



Thru-beam photoelectric sensor, transmitter, Sn=24m, 4L, 10-30VDC, NPN, PNP, M18, insulated material, M12

EATON
Powering Business Worldwide™

Part no. 12102AQD07
Catalog No. 135577
Alternate Catalog No. 12102AQD07
EL-Nummer (Norway) 0004315335

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	24000
Description		Detector (for combination with source) Beam: straight
Connection		4-wire
Function		Thru-beam 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		-20 - +70
Mechanical shock resistance	g	100 Shock duration 3 ms
Degree of Protection		IP67

Characteristics

Rated switching distance	S _n	mm	24000
Range		mm	24000
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	3.5
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	°C	-20
Operating ambient temperature min.	°C	70

Technical data ETIM 7.0

Sensors (EG000026) / One-way light barrier (EC002716)	Receiver
Scope of delivery of the one-way system	
Opening angle	° 0
Pre failure notice	No
With time function	No
Rated switching distance	mm 24000
Max. switching distance	mm 24000
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	0
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	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 70
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	7
Transmission range of the safety field	m	0
Switching frequency	Hz	142
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
AWG-number		0
Material of cable sheath		Polyurethane (PUR)
With restart blockage		No
Suitable for safety functions		No
Degree of protection (IP)		IP67
Degree of protection (NEMA)		4

Approvals

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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

