

AS-Interface safety switch

VAA-2E3A-LIM1-PL-J-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
- Power supply from AS-Interface

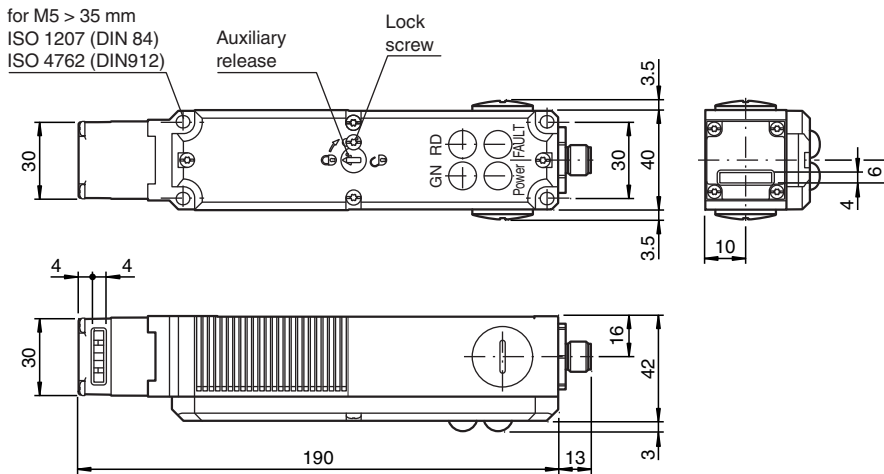
AS-Interface safety switch with guard locking and guard locking monitoring



Function

The VAA-2E3A-LIM1-PL-J-S-V1 safety switch with mechanical interlock and separate actuator is a safety switch with 2 inputs and 3 outputs. The contact monitoring and the 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. 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, via the controller, contact monitoring can be displayed with the red LED and 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

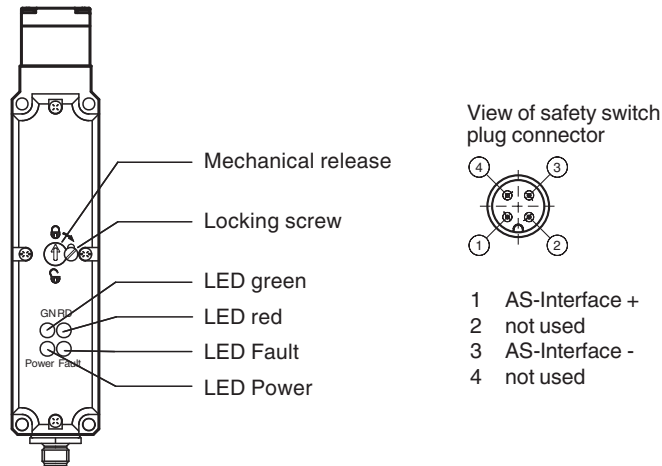
Node type	Safety node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.0
Profile	S-7.B
IO code	7
ID code	B
ID1 code	F
ID2 code	E

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Technical Data

guard-locking mode	working current
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	
Rated operating voltage	U _e 26.5 ... 31.6 V from AS-Interface
Rated operating current	I _e ≤ 100 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 AS-Interface
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
Life span	10 ⁶ 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