

# Safety Switch

RFID

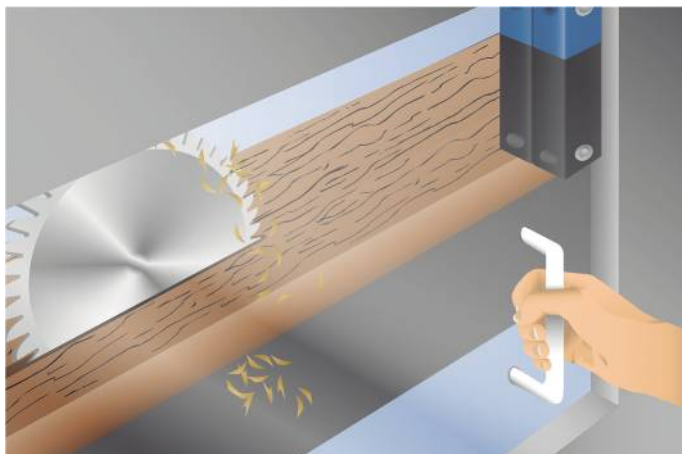
## SD4RAS01SN89

Part Number



- Easy to clean
- High level of manipulation protection thanks to RFID coding
- Protection mode IP69K
- Universal fastening opportunities

Separating safety devices can be easily protected up to cat. 4 PL e using these contactless safety switches, even during series connection. Response and risk times remain unchanged at all times. Extensive diagnosis functions boost system availability and make installation and maintenance easier. The locking version can be used as a stop and does not secure any small doors or flaps.

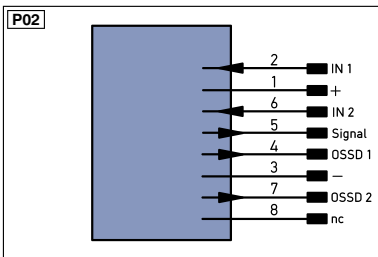
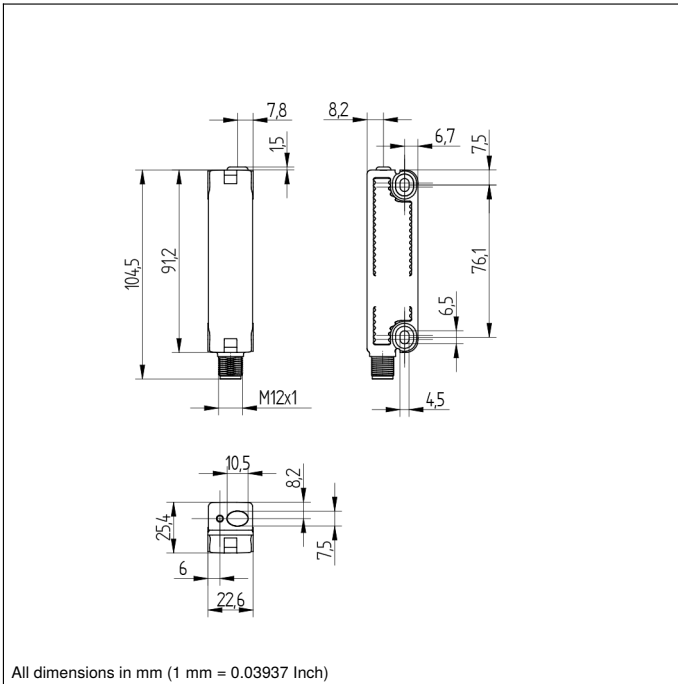


### Technical Data


Electrical Data	
Sensor Type	Switch
Supply Voltage	20,4...26,4 V DC
Response Time	< 100 ms
Risk time	< 200 ms
Temperature Range	-25...70 °C
Storage temperature	-25...85 °C
Safety Output	OSSD
No. Safety Outputs (OSSDs)	2
PNP Safety Output/Switching Current	< 250 mA
Safety Output Voltage Drop	< 1 V
Signal Outputs	1
PNP signal output switching current	50 mA
Short Circuit and Overload Protection	yes
Reverse Polarity Protection	yes
Protection Class	II
Mechanical Data	
Switching Distance	12 mm
Protected Sao switching-off distance	10 mm
Protected Sar switching-off distance	16 mm
Housing Material	Plastic
Degree of Protection	IP65/IP67/IP69K
Connection	M12 × 1; 8-pin
Safety-relevant Data	
Operating principle	RFID
Coding	Standard
Performance Level (EN ISO 13849-1)	Cat. 4 PL e
PFHD	2,70 × E-10 1/h
Safety Integrity Level (EN 61508)	SIL3
Safety Integrity Level (EN 62061)	SILCL3
PDDDB (EN 60947-5-3)	yes
Function	
Series connection	yes
Applicable actuator	SD4RAA01
Connection Diagram No.	<b>P02</b>
Suitable Connection Technology No.	<b>89</b>

### Complementary Products

Safety Relay SR4B3B01S, SR4D3B01S
Seal Set Z0047
Software



### Legend

<b>+</b> Supply Voltage +	<b>nc</b> not connected	<b>ENa</b> Encoder A
<b>-</b> Supply Voltage 0 V	<b>U</b> Test Input	<b>ENb</b> Encoder B
<b>~</b> Supply Voltage (AC Voltage)	<b>U</b> Test Input inverted	<b>AMIN</b> Digital output MIN
<b>A</b> Switching Output (NO)	<b>W</b> Trigger Input	<b>AMAX</b> Digital output MAX
<b>Ā</b> Switching Output (NC)	<b>O</b> Analog Output	<b>AOK</b> Digital output OK
<b>V</b> Contamination/Error Output (NO)	<b>O-</b> Ground for the Analog Output	<b>SY In</b> Synchronization In
<b>ṽ</b> Contamination/Error Output (NC)	<b>BZ</b> Block Discharge	<b>SY OUT</b> Synchronization OUT
<b>E</b> Input (analog or digital)	<b>AWV</b> Valve Output	<b>Ort</b> Brightness output
<b>T</b> Teach Input	<b>a</b> Valve Control Output +	<b>M</b> Maintenance
<b>Z</b> Time Delay (activation)	<b>b</b> Valve Control Output 0 V	
<b>S</b> Shielding	<b>SY</b> Synchronization	
<b>RxD</b> Interface Receive Path	<b>E+</b> Receiver-Line	
<b>TxD</b> Interface Send Path	<b>S+</b> Emitter-Line	
<b>RDY</b> Ready	<b>≡</b> Grounding	
<b>GND</b> Ground	<b>SnR</b> Switching Distance Reduction	
<b>CL</b> Clock	<b>Rx+/-</b> Ethernet Receive Path	
<b>E/A</b> Output/Input programmable	<b>Tx+/-</b> Ethernet Send Path	
 <b>IO-Link</b>	<b>Bus</b> Interfaces-Bus A(+)/B(-)	
<b>PoE</b> Power over Ethernet	<b>La</b> Emitted Light disengageable	
<b>IN</b> Safety Input	<b>Mag</b> Magnet activation	
<b>OSSD</b> Safety Output	<b>RES</b> Input confirmation	
<b>Signal</b> Signal Output	<b>EDM</b> Contactor Monitoring	
<b>Bl..D+/-</b> Ethernet Gigabit bidirect. data line (A-D)	<b>ENAR542</b> Encoder A/Ā (TTL)	
<b>EN0 R542</b> Encoder 0-pulse 0-0 (TTL)	<b>ENBR542</b> Encoder B/B̄ (TTL)	

### Wire Colors according to DIN IEC 757

<b>BK</b> Black
<b>BN</b> Brown
<b>RD</b> Red
<b>OG</b> Orange
<b>YE</b> Yellow
<b>GN</b> Green
<b>BU</b> Blue
<b>VT</b> Violet
<b>GY</b> Grey
<b>WH</b> White
<b>PK</b> Pink
<b>GNYE</b> Green/Yellow

