

Safety Switch with Lock Function

Electromagnetic, Power to Lock Principle

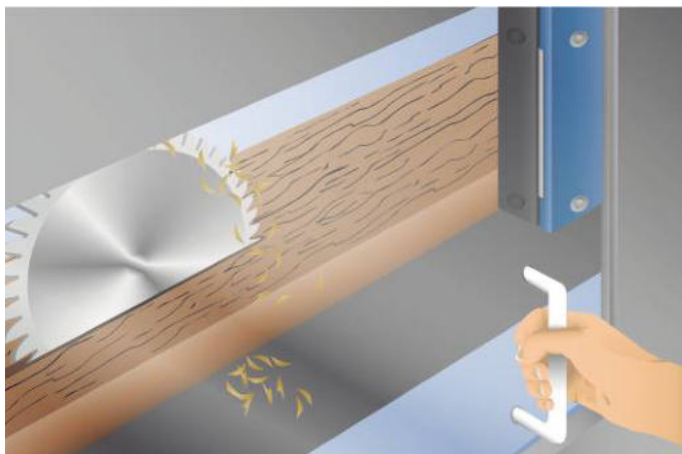
SD4ICS13SE89

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
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	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
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

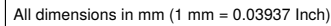
Applicable actuator	SD4ICA01
---------------------	----------

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



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)	Ū Test Input inverted
Ā Switching Output (NC)	W Trigger Input
V Contamination/Error Output (NO)	W- Ground for the Trigger Input
Ȳ 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)	AVV 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	SnR Switching Distance Reduction
PoE Power over Ethernet	Rx+/- Ethernet Receive Path
IN Safety Input	Tx+/- Ethernet Send Path
OSSD Safety Output	Bus Interfaces-Bus A(+)/B(-)
Signal Signal Output	Ia Emitted Light disengageable
BL_D +/- Ethernet Gigabit bidirect. data line (A-D)	Mag Magnet activation
EN _{RS422} Encoder 0-pulse 0-0̄ (TTL)	RES Input confirmation
	EDM Contactor Monitoring
	EN _{RS422} Encoder A/Ā (TTL)
	EN _{RS422} Encoder B/B̄ (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