

Guard Locking Device

Electromagnetic, Power to Lock Principle

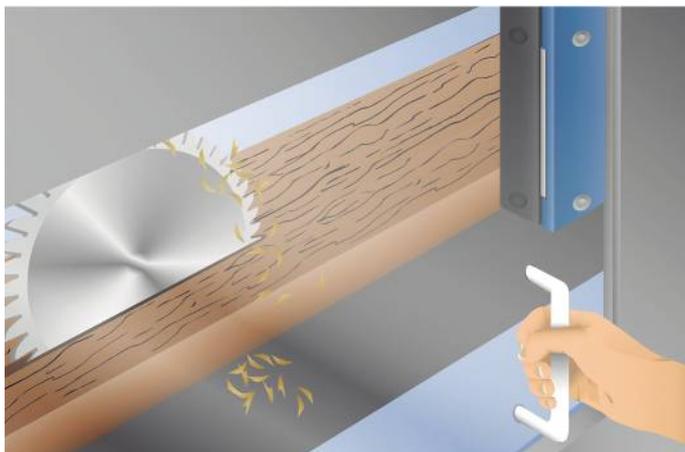
SD4ICS04SE89

Part Number



- 500 N locking force (monitored)
- Adjustable locking force
- Easy to clean
- Extensive diagnosis

This innovative guard locking device is suitable for process safety thanks to the constantly monitored locking force. Also, the safety level cat. 4 PL e (EN ISO 13849-1) can be achieved with just one guard locking device and is retained even during series connection. Response and risk times remain unchanged during series connection. Extensive diagnosis functions boost system availability and make installation and maintenance easier. Thanks to the electrical locking, no touching components whatsoever are used and therefore wear, the guard door clattering (and rattling) loudly and laborious cleaning work are avoided.



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	IP67
Connection	M12 × 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 × 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
Monitored lock	yes
Permanent magnet	yes
Electrical Detent Mechanism	yes

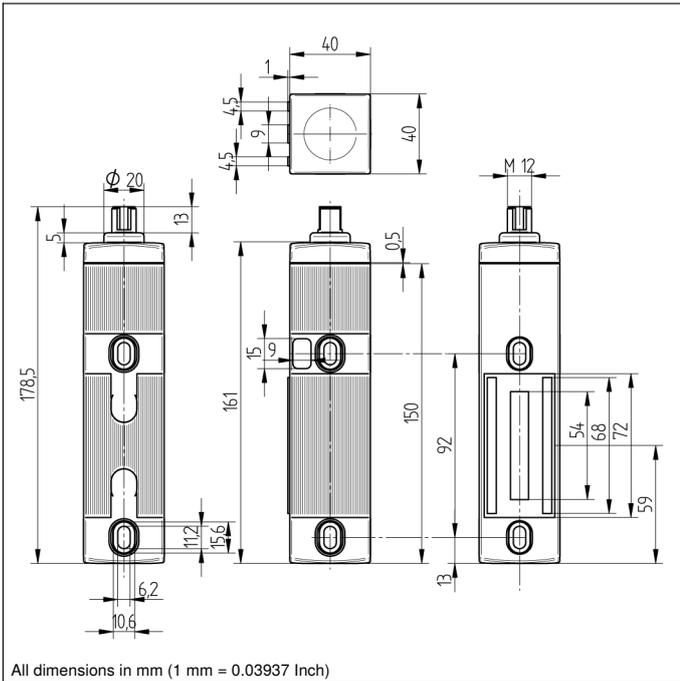
Applicable actuator	SD4ICA01
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Connection Diagram No.	P03
Suitable Connection Equipment No.	89
Suitable Mounting Technology No.	830

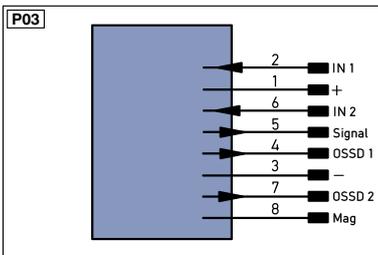
Adjusting Target must be ordered separately (not included in delivery)

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	EN^{A/RS422} Encoder A/ \bar{A} (TTL)
- Supply Voltage 0 V	nc not connected	EN^{B/RS422} Encoder B/ \bar{B} (TTL)
~ Supply Voltage (AC Voltage)	U Test Input	EN^A Encoder A
A Switching Output (NO)	\bar{U} Test Input inverted	EN^B Encoder B
\bar{A} 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
\bar{V} 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	\pm 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
Bl_D+/- Ethernet Gigabit bidirect. data line (A-D)	Mag Magnet activation	WH White
EN^{0/RS422} Encoder 0-pulse 0-0 (TTL)	RES Input confirmation	PK Pink
	EDM Contactor Monitoring	GN_{YE} Green/Yellow

