



Product characteristics

Inductive sensor

Metal thread M18 x 1

Cable

Increased sensing range

e1 type approval

Sensing range 12 mm; [nf] non-flush mountable

Electrical data

Electrical design

3-wire DC PNP; 2-wire DC PNP/NPN

Operating voltage [V]

10...36 DC

Current consumption [mA]

< 10 only in 3-wire operation

Protection class

II

Reverse polarity protection

yes

Outputs

Output function

normally open

Voltage drop [V]

< 2.5

Minimum load current [mA]

> 2; only in 2-wire operation

Leakage current [mA]

< 0.5; only in 2-wire operation

Current rating [mA]

100

Short-circuit protection

yes (non-latching)

Overload protection

yes

Switching frequency [Hz]

200

Monitoring range

Sensing range [mm]

12

Real sensing range (Sr) [mm]

12 ± 10 %

Operating distance [mm]

0...9.72

Accuracy / deviations

Correction factors

mild steel = 1 / stainless steel approx. 0.7 / brass approx. 0.5 / aluminium approx. 0.46 / copper approx. 0.35

Hysteresis [% of Sr]

1...20

Switch-point drift [% of Sr]

-10...10

Environment

Ambient temperature [°C]

-40...85

Protection

IP 67 / IP 69K

Tests / approvals

EMC

Automotive area
Noise emission and noise interference according to the automotive directive 95/54/EC (e1 type approval)
Noise interference according to DIN ISO 11452-2: 100 V/m
Conducted interference according to ISO 7637-2

IGM203 - Inductive sensor - eclass: 27270101 / 27-27-01-01

	Pulse	1 2 3a 3b 4 5
	Severity level	IV IV IV IV IV IV
	Failure criterion	C C A A A C
	EN 61000-4-2 ESD:	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated:	10 V/m
	EN 61000-4-4 Burst:	2 kV
	EN 61000-4-5 Surge:	0.5 kV (line to line, Ri: 20hm)
	EN 61000-4-6 HF conducted:	10 V
	EN 55011:	class B
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / -20°C and 50°C 50 cycles per frequency, 1 octave per minute in each of 3 mutually perpendicular axes
Shock resistance	EN 60068-2-27 Ea	100 g (11 ms half sine; 3 shocks in each direction along the three coordinate axes) / -40°C and 85°C
Continuous shock resistance	EN 60068-2-29 Eb	40 g (6 ms; 4000 shocks in each direction along the three coordinate axes) / -20°C and 50°C
Fast temperature changes	EN 60068-2-14 Na	TA = -40°C; TB = 85°C; t1 = 30 min; t2 = < 10 s; 50 cycles
Salt spray test	EN 60068-2-52 Kb	severity level 5 (4 test cycles)
MTTF [Years]		1143
Mechanical data	non-flush mountable	
Mounting	housing: stainless steel; active face: PBT; LED window: PEI; lock nuts: brass	
Housing materials		
Weight [kg]	0.301	
Displays / operating elements		
Output status indication LED	yellow (4 x 90°)	
Electrical connection		
Connection	PUR cable / 6 m; 3 x 0.5 mm ² ; Ø 5.4 mm; Brennverhalten gemäß ECE R118 Rev.2	

Wiring

Core colors
 BK black
 BN brown
 BU blue



Accessories	
Accessories (included)	2 lock nuts
Remarks	
Pack quantity [piece]	1