

Product characteristics

Fail-safe inductive sensor

Rectangular, plastics

M12 connector

Enable zone 10...15 mm; [nf] non-flush mountable

Complies with the requirements:

EN ISO 13849-1: 2015 Category 4 PL e

IEC 61508: SIL 3

IEC 62061: SILcl 3

Application

Type of operation

continuous operation (maintenance-free)

Electrical data

Electrical design

DC PNP

Operating voltage [V]

24 DC (19.2...30 DC)

Rated insulation voltage [V]

30

Current consumption [mA]

< 15

Protection class

III

Reverse polarity protection

yes

Outputs

Output function

2 x OSSD (A1 and A2)

Output data

Interface type C class 0

Output voltage at 24 V

compatible with EN 61131-2 inputs type 1, 2, 3

Voltage drop [V]

< 2.5; (100 mA)

Short-circuit protection

yes

Max. capacitive load CL_max [nF]

20

Monitoring range

Enable zone [mm]

10...15

Safe switching off distance s(ar) [mm]

30

Reaction times

Power-on delay time [s]

5

response time to safety request [ms]

≤ 50

response time when approaching the enable zone (enable time) [ms]

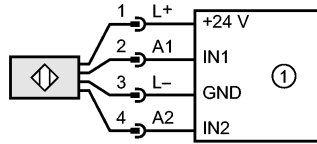
≤ 200

GM701S - Fail-safe inductive sensor - eclass: 27272401 / 27-27-24-01

Risk time (response time for safety-related faults) [ms]	≤ 100
Environment	
Applications	Class C to EN 60654-1 weatherproof application
Ambient temperature [°C]	-25...70, for service life ≤ 87600 h 10...40, for service life ≤ 175200 h
Rate of temperature change [K/min]	0.5
Max. relative air humidity [%]	5...95, briefly 5...70, permanently
Air pressure [kPa]	80...106
Height above sea level [m]	≤ 2000
Ionising radiation	not permissible
Salt spray	no
Protection	IP 65 / IP 67
Tests / approvals	
EMC	IEC 60947-5-2 IEC 60947-5-3 EN 60947-5-2 EN 61000-4-2 ESD: 6 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 20 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V EN 61000-4-8: 30 A/m EN 55011: class B
Shock resistance	IEC 60947-5-2
Vibration resistance	IEC 60947-5-2
Safety classification	
Mission time TM [h]	≤ 175200, (20 years)
Safety-related reliability PFHd [1/h]	2.5E-09
Mechanical data	
Mounting	non-flush mountable
Housing materials	PPE; diecast zinc
Weight [kg]	0.305
Displays / operating elements	
Display	LED yellow (signal), LED green (power)
Electrical connection	
Connection	M12 connector; gold-plated contacts

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Wiring



1: Safety-related logic unit

Remarks

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Unless stated otherwise, all data refer to the 45x45x1 mm reference target plate to IEC 60947-5-2 (FE360 = mild steel) over the whole temperature range.

Pack quantity

[piece]

1