





Overview

Specifications

Resources







DELIVERY PROGRAM

Delivery program

Technical data

Design verification as per IEC/EN 61439

Product range

Comet Series

Basic function Optical sensors

For connection of:

Technical data ETIM 7.0

Plug-in connection M12 x 1

Approvals

Design (outer dimensions) $M18 \times 1 \text{ mm}$

Dimensions

Rated operational voltage [U_e] 10 - 30 V DC

Rated switching distance $[S_n]$ 225 mm

Description Beam straight 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 100

Shock duration 3 ms g

Degree of Protection

IP67

Characteristics

Rated switching distance Rated switching distance [S_n] 225 mm

Range 0.23 mm

Rated operational voltage [U $_{\rm e}$] 10 - 30 V DC

Operating current in the switched state at 24 V DC [I $_{\!o}$] 30 mA

 $\hbox{\it Maximum load current [I_e]}$

< PNP. 100

NPN: 250 (120 > 55 °C) mA
Response time 1 ms
Switching state display Red LED
Protective functions Short-circuit protective device Protection against polarity reversal
Connection 4-wire
Style Design (outer dimensions) M18 x 1 mm
For connection of: Rug-in connection M12 x 1
Material Insulated material
DESIGN VERIFICATION AS PER IEC/EN 61439
DESIGN VERIFICATION AS PER IEC/EN 61439 Operating ambient temperature min40 °C
Operating ambient temperature min.
Operating ambient temperature min40 °C Operating ambient temperature max.
Operating ambient temperature min40 °C Operating ambient temperature max.
Operating ambient temperature min40 °C Operating ambient temperature max. +70 °C
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Operating ambient temperature min. -40 °C Operating ambient temperature max. +70 °C TECHNICAL DATA ETIM 7.0 Sensors (E9000026) / Light scanner with background masking (E0002719) Bectric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology
Operating ambient temperature min40 °C Operating ambient temperature max. +70 °C TECHNICAL DATA ETIM 7.0 Sensors (E3000026) / Light scanner with background masking (E0002719) Bectric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Light scanner w. background masking (ecl@ss10.0.1-27-27-09-04 [AKP253013]) Adjustment range

Pre failure notice

With time function Rated switching distance 225 mm Max. switching distance 225 mm Max. output current 250 mA Reflector included Nb Analogue output 0 V ... 10 V Analogue output 0 mA ... 20 mA Analogue output 4 mA ... 20 mA Analogue output -10 V ... +10 V No With other analogue output Nb Setting procedure Other With communication interface analogue Nb With communication interface AS-Interface With communication interface CANOpen With communication interface DeviceNet Nb With communication interface Ethernet No With communication interface INTERBUS Nb

With communication interface PROFIBUS

With communication interface RS-232 With communication interface RS-422 Nb With communication interface RS-485 No With communication interface SSD Nb With communication interface SSI Nb Number of semiconductor outputs with signalling function Number of contact energized outputs with signalling function 0 Number of protected semiconductor outputs 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 0 mm	
Diameter sensor 18 mm	
Height of sensor 0 mm	
Length of sensor 66 mm	
Sensing mode Light-/dark switching	
Material of optical surface Rastic	
Material housing Rastic	
Max. output current at protected output 0 mA	
Mn. reflector distance 0 mm	
Ambient temperature -40 - 70 °C	
Time of reaction 1 ms	
Transmission range of the safety field 0 m	
Switching frequency 500 Hz	
Type of safety acc. IEC 61496-1	
"Switching voltage of OSSD at state ""high""" 30 V	
Rated control supply voltage Us at AC 50HZ 0 - 0 V	
Rated control supply voltage Us at AC60HZ 0 - 0 V	
Rated control supply voltage Us at DC 10 - 30 V	

Voltage type DC With monitoring function downstreamswitching devices Laser protection class None Wavelength of the sensor 0 nm Type of light Infrared light Light dot 0 mm² AWG-number 22 Material of cable sheath Other With restart blockage Nb Suitable for safety functions Nb Degree of protection (IP) IP67 **APPROVALS Product Standards** UL 508; CSA-C22.2 No. 14; IEO60947-5-2; CE marking UL File No. E117028

UL Category Control No. NRKH, NRKH7

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CSA Class No. 3211-07

North America Certification UL listed, CSA certified Max. Voltage Rating
30 V DC

Degree of Protection
EC: IF68, IF69K; LL/CSA Type: 1, 4, 6

DIMENSIONS

Sensor with installed adapter
Light/dark
Gain





