Insulated material |
| Switching type | | | NPN PNP |
| Switching principle | | | Dark switching |

Notes for combination with reflector

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, 3, 4, 4x, 6, 6P, 12, 13

Technical data

General

| | | | |
|-----------------------------|---|----|----------------------------|
| Standards | | | IEC/EN 60947-5-2 |
| Ambient temperature | | | -25 - +55 |
| Operation | θ | °C | -25 - +55 |
| Storage | θ | °C | -25 - +70 |
| Mechanical shock resistance | | g | 50 Shock duration 10 ms |
| Degree of Protection | | | IP68, IP69 |

Characteristics

| | | | |
|--|----------------|-----|---|
| Rated switching distance | | | |
| Rated switching distance | S _n | mm | 3000 |
| Range | | mm | 3 |
| Rated operational voltage | U _e | | 10 - 30 V DC |
| Maximum load current | I _e | mA | < 100 |
| Operating current in the switched state at 24 V DC | I _b | mA | 20 |
| Response time | | ms | 1 |
| Switching state display | | LED | Red |
| Operating voltage display | | LED | Green |
| Boundary gain | | | Yellow |
| Protective functions | | | Short-circuit protective device Protection against polarity reversal |

| | | | |
|---------------------------|--|----|----------------------------------|
| Connection | | | Protection against wire breakage |
| Style | | | 4-wire |
| Design (outer dimensions) | | mm | 33 x 41 x 37 |
| For connection of: | | | Plug-in connection M12 x 1 |
| Material | | | Insulated material |

Design verification as per IEC/EN 61439

| | | | |
|--|--|----|-----|
| Technical data for design verification | | | |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 55 |

Technical data ETIM 7.0

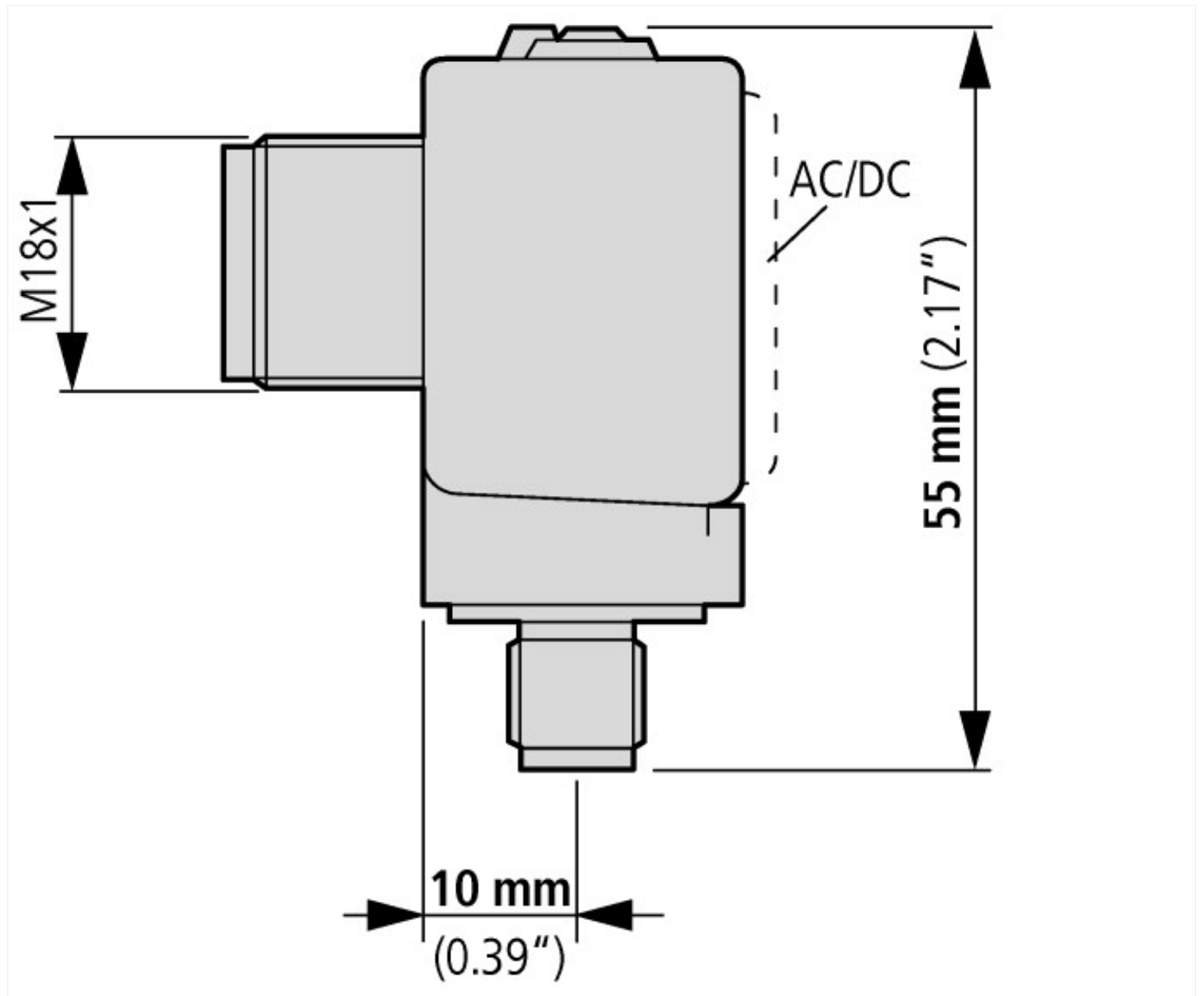
| | | | |
|---|--|----|---------------|
| Sensors (EG000026) / Reflection light barrier (EC002717) | | | |
| Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Reflection light barrier (ecl@ss10.0.1-27-09-02 [AKP251013]) | | | |
| Pre failure notice | | | No |
| With time function | | | No |
| Rated switching distance | | mm | 3000 |
| Max. switching distance | | mm | 0 |
| 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 | | | |
| Type of electric connection | | | Connector M12 |
| Type of switching output | | | PNP/NPN |
| Type of switch function | | | Other |
| Operation agent-safety class | | | |
| Explosion safety category for gas | | | None |
| Explosion safety category for dust | | | None |
| Construction type housing | | | Cuboid |
| Width sensor | | mm | 33 |
| Diameter sensor | | mm | 0 |
| Height of sensor | | mm | 55 |
| Length of sensor | | mm | 41 |

| | | | |
|---|--|-----------------|----------------|
| Sensing mode | | | Dark switching |
| Material of optical surface | | | Plastic |
| Material housing | | | Plastic |
| Max. output current at protected output | | mA | 0 |
| Min. reflector distance | | mm | 0 |
| Ambient temperature | | °C | 25 - 55 |
| Time of reaction | | ms | 0 |
| 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 ² | 0 |
| With restart blockage | | | No |
| Suitable for safety functions | | | No |
| Degree of protection (IP) | | | IP67 |
| Degree of protection (NEMA) | | | 4X |

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, 3, 4, 4x, 6, 6P, 12, 13 |

Dimensions





Assets (links)

Declaration of CE Conformity

00002426

Instruction Leaflets

IL05305004Z2018_05

Additional product information (links)

IL05305004Z E65 SM Series Optical Sensors

IL05305004Z E65 SM Series Optical Sensors ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305004Z2018_05.pdf