

Safety Switch with Lock Function

Electromagnetic, Power to Lock Principle

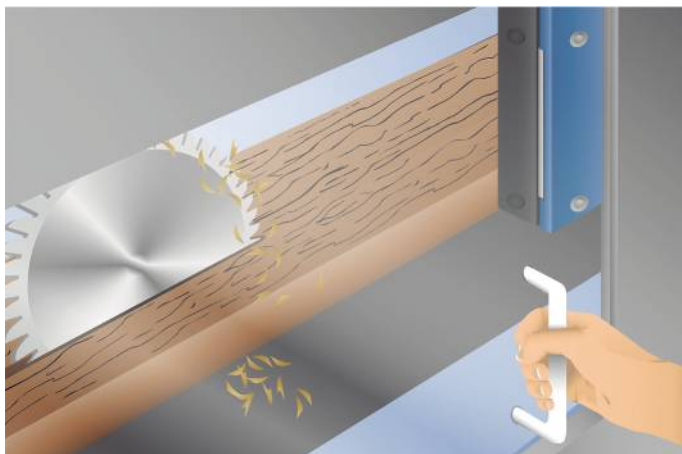
SD4ICS13SE89

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	30...100 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

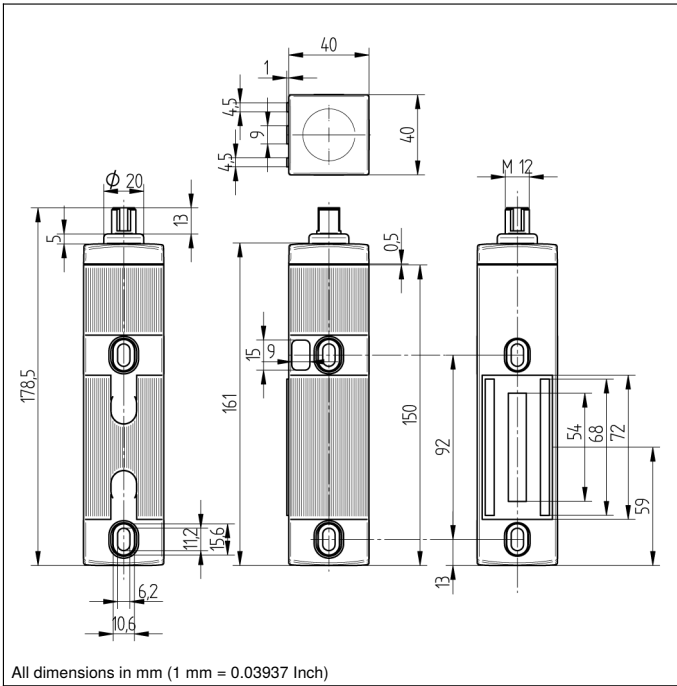
Applicable actuator	SD4ICA01
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Connection Diagram No.	P03
Suitable Connection Technology No.	89
Suitable Mounting Technology No.	830

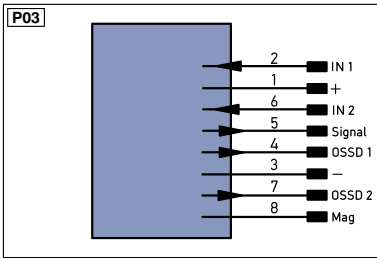
Adjusting Target must be ordered separately (not included in delivery)

Complementary Products

Adjusting Target Z0048
Safety Relay SR4B3B01S, SR4D3B01S
Software



All dimensions in mm (1 mm = 0.03937 Inch)



Legend

+ Supply Voltage +	nc not connected	ENa Encoder A
- Supply Voltage 0 V	U Test Input	ENb Encoder B
~ Supply Voltage (AC Voltage)	U Test Input inverted	AMIN Digital output MIN
A Switching Output (NO)	W Trigger Input	AMAX Digital output MAX
Ā Switching Output (NC)	O Analog Output	AOK Digital output OK
V Contamination/Error Output (NO)	O- Ground for the Analog Output	SY In Synchronization In
ṽ Contamination/Error Output (NC)	BZ Block Discharge	SY OUT Synchronization OUT
E Input (analog or digital)	AW Valve Output	Out Brightness output
T Teach Input	a Valve Control Output +	M Maintenance
Z Time Delay (activation)	b Valve Control Output 0 V	
S Shielding	SY Synchronization	
RxD Interface Receive Path	E+ Receiver-Line	
TxD Interface Send Path	S+ Emitter-Line	
RDY Ready	≡ Grounding	
GND Ground	SnR Switching Distance Reduction	
CL Clock	Rx+/- Ethernet Receive Path	
E/A Output/Input programmable	Tx+/- Ethernet Send Path	
IO-Link	Bus Interfaces-Bus A(+)/B(-)	
PoE Power over Ethernet	La Emitted Light disengageable	
IN Safety Input	Mag Magnet activation	
OSSD Safety Output	RES Input confirmation	
Signal Signal Output	EDM Contactor Monitoring	
Bl..D+/- Ethernet Gigabit bidirect. data line (A-D)	ENaRS42 Encoder A/Ā (TTL)	
EN0RS42Z Encoder 0-pulse 0-0 (TTL)	ENbRS42Z 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

