

Safety Switch with Lock Function

Electromagnetic, Power to Lock Principle

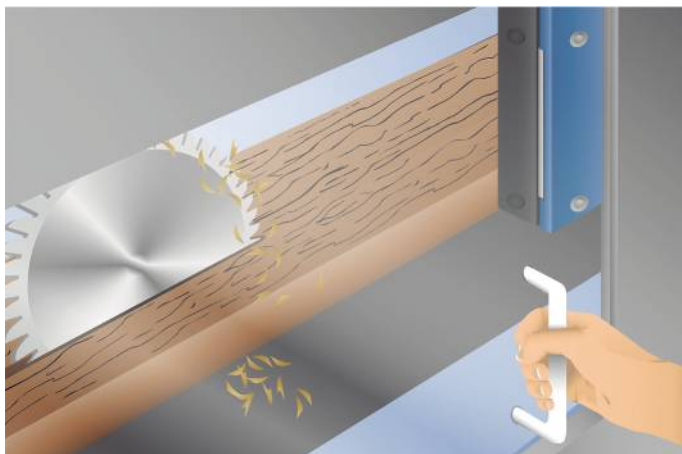
SD4ICS13SE89

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 × 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

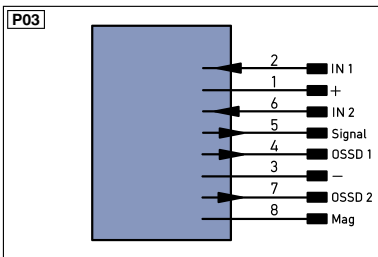
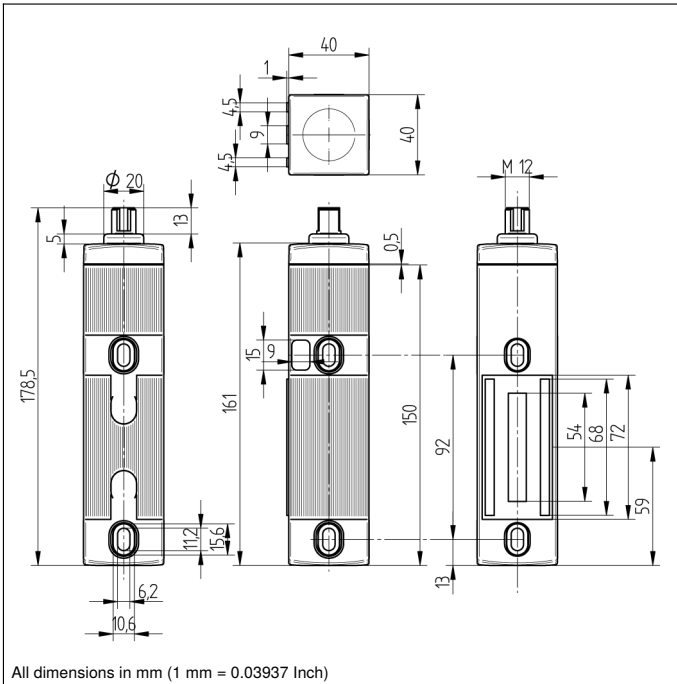
Function	
Series Connection	yes
Actuator monitored	yes
Electrical Detent Mechanism	yes

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		Legend		Legend	
+	Supply Voltage +	PT	Platinum measuring resistor	EN ^{A/RS422}	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN ^{B/RS422}	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN ^A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN ^B	Encoder B
Ā	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
Ṽ	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 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contacting Monitoring	GNYE	Green/Yellow

