

AS-Interface safety switch

VAA-2E3A-LIM1-PU-L-S-V1



- Applications up to PL_d
- 40 mm narrow construction, fixture dimensions compatible with all safety switches
- Rotating metal head
- Integrated guard locking up to 2500 N
- M12 plug connection
- Highly visible 4-way LED display

AS-Interface safety switch with guard locking and guard locking monitoring



Function

The VAA-2E3A-LIM1-PU-L-S-V1 safety switch with mechanical interlock and separate actuator is a safety switch with 2 inputs and 3 outputs. The contact monitoring and solenoid monitoring are available via the inputs. Evaluation takes place via a safety monitor. The outputs control the solenoid and the red and green LEDs.

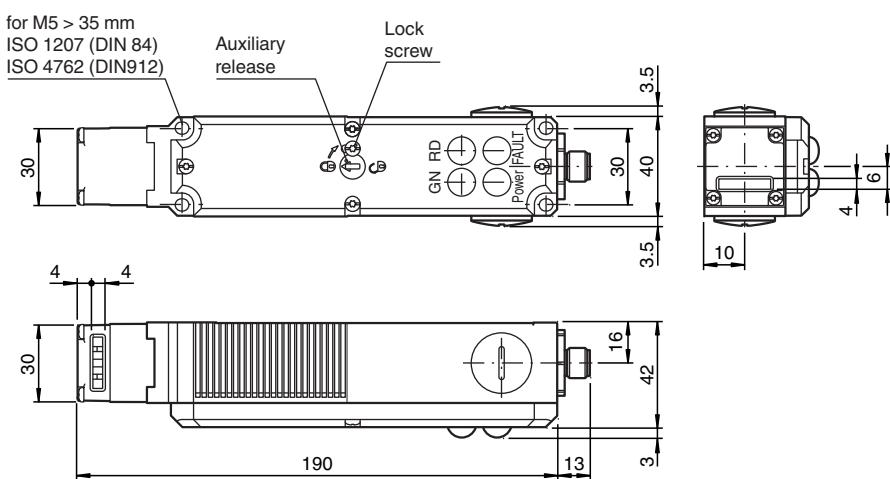
Connection is via an M12 plug. The safety switch is supplied via the AS-Interface and AUX. The mechanical interlock functions according to the standby current principle. The interlock release is activated by triggering the D0 AS-Interface output. Mechanical interlock takes place through tension.

The mechanical override serves to unlock the safety switch with the use of tools. To protect against manipulation, the mechanical override is sealed by locking varnish.

The Power LED indicates operating voltage, the Fault LED indicates a device or communication error. For example, via the controller, contact monitoring can be displayed with the red LED and the solenoid monitoring with the green LED.

Depending on the application, 4 different models of mechanical actuators can be ordered separately.

Dimensions



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Technical Data

General specifications

Node type	Safety node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.0
Profile	S-7.B
IO code	7
ID code	B
ID1 code	F

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

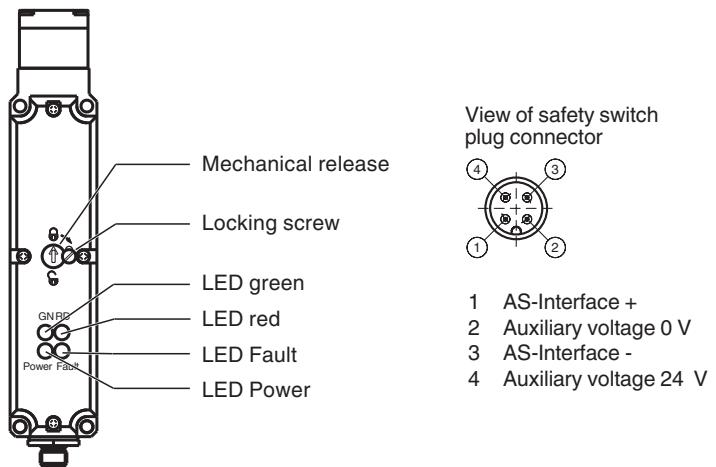
ID2 code	E	
guard-locking mode	quiescent current	
UL File Number	E179102	
Functional safety related parameters		
Performance level (PL)	PL d	
B_{10d}	5 E+6	
Indicators/operating means		
LED FAULT	error display; LED red red: communication error	
LED POWER	AS-Interface voltage; LED green	
Electrical specifications		
Auxiliary voltage	U_{AUX}	Guard locking magnet: 24 V DC +10/-15 % PELV
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 45 mA
Rated insulation voltage		50 V
Input		
Number/Type	2 safety-related inputs: 1 door-monitoring contact SK 1 Magnet-monitoring contact MC	
Supply	from AS-Interface	
Output		
Number/Type	1 guard locking magnet, 1 LED red, 1 LED green	
Supply	from external auxiliary voltage (in accordance with IEC 60742, PELV)	
Current	300 mA	
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU	EN 62026-2:2013+A1:2019	
Standard conformity		
Degree of protection	EN 60529:2000	
AS-Interface	EN 62026-2:2013+A1:2019	
Functional safety	DIN EN 954-1, EN ISO 13849-1 (up to PL _d)	
Ambient conditions		
Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)	
Mechanical specifications		
Housing length	190 mm	
Housing width	40 mm	
Housing height	42 mm	
approach speed	max. 20 m/min	
Operating force	35 N	
Extraction force	30 N (not interlocked)	
retention force	20 N	
locking force	max. 2500 N 2000 N, F_{Zh} as per inspection policy GS-ET-19	
insertion depth		
approach direction lateral	detected min. distance: 24.5 mm permissible caster: 5 mm	
approach direction from above	detected min. distance: 24.5 mm permissible caster: 5 mm	
Degree of protection	IP67	
Connection	connector M12 x 1	
Material		
Housing	Fiberglass-reinforced thermoplastic	
actuating head	metal	
cam	stainless steel	
Mass	approx. 0.5 kg	

Technical Data

Life span

10⁶ switching cycles

Assembly



Programming

Data bits

(Function via AS-Interface)

Data bit	Input	Output
D0	door-monitoring contact SK	guard locking magnet
D1	door-monitoring contact SK	LED red
D2	magnet-monitoring contact MC	LED green
D3	magnet-monitoring contact MC	-

Accessories

	VAZ-IM1-90°-BOLT-S	Right-angled actuator for AS-Interface safety switches
	VAZ-IM1-BOLT-S	Straight actuator for AS-Interface safety switches
	VAZ-IM1-LR-RADIUS-BOLT-S	Hinged actuator for right/left mounted doors, for AS-Interface safety switches
	VAZ-IM1-TD-RADIUS-BOLT-S	Hinged actuator for top/bottom mounted doors, for AS-Interface safety switches
	VAZ-IM1-BASE-BOLT-S	Latches for mechanical safety switches (LIM1 and IM1)
	VAZ-IM1-BASE-S	Switch mount for mechanical safety switches (LIM1 and IM1)
	VAZ-2T1-FK-1M-PUR-V1-G	Splitter box AS-Interface and auxiliary voltage to 1 x M12 round connector