



Model number

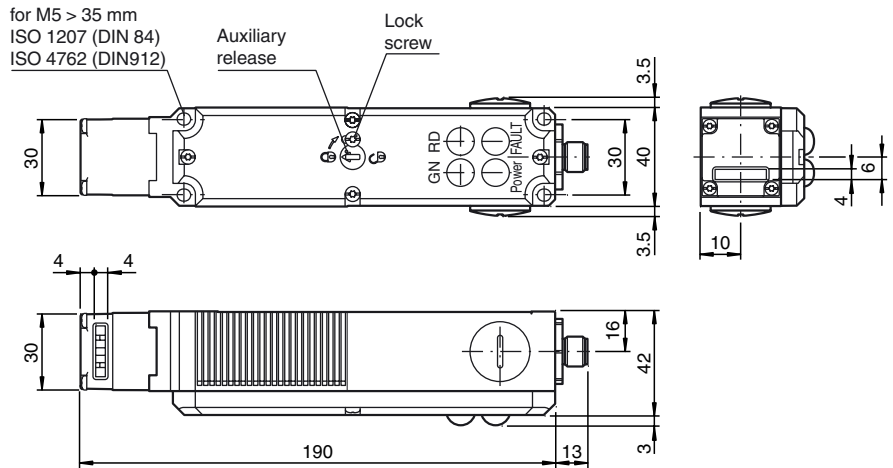
VAA-2E3A-LIM1-PU-L-S-V1

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

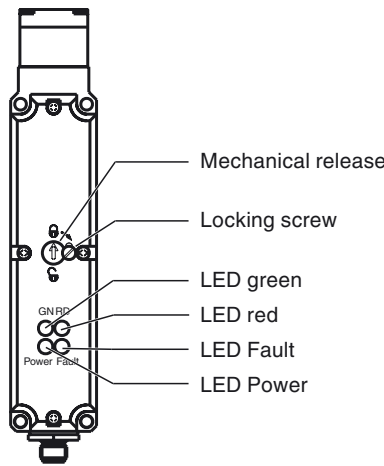
Features

- 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

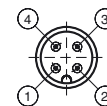
Dimensions



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 | 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

Release date: 2019-01-09 10:03 Date of issue: 2019-01-09 210502_eng.xml

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

| | | |
|--|--|---------------------------|
| Electromagnetic compatibility | | |
| Directive 2014/30/EU | EN 62026-2:2013 | |
| Standard conformity | | |
| 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 _d) | |
| Programming instructions | | |
| Profile | S-7.B | |
| IO code | 7 | |
| ID code | B | |
| ID1 code | F | |
| ID2 code | E | |
| Data bits (function via AS-Interface) | 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 | - |
| Ambient conditions | | |
| Ambient temperature | -20 ... 55 °C (-4 ... 131 °F) | |
| Mechanical specifications | | |
| approach speed | ≤ 20 m/min | |
| Operating force | 35 N | |
| Extraction force | 30 N (not interlocked) | |
| retention force | 20 N | |
| locking force | ≤ 2500 N 2000 N , F _{Zh} as per inspection policy GS-ET-19 | |
| insertion depth | detected min. distance | permissible caster |
| 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 | |
| Material | | |
| Housing | Fiberglass-reinforced thermoplastic | |
| actuating head | metal | |
| cam | stainless steel | |
| Mass | approx. 0.5 kg | |
| Life span | 10 ⁶ switching cycles | |

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.

A simple connection to the AS-Interface network is sufficient for process protection. For personal protection, the 24 V connection can be switched securely.

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