





Overview

Specifications

Resources







DELIVERY PROGRAM

Delivery program

Technical data

Basic function Optical sensors

Design verification as per IEC/EN 61439

Product range E65 SM Series

Technical data ETIM7.0

For connection of: Plug-in connection M12 x 1

Approvals

Design (outer dimensions) 33 x 41 x 37 mm

Dimensions

Rated operational voltage $[U_e]$ 10 - 30 V DC

Rated switching distance $[S_n]$ 100 mm

Description

with background suppression (Perfect Prox)

Connection 4-wire

Function Reflected-light beam

Material Insulated material

Switching type NPN

Switching principle Light switching

Information relevant for export to North America Froduct Standards UL 508; CSA-C22.2 No. 14; IEC60947-5-

2; CEmarking

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] -25 - +55 °C

Storage [ϑ] -25 - +70 °C

Mechanical shock resistance 50 Shock duration 10 ms g

Degree of Protection IP68, IP69

Characteristics

Rated switching distance Rated switching distance $[S_n]$ 100 mm

Range 0.1 mm

Rated operational voltage [U_e] 10 - 30 V DC

Maximum load current [le] < 100 mA Operating current in the switched state at 24 V DC [I_b] 20 mA Response time 1 ms Switching state display Red LED Operating voltage display Green LED Boundary gain Yellow Protective functions Short-circuit protective device Protection against polarity reversal Protection against wire breakage Connection 4-wire Style Design (outer dimensions) 33 x 41 x 37 mm For connection of: Plug-in connection M12 x 1 Material

Insulated material

DESIGN VERIFICATION AS PER IEC/EN 61439

Operating ambient temperature min. -25 °C

Operating ambient temperature max. +55 °C

TECHNICAL DATA ETIM 7.0

Sensors (EG000026) / Light scanner with background masking (EC002719)

 $\textbf{Bectric engineering, automation, process control engineering / \textit{Binary sensor technology}, safety-related sensor technology}$ / Optoelectronic sensor / Light scanner w. background masking (ecl@ss10.0.1-27-27-09-04 [AKP253013])

Adjustment range 0 - 100 mm Operating distance 0 - 0 mm Triangulation Background fade-out Pre failure notice No With time function Nb Rated switching distance 100 mm Max. switching distance 100 mm Max. output current 100 mA Reflector included No Analogue output 0 V ... 10 V Analogue output 0 mA ... 20 mA No Analogue output 4 mA ... 20 mA Nb Analogue output -10 V ... +10 V No With other analogue output Setting procedure Other With communication interface analogue No With communication interface AS-Interface Nb With communication interface CANOpen Nb

With communication interface DeviceNet No
With communication interface ⊟hernet 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 33 mm
Diameter sensor 0 mm
Height of sensor 55 mm
Length of sensor 41 mm
Sensing mode Light switching
Material of optical surface Rastic
Material housing Rastic
Max. output current at protected output 100 mA
Mn. reflector distance 0 mm
Ambient temperature -25 - 55 °C
Time of reaction 2 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 6/9

0-0V Rated control supply voltage Us at AC 60HZ Rated control supply voltage Us at DC 10 - 30 V Voltage type DC With monitoring function downstreamswitching devices Nb Laser protection class None Wavelength of the sensor 660 nm Type of light Other Light dot 0 mm² AWG-number 0 Material of cable sheath Other With restart blockage No Suitable for safety functions No Degree of protection (IP)

Degree of protection (IP)
IP67

APPROVALS

Product Standards
UL 508; CSA-C22.2 No. 14; IEO60947-5-2; 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

DIMENSIONS









