

Product characteristics

Fail-safe inductive sensor

Metal thread M30 x 1.5

M12 connector

Enable zone 6...12 mm; [nf] non-flush mountable

Complies with the requirements:

EN ISO 13849-1: 2015 Category 4 PL e

IEC 61508: SIL 3

Application

Type of operation

continuous operation (maintenance-free)

Electrical data

Electrical design

DC

Operating voltage [V]

24 DC (19.2...30 DC)

Current consumption [mA]

< 15

Protection class

III

Reverse polarity protection

yes

Outputs

Output function

Clock signal

Output data

Interface type B

Short-circuit protection

yes

Monitoring range

Enable zone [mm]

6...12

Safe switching off distance s(ar) [mm]

30

Reaction times

Power-on delay time [s]

5

response time to safety request [ms]

≤ 20

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

≤ 200; typ. 100

Environment

Applications

Class C to EN 60654-1 weatherproof application

Ambient temperature [°C]

0...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

Protection

IP 68 / IP 69K; to EN 60529

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

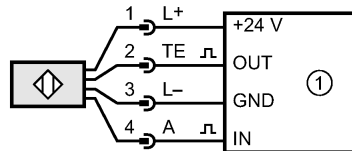
EN 61000-4-3 HF radiated: 20 V/m

EN 61000-4-4 Burst: 2 kV

GI505S - Fail-safe inductive sensor - eclass: 27272401 / 27-27-24-01

	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]	1.1E-09
Max. input capacitance Ci_max [nF]	2
Mechanical data	
Mounting	non-flush mountable
Housing materials	PEEK (polyether ether ketone); high-grade stainless steel; O-ring: EPDM
Weight [kg]	0.265
Displays / operating elements	
Display	LED yellow (signal), LED green (power)
Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring



1 = Safety-related logic unit

Accessories	
Accessories (included)	2 lock nuts
Remarks	
Remarks	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