



Retroreflective sensing sensor, $S_n=3000\text{mm}$, 4L, 10-30VDC, NPN, PNP, M18, insulated material, M12



Part no. 14101RQD07
Catalog No. 135653
Alternate Catalog No. 14101RQD07

Delivery program

Basic function			Optical sensors
Product range			Comet Series
For connection of:			Plug-in connection M12 x 1
Design (outer dimensions)		mm	M18 x 1
Rated operational voltage	U_e		10 - 30 V DC
Rated switching distance	S_n	mm	3000
Description			polarized light for combination with reflector Beam: right-angled
Connection			4-wire
Function			Reflex photoelectric sensor
Type of light			Visible red
Material			Insulated material
Switching type			NPN PNP
Switching principle			Adjustable bright/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. E117028

UL Category Control No. NRKH, NRKH7

CSA File No. 50513

CSA Class No. 3211-07

North America Certification UL listed, CSA certified

Max. Voltage Rating 30 V DC

Degree of Protection IEC: IP68, IP69K; UL/CSA Type: 1, 4, 6

Technical data

General

Standards			IEC/EN 60947-5-2
Ambient temperature			-40 - +70
Mechanical shock resistance		g	100 Shock duration 3 ms
Degree of Protection			IP67

Characteristics

Rated switching distance			
Rated switching distance	S_n	mm	3000
Range		mm	3
Rated operational voltage	U_e		10 - 30 V DC
Operating current in the switched state at 24 V DC	I_b	mA	30
Maximum load current	I_e	mA	< PNP: 100 NPN: 250 (120 > 55 °C)
Response time		ms	1
Switching state display		LED	Red
Protective functions			Short-circuit protective device Protection against polarity reversal
Connection			4-wire
Style			

Design (outer dimensions)	mm	M18 x 1
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	-40
Operating ambient temperature max.	°C	70

Technical data ETIM 7.0

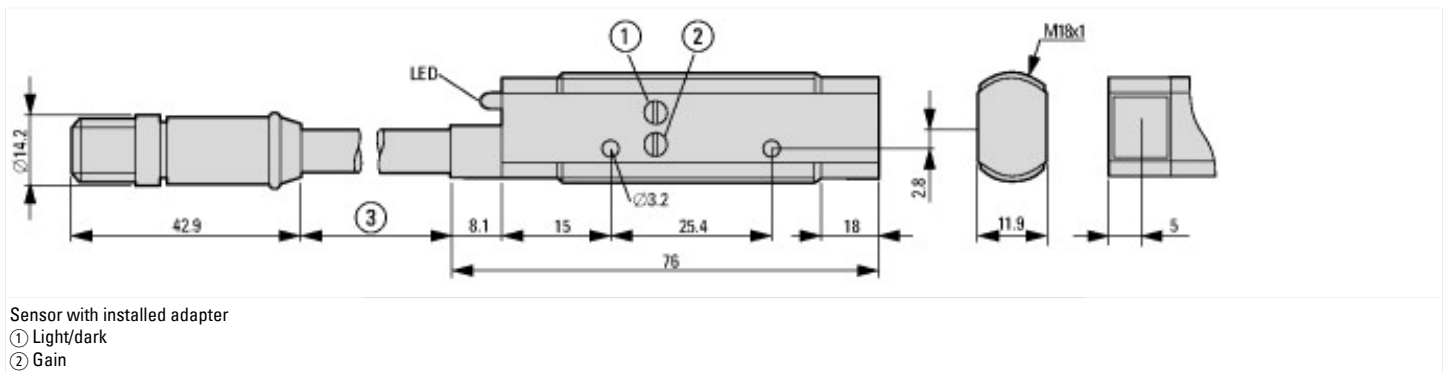
Sensors (EG000026) / Reflection light barrier (EC002717)		
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Reflection light barrier (ecl@ss10.0.1-27-09-02 [AKP251013])		
Pre failure notice		No
With time 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		Manual adjustment
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		Programmable/configurable
Operation agent-safety class		
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	76
Sensing mode		Light-/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	40 - 70
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	0
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	0
Type of light		Polarity free red light
Light dot	mm ²	0
With restart blockage		No
Suitable for safety functions		No
Degree of protection (IP)		IP67
Degree of protection (NEMA)		4

Approvals

Product Standards		UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.		E117028
UL Category Control No.		NRKH, NRKH7
CSA File No.		50513
CSA Class No.		3211-07
North America Certification		UL listed, CSA certified
Max. Voltage Rating		30 V DC
Degree of Protection		IEC: IP68, IP69K; UL/CSA Type: 1, 4, 6

Dimensions



Additional product information (links)

IL05305002Z Comet Series Optical Sensors	
IL05305002Z Comet Series Optical Sensors	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305002Z2018_05.pdf