



Diffuse reflective sensor,  $S_n=50\text{mm}$ , 4L, 10-30VDC, light, NPN, PNP, quad 40, insulated material, M12

**Part no.** E65-SMPP050-HLD  
**Article no.** 135705  
**Catalog No.** E65-SMPP050-HLD

## 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	50
Description			with background suppression (Perfect Prox)
Connection			4-wire
Function			Reflected-light beam
Material			Insulated material
Switching type			NPN PNP
Switching principle			Light switching
<b>Information relevant for export to North America</b>			
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	$\theta$	°C	-25 - +55
Storage	$\theta$	°C	-25 - +70
Mechanical shock resistance		g	50 Shock duration 10 ms
Degree of Protection			IP68, IP69K

### 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	< 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 Protection against wire breakage
Connection			4-wire
Style			
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 6.0

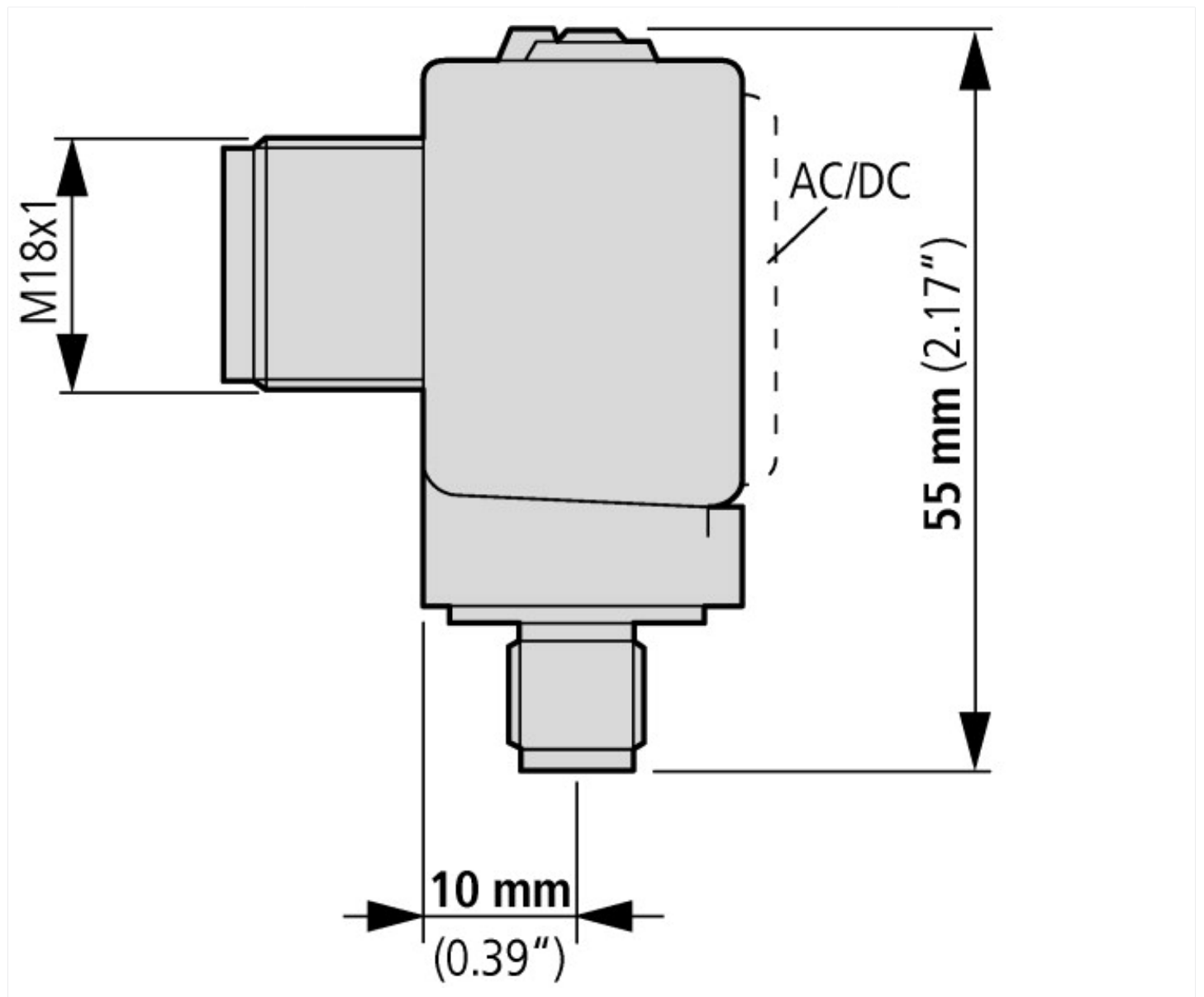
Sensors (EG000026) / Light scanner with background masking (EC002719)		
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Light scanner w. background masking (ec1@ss8.1-27-27-09-04 [AKP253010])		
Adjustment 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	50
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 analog output		No
Setting procedure		-
With communication interface analog		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		1
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		-
Operation agent-safety class		Safety class 2
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
Switch function		Light switching

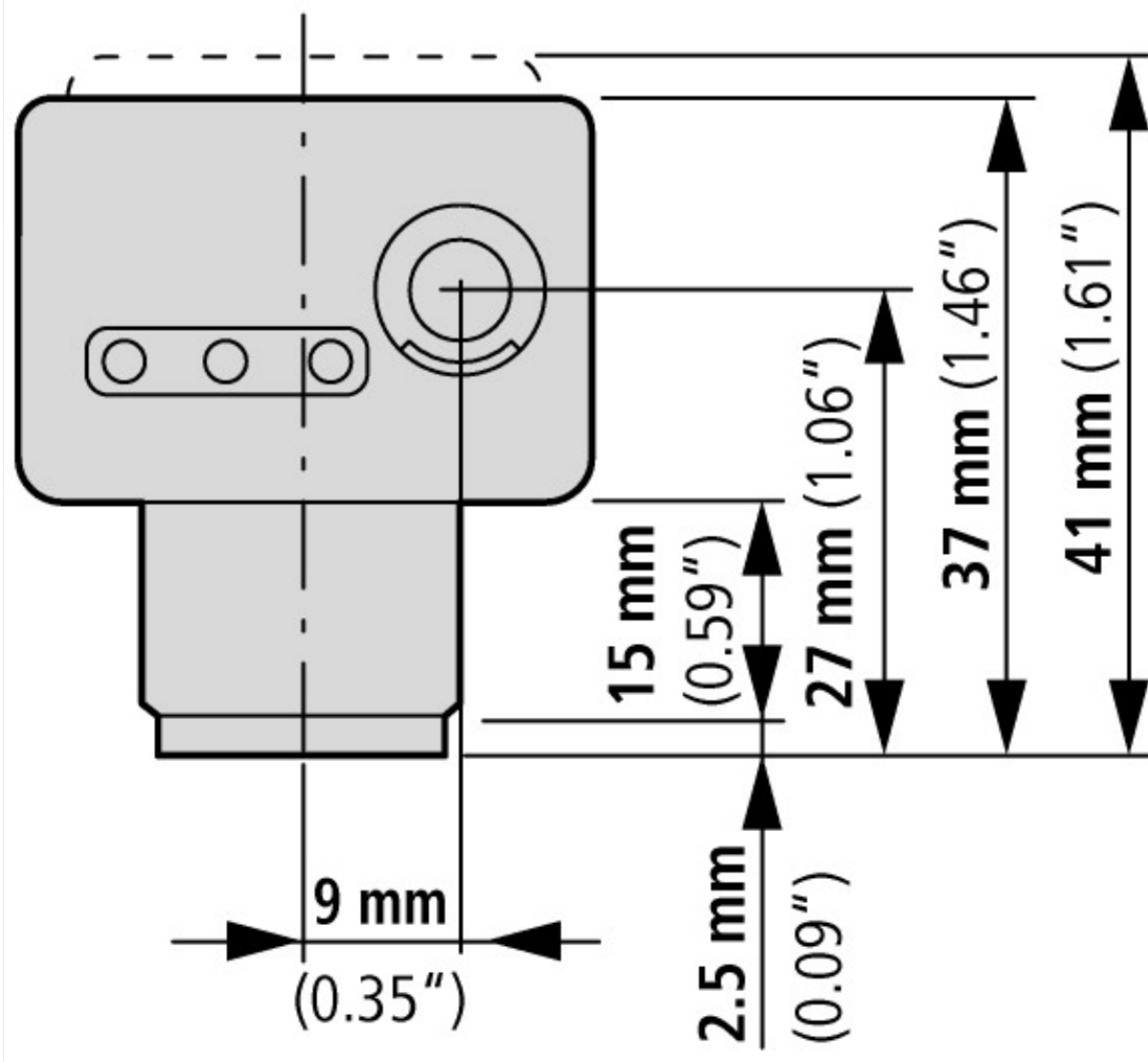
Material of optical surface		Plastic
Material housing		Plastic
Max. output current at protected output	mA	100
Min. reflector distance	mm	0
Ambient temperature	°C	-25 - 55
Time of reaction	ms	2
Transmission range of the safety field	m	0
Switching frequency	Hz	500
Type of safety acc. IEC 61496-1		-
Switching 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		-
Light dot	mm <sup>2</sup>	0
AWG-number		0
Material of cable sheath		-
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, 3, 4, 4x, 6, 6P, 12, 13

## Dimensions





### Additional product information (links)

IL05305004Z E65 SM Series Optical Sensors

IL05305004Z E65 SM Series Optical Sensors [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05305004Z2016\\_07.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305004Z2016_07.pdf)