

Safety Switch with Lock Function

Electromagnetic, Power to Lock Principle

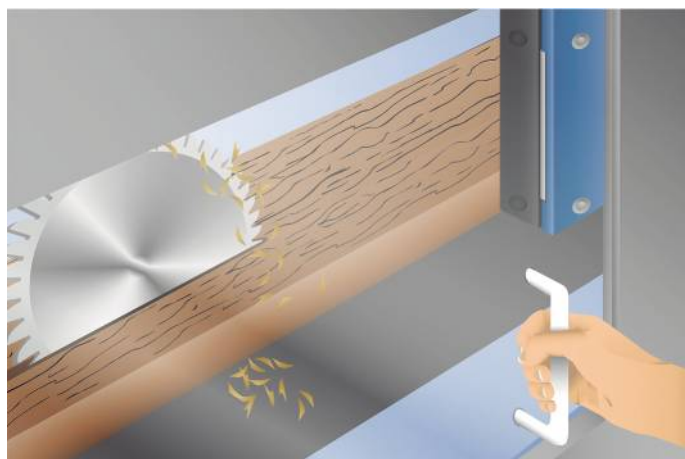
SD4ICS14SE89

Part Number



- 500 N locking force
- Adjustable locking force
- Easy to clean
- Extensive diagnosis

This innovative safety switch with lock function is suitable for process protection thanks to its locking force. Furthermore, a safety level of category 4 PL e (EN ISO 13849-1) can be fulfilled with just one safety switch with lock function and is retained even when connected in series. Reaction time and risk time remain unchanged when connected in series as well. Extensive diagnosis functions enhance system availability and simplify installation and maintenance. Thanks to the electromagnetic operating principle, the safety switches with lock function work in a fully contactless fashion and are thus wear-resistant and easy to clean.



Technical Data

Electrical Data	
Sensor Type	Locking unit
Supply Voltage	20,4...26,4 V DC
Response Time	< 150 ms
Risk time	< 150 ms
Temperature Range	-25...55 °C
Storage temperature	-25...85 °C
Safety Output	OSSD
No. Safety Outputs (OSSDs)	2
PNP Safety Output/Switching Current	< 250 mA
Number of Signal Outputs	1
PNP signal output switching current	50 mA
Short Circuit Protection	yes
Protection Class	II

Mechanical Data	
Housing Material	Plastic
Degree of Protection	IP65/IP67
Connection	M12 × 1; 8-pin
Latching Force, typical	45...115 N

Safety-relevant Data	
Operating principle	Inductively coded
Coding	Standard
Performance Level (EN ISO 13849-1)	Cat. 4 PL e
PFHD	3,50 × E-9 1/h
Safety Integrity Level (EN 61508)	SIL3
Safety Integrity Level (EN 62061)	SILCL3
PDDb (EN 60947-5-3)	yes
Locking Device	Power to lock principle
Locking Force F, guaranteed	500 N
Locking Force Fmax, typical	750 N

Function	
Series Connection	yes
Actuator monitored	yes
Electrical Detent Mechanism	yes

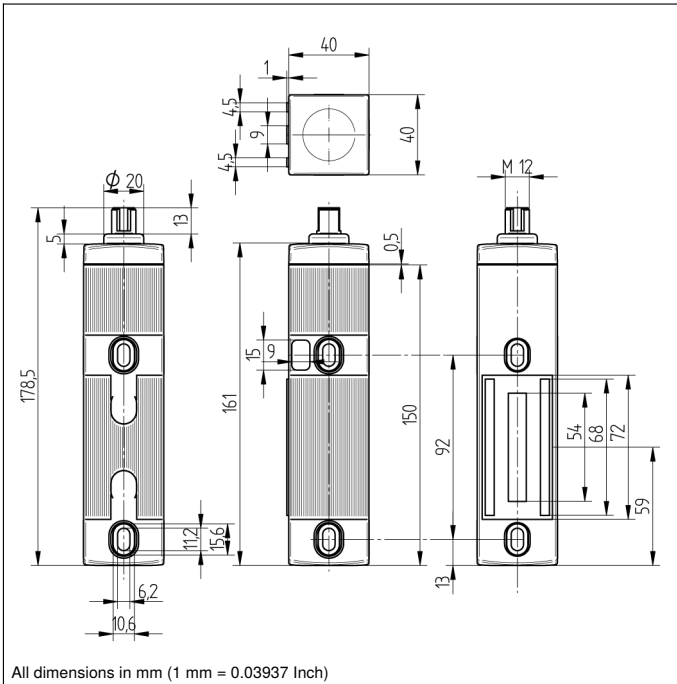
Applicable actuator	SD4ICA01
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Connection Diagram No.	P03
Suitable Connection Equipment No.	89
Suitable Mounting Technology No.	830

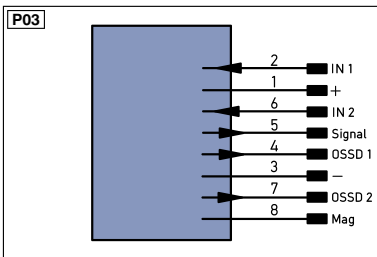
Adjusting Target must be ordered separately (not included in delivery)

Complementary Products

Adjusting Target Z0048
Safety Relay SR4B3B01S, SR4D3B01S
Software



All dimensions in mm (1 mm = 0.03937 Inch)



Legend

+ Supply Voltage +	PT Platinum measuring resistor	EN^{A/RS422} Encoder A/ \bar{A} (TTL)
- Supply Voltage 0 V	nc not connected	EN^{B/RS422} Encoder B/ \bar{B} (TTL)
~ Supply Voltage (AC Voltage)	U Test Input	EN^A Encoder A
A Switching Output (NO)	\bar{U} Test Input inverted	EN^B Encoder B
\bar{A} Switching Output (NC)	W Trigger Input	A_{MIN} Digital output MIN
V Contamination/Error Output (NO)	W- Ground for the Trigger Input	A_{MAX} Digital output MAX
\bar{V} Contamination/Error Output (NC)	O Analog Output	A_{OK} Digital output OK
E Input (analog or digital)	O- Ground for the Analog Output	SY_{in} Synchronization In
T Teach Input	BZ Block Discharge	SY_{OUT} Synchronization OUT
Z Time Delay (activation)	A_{WV} Valve Output	OL_T Brightness output
S Shielding	a Valve Control Output +	M Maintenance
RxD Interface Receive Path	b Valve Control Output 0 V	rsv reserved
TxD Interface Send Path	SY Synchronization	Wire Colors according to DIN IEC 757
RDY Ready	SY- Ground for the Synchronization	BK Black
GND Ground	E+ Receiver-Line	BN Brown
CL Clock	S+ Emitter-Line	RD Red
E/A Output/Input programmable	⊕ Grounding	OG Orange
 IO-Link	S_{nR} Switching Distance Reduction	YE Yellow
PoE Power over Ethernet	Rx+/- Ethernet Receive Path	GN Green
IN Safety Input	Tx+/- Ethernet Send Path	BU Blue
OSSD Safety Output	Bus Interfaces-Bus A(+)/B(-)	VT Violet
Signal Signal Output	L_a Emitted Light disengageable	GY Grey
BI-D+/- Ethernet Gigabit bidirect. data line (A-D)	Mag Magnet activation	WH White
EN^{0/RS422} Encoder 0-pulse 0-0 (TTL)	RES Input confirmation	PK Pink
	EDM Contactor Monitoring	GNYE Green/Yellow

