Technical data sheet
Safety transponder
Part no.: 63002012
RD800-MSCA-M12L



For Illustration purposes only

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Technical data

Basic data

Series	RD800
Application	Individual use
	Series use
Code type	Standard code

Characteristic parameters

SIL	Up to 3, IEC 61508
SILCL	Up to 3, IEC/EN 62061
Performance Level (PL)	Up to and including e, EN ISO 13849-1
$MTTF_d$	4,077 years, EN ISO 13849-1
PFH_D	1,19E-09 per hour
Mission time T_M	20 years, EN ISO 13849-1
Category	Up to and including 4, EN ISO 13849
DC	High

Electrical data

Protective circuit	Cross circuit protection
	Short circuit protected
Pulse resistance	1,500 V
Usage category at DC 12	Ue 24 V, Ie 0.25 A, EN 60947-5-1

Performance data

Supply voltage U_B	24 V, DC, -15 ... 10 %
Current consumption, max.	250 mA
Power consumption, max.	1 W
Nominal current, min.	0.5 mA
Overvoltage category	III
Fuse, external	1 A
Fuse, internal	0.75 A polyfuse (O1 + O2 + O3)
Rated insulation voltage	32 V DC
Conventional thermal current, max.	0.25 A

Inputs

Number of digital switching inputs	2 Piece(s)

Switching inputs

Type	Digital switching input
Switching voltage, type.	24 V
Voltage type	DC
Current consumption, max.	5 mA

Outputs

Number of safety-related switching outputs (OSSDs)	2 Piece(s)
Number of digital switching outputs	1 Piece(s)
Switching power, max.	6 W

Safety-related switching outputs

Type	Safety-related switching output OSSD
Switching voltage, type.	24 V
Voltage type	DC
Test-pulse length, max.	0.3 ms
Output current, max.	250 mA
Capacitance, max. between an output and GND	200 nF
Capacitance, max. between two outputs	200 nF

Safety-related switching output 1

Switching element	Transistor, PNP

Safety-related switching output 2

Switching element	Transistor, PNP

Switching outputs

Type	Digital switching output
Switching voltage, type.	24 V
Voltage type	DC
Switching current, max.	100 mA

Switching output 1

Switching element	Transistor, PNP
Function	Signal output

Time behavior

Reaction time after removing the actuator, min.	80 ms
Reaction time after removing the actuator, max.	150 ms
Reaction time after shutdown, input, min.	7 ms
Reaction time after shutdown, input, max.	12 ms

Connection

Number of connections	1 Piece(s)

Connection 1

Function	Connection with PLC
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Plug outlet	On left side

Cable properties

Length of connection cable, max.	50 m

Mechanical data

Design	Cubic
Dimension (W x H x L)	25 mm x 18 mm x 72 mm
Housing material	Plastic
Plastic housing	PA 66
Net weight	57 g
Housing color	Black
Type of fastening	Through-hole mounting
Switching hysteresis, max.	2.4 mm
Assured cut-out distance (Sar), min.	16 mm
Assured cut-in distance (Sao), max.	10 mm
Nominal switch-off distance, max.	14 mm
Nominal operating distance, max.	12 mm
Distance between two systems (sensor, actuator), min.	50 mm
Repeatability, max.	1.2 mm
Screw tightening torque	0.8 ... 2 N·m

Operation and display

Type of display	LED
Number of LEDs	4 Piece(s)

Technical data

Environmental data

Ambient temperature, operation	-25 ... 70 °C
Ambient temperature, storage	-25 ... 85 °C
Degree of contamination	3, EN 60947-1

Certifications

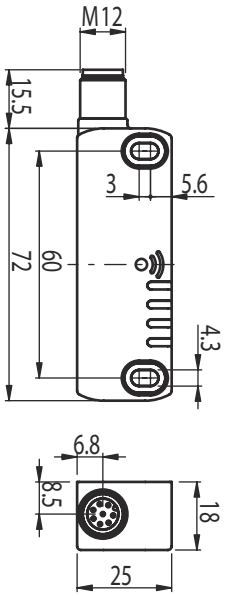
Degree of protection	IP 67
	IP 69K
Approvals	c UL US
	TÜV Süd
Test procedure for shock in accordance with standard	EN 60068-2-27
Test procedure for vibration in accordance with standard	EN 60068-2-6

Classification

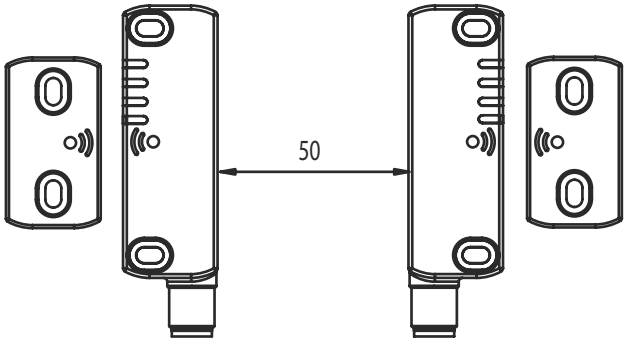
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ECLASS 8.0	27272403
ECLASS 9.0	27272403
ECLASS 10.0	27272403
ECLASS 11.0	27272403
ECLASS 12.0	27274601
ECLASS 13.0	27274601
ECLASS 14.0	27274601
ECLASS 15.0	27274601
ECLASS 16.0	27274601
ETIM 5.0	EC001829
ETIM 6.0	EC001829
ETIM 7.0	EC001829
ETIM 8.0	EC001829
ETIM 9.0	EC001829
ETIM 10.0	EC001829
UNSPSC 26.08	39122205

Dimensioned drawings

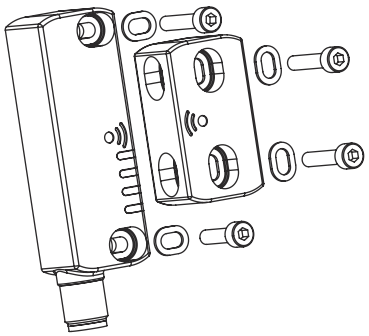
All dimensions in millimeters



Minimum distance in mm



Fastening

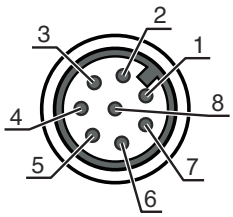


Electrical connection

Connection 1

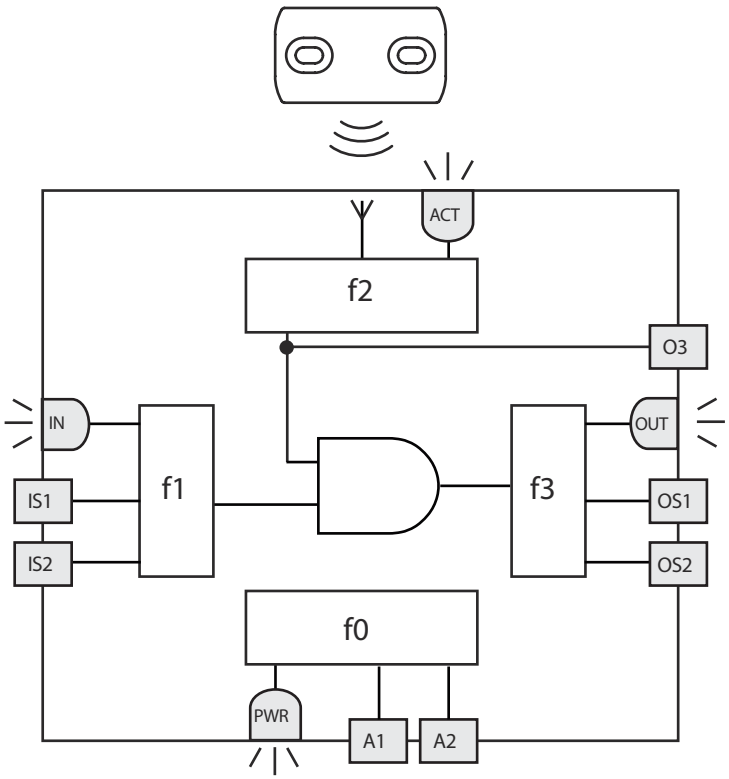
Function	Connection with PLC
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Plug outlet	On left side

Pin	Pin assignment
1	A1
2	IS1
3	A2
4	OS1
5	O3
6	IS2
7	OS2
8	n.c.



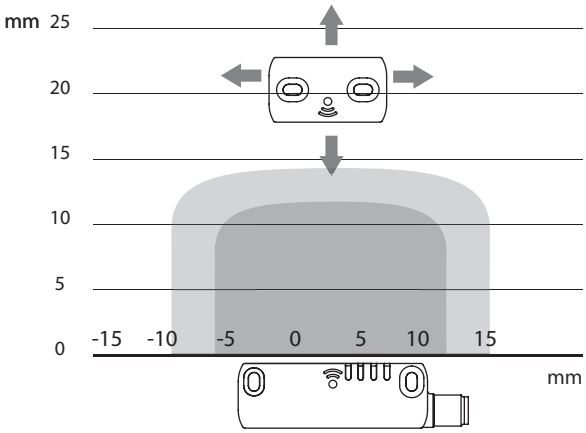
Circuit diagrams

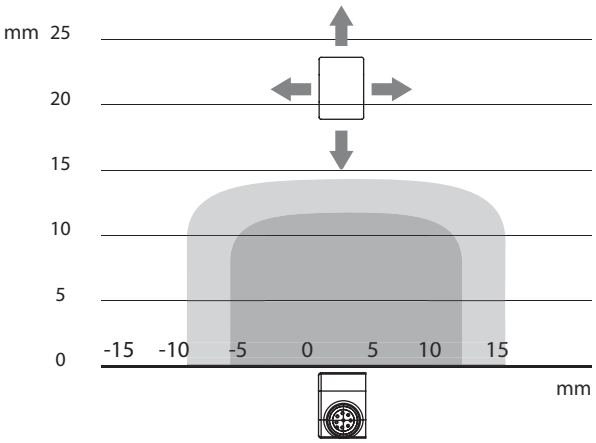
Internal circuit diagram



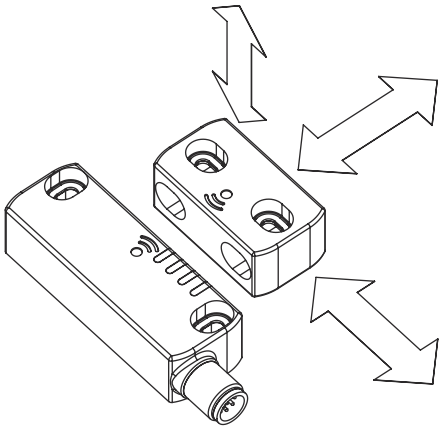
Diagrams

Safety-related distances





Approach directions



Notes

Observe intended use!	
	↳ The product may only be put into operation by competent persons. ↳ Only use the product in accordance with its intended use.

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Note

A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.