

Safety Switch with Lock Function

Electromagnetic, Power to Lock Principle

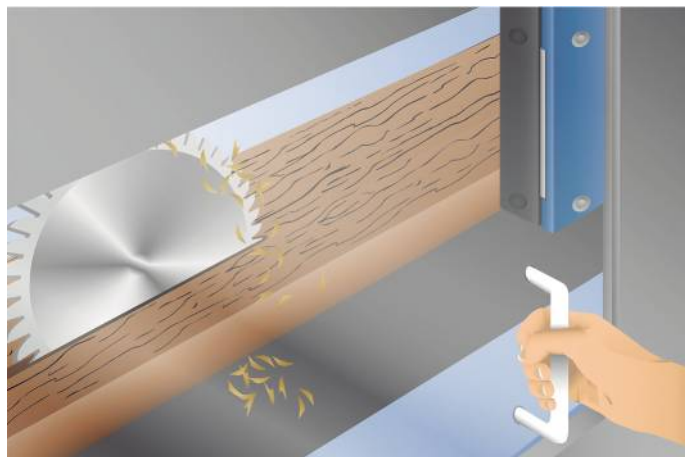
SD4ICS14SE89

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
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
Detent 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
Lock	Power to lock principle
Locking Force F, guaranteed	500 N
Locking Force Fmax, typical	750 N

Function

Series connection	yes
Actuator monitored	yes
Electrical locking	yes

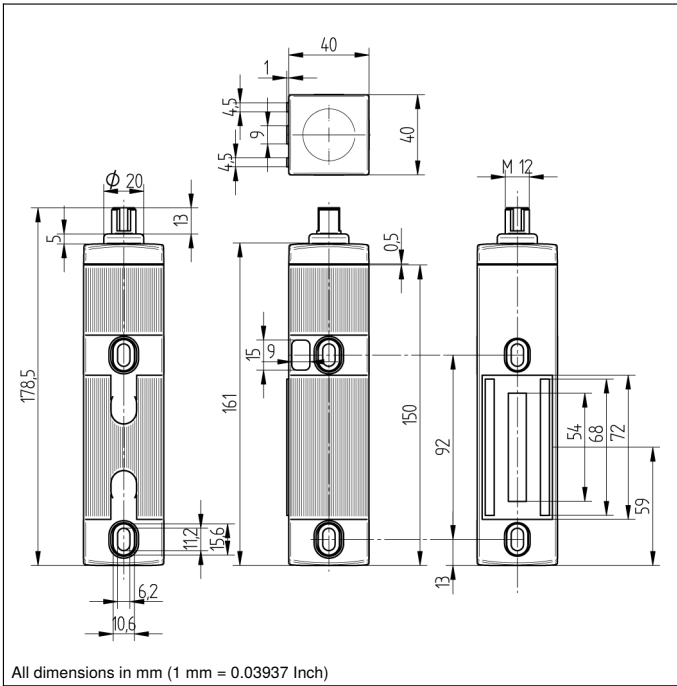
Applicable actuator	SD4ICA01
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Connection Diagram No.	P03
Suitable Connection Technology No.	89
Suitable Mounting Technology No.	830

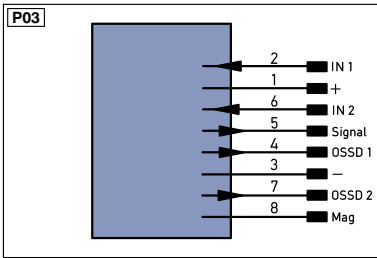
Adjusting Target must be ordered separately (not included in delivery)

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	ENa Encoder A
- Supply Voltage 0 V	nc not connected	ENb Encoder B
~ Supply Voltage (AC Voltage)	U Test Input	AMIN Digital output MIN
A Switching Output (NO)	U Test Input inverted	AMAX Digital output MAX
Ā Switching Output (NC)	W Trigger Input	AOK Digital output OK
V Contamination/Error Output (NO)	O Analog Output	SY In Synchronization In
ṽ Contamination/Error Output (NC)	O- Ground for the Analog Output	SY OUT Synchronization OUT
E Input (analog or digital)	BZ Block Discharge	Out Brightness output
T Teach Input	AW Valve Output	M Maintenance
Z Time Delay (activation)	a Valve Control Output +	
S Shielding	b Valve Control Output 0 V	
RxD Interface Receive Path	SY Synchronization	
TxD Interface Send Path	E+ Receiver-Line	
RDY Ready	S+ Emitter-Line	
GND Ground	≡ Grounding	
CL Clock	SnR Switching Distance Reduction	
E/A Output/Input programmable	Rx+/- Ethernet Receive Path	
IO-Link	Tx+/- Ethernet Send Path	
PoE Power over Ethernet	Bus Interfaces-Bus A(+)/B(-)	
IN Safety Input	La Emitted Light disengageable	
OSSD Safety Output	Mag Magnet activation	
Signal Signal Output	RES Input confirmation	
Bl..D+/- Ethernet Gigabit bidirect. data line (A-D)	EDM Contactor Monitoring	
EN0-R542Z Encoder 0-pulse 0-0 (TTL)	ENAR542Z Encoder A/Ā (TTL)	
	ENBR542Z Encoder B/B̄ (TTL)	

Wire Colors according to DIN IEC 757

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

