Diffuse reflective sensor, Sn=225mm, 4L, 10-30VDC, NPN, PNP, M18, insulated material, M12

Powering Business Worldwide

Part no. 13103RQD07
Article no. 135601
Catalog No. 13103RQD07

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	225
Description			Beam: right-angled with background suppression (Perfect Prox)
Connection			4-wire
Function			Reflected-light beam
Type of light			Infra-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	225
Range		mm	0.23
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 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 (ecl@ss8.1-27-27-09-04 [AKP253010])		
Adjustment range	mm	0 - 0
Operating distance	mm	0 - 0
Triangulation		Background fade-out
Pre failure notice		No
With time function		No
Rated switching distance	mm	225
Max. switching distance	mm	225
Max. output current	mA	250
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		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		Safety class 2
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	66
Switch function		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	1
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	0
Type of light			Infrared light
Light dot		mm^2	0
AWG-number			22
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.			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

Additional product information (links)

IL05305002Z Comet Series Optical Sensors	
IL05305002Z Comet Series Optical Sensors	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305002Z2016_07.pdf

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