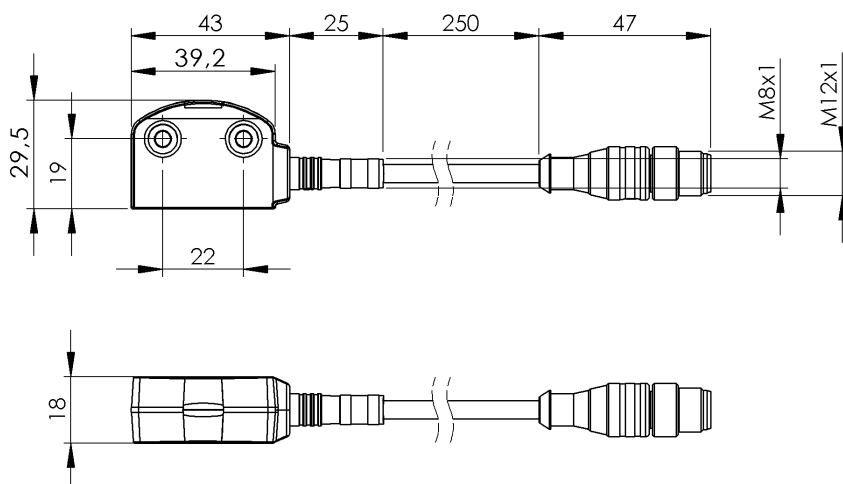




Basic features

Approval/Conformity	TÜV cULus CE WEEE
Guard locking, principle	no
Operating principle	non-contact (RFID)
Principle of operation	RFID safety sensor
Series	BID R02K

Electrical connection

Cable length L	25 cm
Connection	M12x1, Straight, 5-pin, A-coded
Connection type	Cable with connector, 25 cm, PUR
Short-circuit protection	yes

Electrical data

No-load current I_0 max. at U_e	35 mA
Operating voltage U_b	20.4...26.4 VDC
Rated insulation voltage U_i	32 V DC
Rated operating current I_e	600 mA
Rated short circuit current	100 A
Rated surge voltage U_{imp}	800 V
Ready delay t_v max.	5 s
Residual current I_r max.	500 μ A
Switching frequency	1 Hz
Utilization category	DC-12: 24 V/0.25 A DC-13: 24 V/0.25 A
Voltage drop U_d max. at I_e	1 V

Environmental conditions

Ambient temperature	-25...65 °C
Contamination scale	3
EN 60068-2-27, Shock	30 g, 11 ms
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm
IP rating	IP65, IP67
Storage temperature	-25...85 °C

Functional safety

Coding level (EN ISO 14119)	high
Device type (VDMA 66413)	1
Mission Time	20 a
Overvoltage category	III
PFD (IEC 61508)	1.2 E-4 1/h
PFH (IEC 61508)	6.8 E-10 1/h
PFHd (EN 62061)	6.8 E-10 1/h
Performance Level	e
Risk time	200 ms
SIL (IEC 61508)	3
SIL CL (EN 62061)	3
Safety category (EN ISO 13849-1)	4
Type (EN ISO 14119)	4

Material

Housing material	Thermoplast
Material jacket	PUR

Mechanical data

Approach direction	any to the active surface or laterally
Dimension	39.2 x 18 x 29.5 mm
Installation	for flush mounting
Mounting holes, number	2
Mounting part	Screw M4
Sensing surface	lateral
Tightening torque	0.8 Nm
Weight	43 g

Output/Interface

Switching output	2x PNP OSSD
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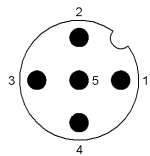
Range/Distance

Assured operating distance S_{ao}	4 mm
	8 mm
Assured switch off distance S_{ar}	18 mm
Response time max.	100 ms

Remarks

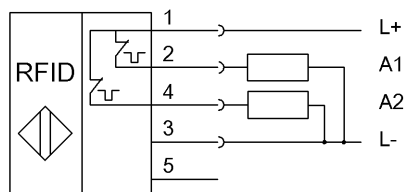
To install the sensors/actuators M4x20 screws are generally sufficient. When using the mounting plates 25 mm long screws are recommended.
 Axial offset: The long side allows for a maximum height misalignment (x) of sensor and actuator of 8 mm (e.g. mounting tolerance or due to guard door sagging). The axial misalignment (y) is max. ± 18 mm. see drawing: Operating principle
 Minimum clearance between two sensor systems = 100 mm

Connector Drawings



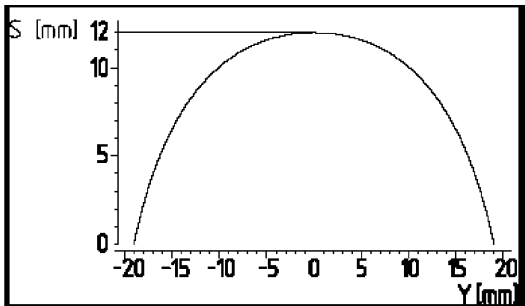
PIN 1: +UB
 PIN 2: Output 1 OSSD
 PIN 3: 0V
 PIN 4: Output 2 OSSD
 PIN 5: n.c.

Wiring Diagrams

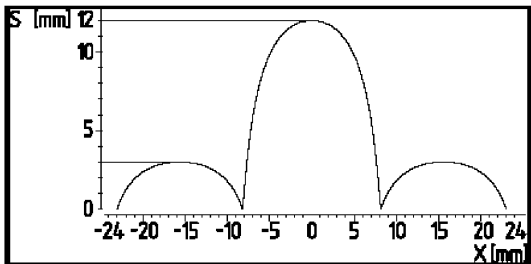


Shown in damped state

Technical Drawings



Distance characteristic



Distance characteristic