



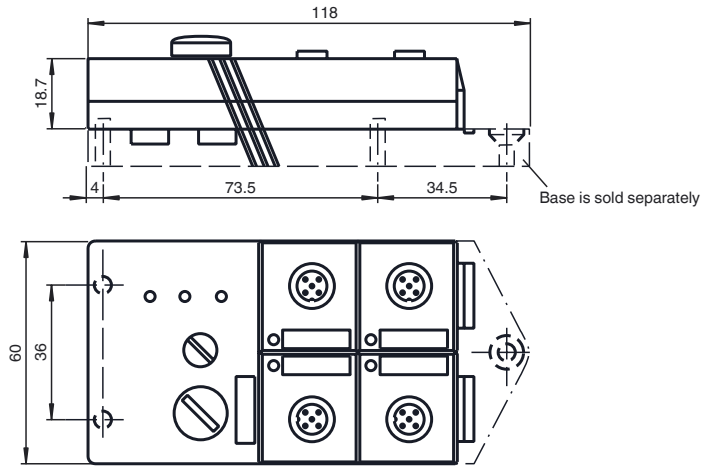
Model number

VAA-4E-G2-ZA
 G2 flat module
 4 inputs (PNP)

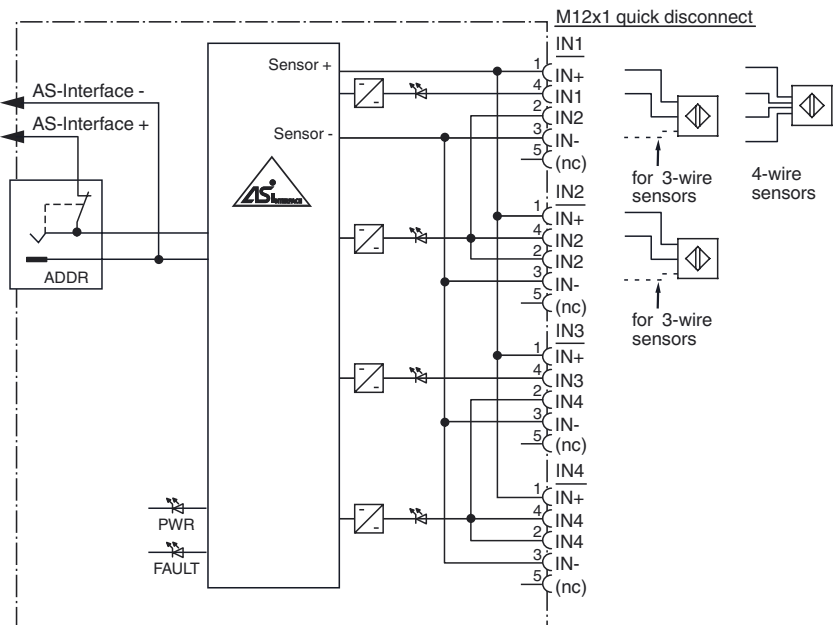
Features

- AS-Interface certificate
- Protection degree IP67
- Addressing jack
- Flat cable connection with cable piercing technique, variable flat cable guide
- Inputs for 2- and 3-wire sensors
- Power supply of inputs from the module
- Function display for bus and inputs
- Monitoring of sensor overloads

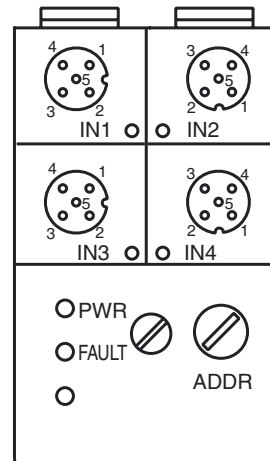
Dimensions



Electrical connection



Indicating / Operating means



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Technical data**General specifications**

| | |
|-------------------------------|----------------|
| Slave type | Standard slave |
| AS-Interface specification | V3.0 |
| Required master specification | ≥ V2.0 |
| UL File Number | E87056 |

Indicators/operating means

| | |
|-----------|---|
| LED FAULT | error display; LED red red: communication error or address is 0 red flashing: overload of sensor supply |
| LED PWR | AS-Interface voltage; LED green |
| LED IN | switching state (input); 4 LED yellow |

Electrical specifications

| | | |
|-------------------------|-------|---|
| Rated operating voltage | U_e | 26.5 ... 31.6 V from AS-Interface |
| Rated operating current | I_e | ≤ 40 mA (without sensors) / max. 240 mA |
| Protection class | | III |

Input

| | |
|--------------------------|--|
| Number/Type | 4 inputs for 2- or 3-wire sensors (PNP), DC |
| Supply | from AS-Interface |
| Voltage | 21 ... 31 V |
| Current loading capacity | ≤ 200 mA ($T_B \leq 40 \text{ °C}$), ≤ 150 mA ($T_B \leq 60 \text{ °C}$), short-circuit protected |
| Input current | ≤ 8 mA (limited internally) |
| Switching point | |
| 0 (unattenuated) | ≤ 1.5 mA |
| 1 (attenuated) | ≥ 4.5 mA |
| Signal delay | < 2 ms (input/AS-Interface) |
| Signal frequency | ≤ 250 Hz |

Programming instructions

| | |
|----------|-------|
| Profile | S-0.1 |
| IO code | 0 |
| ID code | 1 |
| ID1 code | F |
| ID2 code | F |

| Data bits (function via AS-Interface) | input | output |
|---------------------------------------|-------|--------|
| D0 | IN1 | - |
| D1 | IN2 | - |
| D2 | IN3 | - |
| D3 | IN4 | - |

Parameter bits (programmable via AS-i) function

| | |
|----|---|
| P0 | Communication monitoring P0 = 0 monitoring = off, the outputs maintain the status if communication fails P0 = 1 monitoring = on, i.e. if communication fails, the outputs are deenergised (basic setting) |
| P1 | Input filter P1 = 0 input filter on, pulse suppression ≤ 2 ms P1 = 1 input filter off (basic setting) |
| P2 | Synchronous mode P2 = 0 synchronous mode on P2 = 1 synchronous mode off (basic setting) |
| P3 | not used |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 60 °C (-13 ... 140 °F) |
| Storage temperature | -25 ... 85 °C (-13 ... 185 °F) |

Mechanical specifications

| | |
|-------------------|---|
| Protection degree | IP67 |
| Connection | cable piercing method flat cable yellow inputs: M12 round connector |
| Material | |
| Housing | PBT |
| Mass | 100 g |
| Mounting | Mounting base |

Compliance with standards and directives

| | |
|---------------------------|---|
| Directive conformity | |
| EMC Directive 2004/108/EC | EN 61000-6-2:2001, EN 61000-6-4:2001, EN 50295:1999 |
| Standard conformity | |
| Noise immunity | EN 61000-6-2:2001 |
| Emitted interference | EN 61000-6-4:2001 |
| Input | EN 61131-2:2007 |
| Protection degree | EN 60529:2000 |
| Fieldbus standard | EN 50295:1999, IEC 62026-2:2006 |

Function

The VAA-4E-G2-ZA is an AS-Interface coupling module with 4 inputs. Mechanical contacts (e. g. push buttons) and 2- and 3-wire sensors can be connected to the inputs.

The IP67 flat module features an integrated addressing jack and is ideal for applications in the field.

Sensors are connected via M12 x 1 quick disconnects. The current switching state of each channel is indicated by an LED. An additional LED monitors the AS-Interface communication and indicates when the module has an address of zero.

The input is monitored for short circuits. In a failure case, the module disconnects from the AS-Interface and an error is indicated.

The U-G3FF mounting base is used as a standard connection to the AS-Interface. The flat cables can be installed in two orientation within the base. This means, for example, that 90° curves can be laid with very tight radii (variable flat cable guide). If input and output modules are used in an application, the flat cable for the external power supply can be placed in the base of the module, since the module does not access this line. The advantage is that both flat cables can be placed in parallel without destroying the module due to a wrong connection.

Note:

The mounting base for the module is sold separately.

Accessories**VBP-HH1-V3.0**

AS-Interface Handheld

VAZ-PK-1,5M-V1-G

Adapter cable module/hand-held programming device

VAZ-FK-ED-G2

AS-Interface end seal for G2 modules

Matching system components**U-G3FF**

AS-Interface module mounting base for connection to flat cable (AS-Interface and external auxiliary power)

Notes

Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

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

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