

Safety Switch with Lock Function

Electromagnetic, Power to Lock Principle

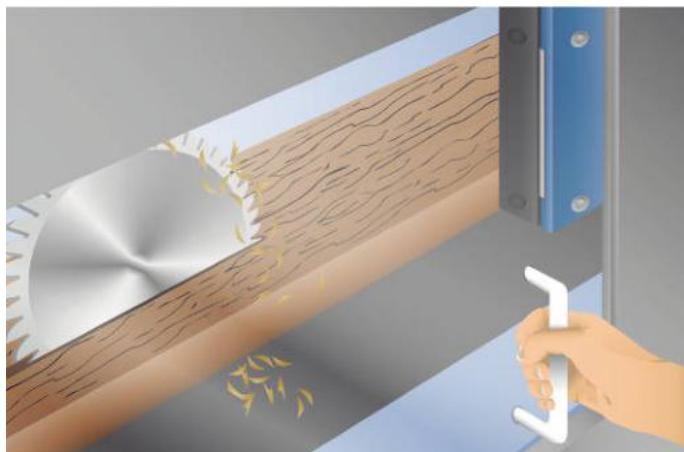
SD4ICS14SE89

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 x 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 x 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

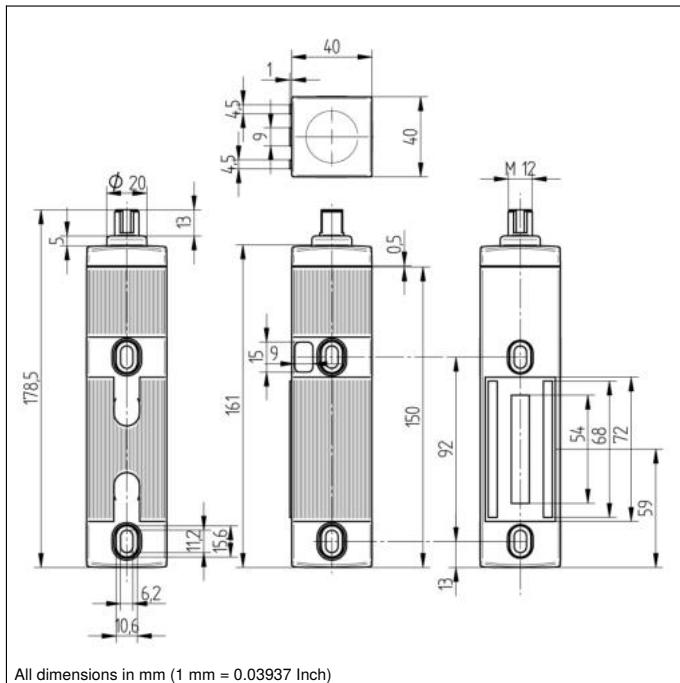
Function

Series Connection	yes
Actuator monitored	yes
Electrical Detent Mechanism	yes
Applicable actuator	SD4ICA01
Connection Diagram No.	P03
Suitable Connection Equipment No.	89
Suitable Mounting Technology No.	830

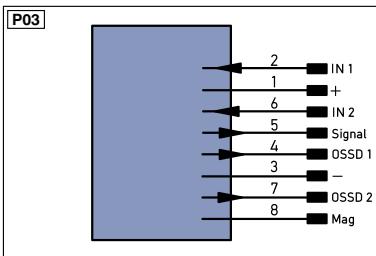
Adjusting Target must be ordered separately (not included in delivery)

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
-	Supply Voltage 0 V	nc not connected
~	Supply Voltage (AC Voltage)	U Test Input
A	Switching Output (NO)	Ü Test Input inverted
Ä	Switching Output (NC)	W Trigger Input
V	Contamination/Error Output (NO)	W- Ground for the Trigger Input
Ä	Contamination/Error Output (NC)	O Analog Output
E	Input (analog or digital)	O- Ground for the Analog Output
T	Teach Input	BZ Block Discharge
Z	Time Delay (activation)	Aw Valve Output
S	Shielding	a Valve Control Output +
RxD	Interface Receive Path	b Valve Control Output 0 V
TxD	Interface Send Path	SY Synchronization
RDY	Ready	SY- Ground for the Synchronization
GND	Ground	E+ Receiver-Line
CL	Clock	S+ Emitter-Line
E/A	Output/Input programmable	Grounding
	IO-Link	SdR Switching Distance Reduction
PoE	Power over Ethernet	Rx+/- Ethernet Receive Path
IN	Safety Input	Tx+/- Ethernet Send Path
OSD	Safety Output	Bus Interfaces-Bus A(+)/B(-)
Signal	Signal Output	La Emitted Light disengageable
BL-D	Ethernet Gigabit bidirect. data line (A-D)	Mag Magnet activation
EN0-5	Encoder 0-pulse 0-5 (TTL)	RES Input confirmation
		EDM Contactor Monitoring
		EN _{ARS42} Encoder A/A (TTL)
		EN _{RS42} Encoder B/B (TTL)
		ENA Encoder A
		ENB Encoder B
		AMIN Digital output MIN
		AMAX Digital output MAX
		AOK Digital output OK
		SY In Synchronization In
		SY OUT Synchronization OUT
		OLT Brightness output
		M Maintenance
		rsv reserved
		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

