



Retroreflective sensing sensor, Sn=3m, 4L, 10-30VDC, light, NPN, PNP, quad 40, insulated material, line 2m



**Part no.** E65-SMPR3-HL  
**Catalog No.** 135720  
**Alternate Catalog No.** E65-SMPR3-HL

## Delivery program

Basic function			Optical sensors
Product range			E65 SM Series
For connection of:			2 m connection cable
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			Light 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:		2 m connection cable
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@ss10.0.1-27-27-09-02 [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		Cable
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	43
Length of sensor	mm	41

Sensing mode			Light 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 <sup>2</sup>	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



