



Diffuse reflective sensor, $S_n=100\text{mm}$, 4L, 10-30VDC, light, NPN, PNP, quad 40, insulated material, M12

Part no. **E65-SMPP100-HLD**
Catalog No. **135713**
Alternate Catalog No. **E65-SMPP100-HLD**
EL-Nummer (Norway) **0004315353**

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	100
Description			with background suppression (Perfect Prox)
Connection			4-wire
Function			Reflected-light beam
Material			Insulated material
Switching type			NPN PNP
Switching principle			Light 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, 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	100
Range		mm	0.1
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 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 - 100
Operating distance		mm	0 - 0
Triangulation			Background fade-out
Pre failure notice			No
With time function			No
Rated switching distance		mm	100
Max. switching distance		mm	100
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			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			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			Cuboid
Width sensor		mm	33
Diameter sensor		mm	0

Height of sensor	mm	55
Length of sensor	mm	41
Sensing mode		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		Other
Light dot	mm ²	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, 3, 4, 4x, 6, 6P, 12, 13



