

AS-Interface safety switch

VAA-2E3A-LIM1-PL-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

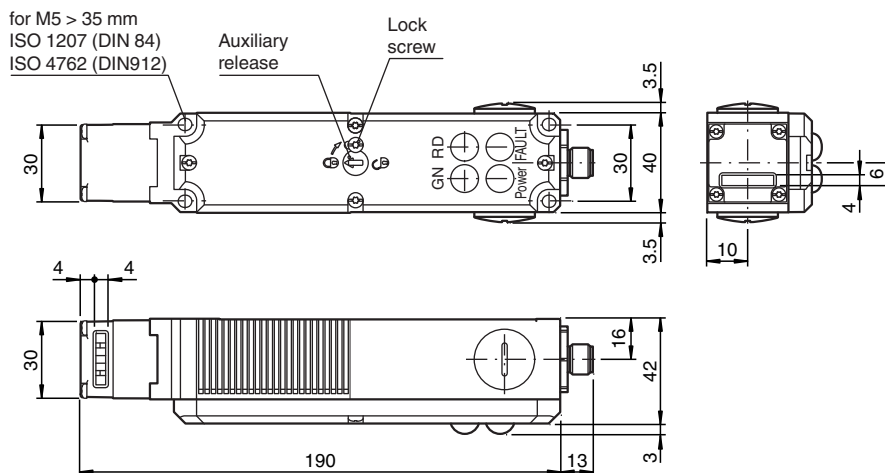
AS-Interface safety switch with guard locking and guard locking monitoring



Function

The VAA-2E3A-LIM1-PL-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 operating current principle. The mechanical interlock is activated by triggering the D0 AS-Interface output. The interlock release 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, contact monitoring can be displayed via the controller 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



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		working 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

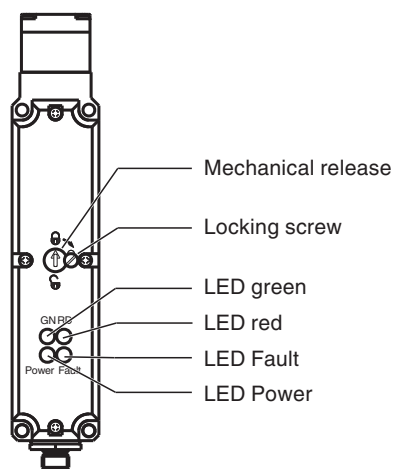
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Technical Data

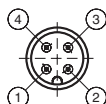
Life span

10⁶ switching cycles

Assembly



View of safety switch plug connector



- 1 AS-Interface +
- 2 Auxiliary voltage 0 V
- 3 AS-Interface -
- 4 Auxiliary voltage 24 V

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