



### Model number

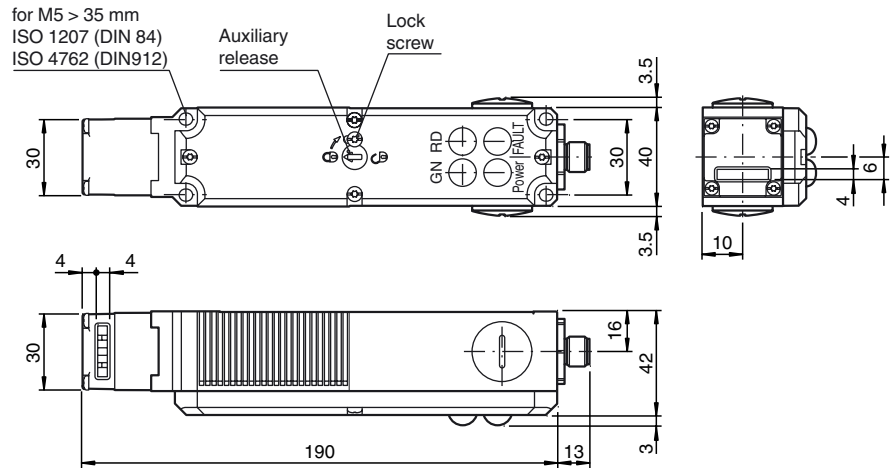
**VAA-2E3A-LIM1-PL-L-S-V1**

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

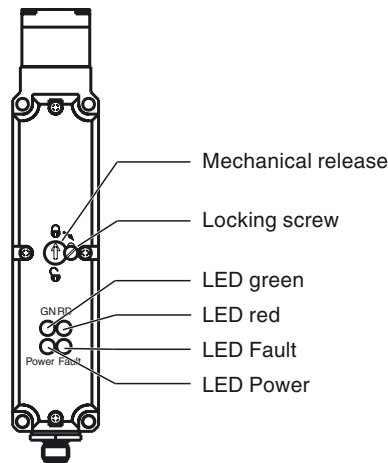
### Features

- Applications up to PL<sub>d</sub>
- 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

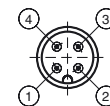
### Dimensions



### Indicating / Operating means



View of safety switch plug connector



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

### Technical data

#### General specifications

Slave type	Safety-Slave
AS-Interface specification	V2.1
Required master specification	≥ V2.0
guard-locking mode	working current
UL File Number	E179102

#### Functional safety related parameters

Performance level (PL)	PL d
B <sub>10d</sub>	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 <sub>AUX</sub>	Guard locking magnet: 24 V DC +10/-15 % PELV
Rated operating voltage	U <sub>e</sub>	26.5 ... 31.6 V from AS-Interface
Rated operating current	I <sub>e</sub>	≤ 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
<b>Standard conformity</b>		
Degree of protection		EN 60529:2000
AS-Interface		EN 62026-2:2013
Functional safety		DIN EN 954-1, EN ISO 13849-1 (up to PL <sub>d</sub> )
<b>Programming instructions</b>		
Profile		S-7.B
IO code		7
ID code		B
ID1 code		F
ID2 code		E
<b>Data bits (function via AS-Interface)</b>		
	<b>input</b>	<b>output</b>
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	-
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 55 °C (-4 ... 131 °F)
<b>Mechanical specifications</b>		
approach speed		≤ 20 m/min
Operating force		35 N
Extraction force		30 N (not interlocked)
retention force		20 N
locking force		≤ 2500 N
insertion depth		2000 N, F <sub>Zh</sub> as per inspection policy GS-ET-19
	<b>detected min. distance</b>	<b>permissible caster</b>
approach direction lateral		24.5 mm 5 mm
approach direction from above		24.5 mm 5 mm
Degree of protection		IP67
Connection		M12 x 1 connector
<b>Material</b>		
Housing		Fiberglass-reinforced thermoplastic
actuating head		metal
cam		stainless steel
Mass		approx. 0.5 kg
Life span		10 <sup>6</sup> switching cycles

## 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.

A simple connection to the AS-Interface network is sufficient for process protection. Depending on the application, 4 different models of mechanical actuators can be ordered separately.

## 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