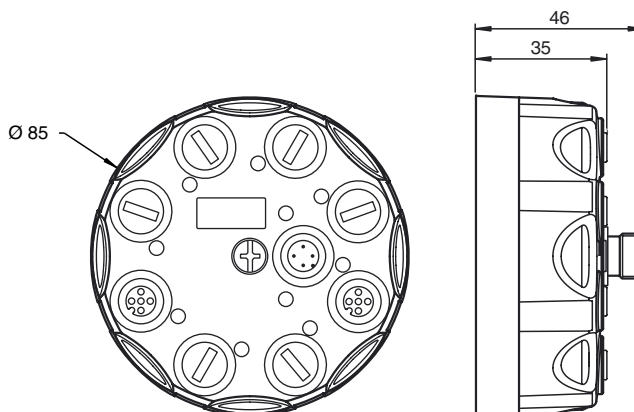
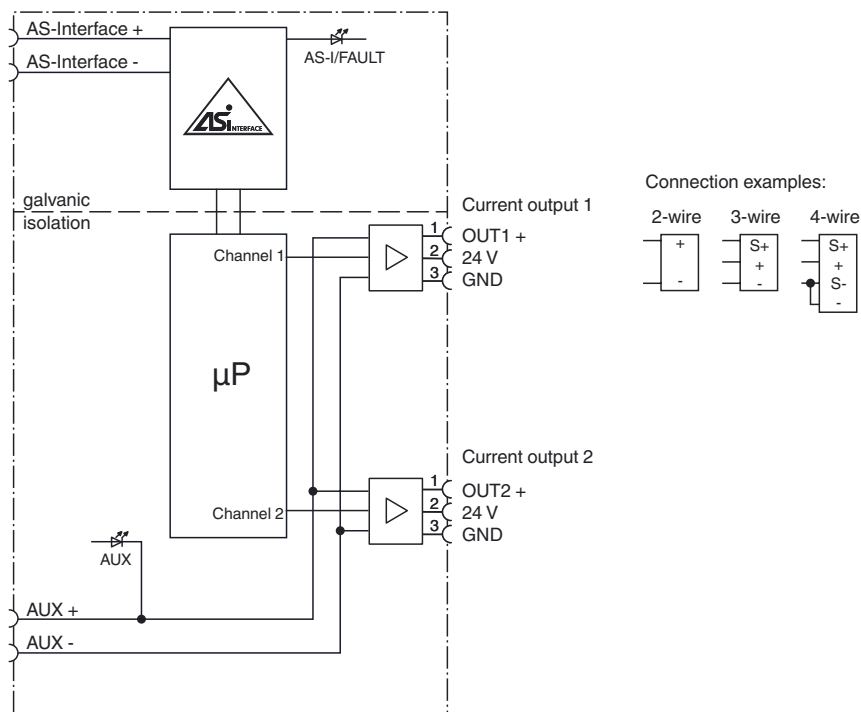




Dimensions



Electrical connection



Model number

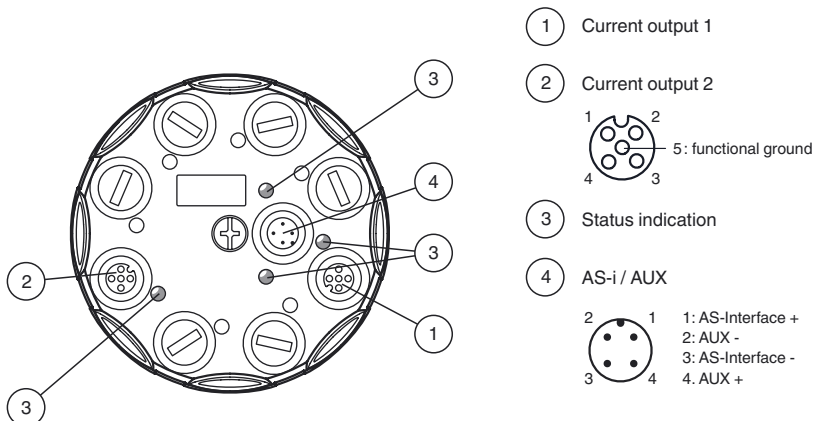
VBA-2A-G11-IL-V1

G11 analog module
2 analog outputs

Features

- Degree of protection IP68 / IP69K
- Function display for bus, external auxiliary voltage and outputs
- Power supply of outputs from the external auxiliary voltage
- Accuracy $\pm 0.15\%$
- Integrated shielding
- Channel-specific output monitoring
- Communication monitoring

Indicating / Operating means



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

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Technical data**General specifications**

| | |
|-------------------------------|----------------|
| Slave type | Standard slave |
| AS-Interface specification | V3.0 |
| Required master specification | ≥ V2.1 |
| UL File Number | E87056 |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 365 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|----------------|---|
| LED AS-i/FAULT | Status display; multi-colour LED Green: normal operation Red: communication fault Flashing yellow/red: address 0 Flashing green/red: peripheral fault |
| LED ANALOG | Status of output signal; yellow LED Yellow: 0 mA ≤ I ≤ 23 mA Yellow flashing: lead breakage or I > 23 mA |
| LED AUX | ext. auxiliary voltage U _{AUX} ; dual LED green/red green: voltage OK red: reverse voltage |

Electrical specifications

| | | |
|----------------------------|------------------|---|
| Auxiliary voltage (output) | U _{AUX} | 24 V DC ± 15 % PELV |
| Rated operating voltage | U _e | 26.5 ... 31.6 V from AS-Interface |
| Rated operating current | I _e | ≤ 35 mA |
| Protection class | | III |
| Surge protection | | U _{AUX} , U _{in} : Over voltage category III, safe isolated power supplies (PELV) |

Output

| | |
|--------------------------|---|
| Number/Type | 2 analog outputs (current), 0 ... 20 mA |
| Supply | from AUX |
| Load | ≤ 600 Ω |
| Current loading capacity | ≤ 700 mA (signal current + actuator supply) from external bulk power supply U _{AUX} , overload and short-circuit protected |
| Resolution | 6 μA |
| Accuracy | 0.15 % of full-scale value |
| Temperature influence | 1 μA/K |

Programming instructions

| | |
|---------------------------------------|--|
| Profile | S-7.3.5 |
| IO code | 7 |
| ID code | 3 |
| ID1 code | F |
| ID2 code | 5 |
| Data bits (function via AS-Interface) | The transfer of the data value is based on AS-Interface Profile 7.3. |

Parameter bits (programmable via AS-i) function

| | |
|----|---|
| P0 | Watchdog: P0=1 (default), watchdog active P0=0, watchdog inactive |
| P1 | not used |
| P2 | Indication of peripheral fault: P2=1 (default), peripheral fault is reported P2=0, peripheral fault is not reported |
| P3 | not used |

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
| Storage temperature | -25 ... 85 °C (-13 ... 185 °F) |

Mechanical specifications

| | |
|----------------------|---|
| Degree of protection | IP68 / IP69K |
| Connection | AS-Interface/U _{AUX} : M12 round connector Outputs: M12 round connector |
| Material | |
| Housing | PBT PC |
| Mounting screw | Stainless steel 1.4305 / AISI 303 |
| Mass | 200 g |
| Mounting | Mounting base |

Compliance with standards and directives

| | |
|---------------------------|--|
| Directive conformity | |
| EMC Directive 2004/108/EC | EN 50295:1999 |
| Standard conformity | |
| Noise immunity | EN 61000-6-2:2005, EN 61326-1:2006, IEC 62026-2:2008 |
| Emitted interference | EN 61000-6-4:2007 |
| Degree of protection | EN 60529:2000 |
| Fieldbus standard | EN 50295:1999, IEC 62026-2:2008 |

Function

The analog module VBA-2A-G11-IL-V1 has two analog current outputs (0 mA ... 20 mA). Power is supplied to the outputs through the auxiliary voltage. Analog value conversion and data transfer are provided asynchronously according to AS-Interface profile 7.3. The rise time of the analog signals is approx. 2 ms.

If the analog value "0" is returned, lead breakages are not monitored on the respective channel. Peripheral faults are not signaled when there is no active connection to an actuator. If the internal "watchdog" monitoring function is enabled, the output signals are reset to zero if communication with the AS-Interface fails.

The G11 module with IP68/IP69K protection is particularly suitable for demanding field applications. The connection to the actuators is established via M12 connectors. The module can be preaddressed by connecting it to the handheld programming unit VBP-HH1. The connection to the AS-Interface transfer line and the auxiliary voltage AUX is established via an M12 connector.

Note:

A lead breakage or an output value outside the value range is also transmitted to the AS-Interface master via the 'peripheral fault' function. Communication via the AS-Interface continues.

Accessories**VAZ-V1-B3**

Blind plug for M12 sockets

VBP-HH1-V3.0-KIT

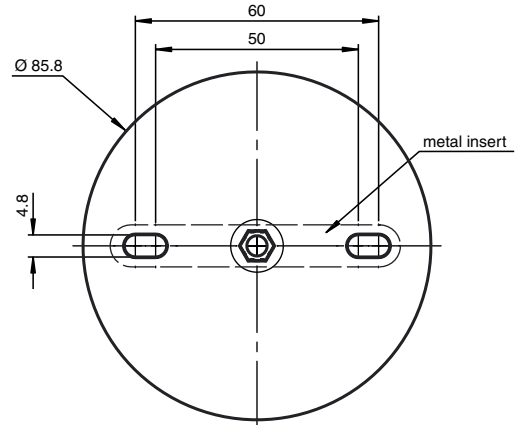
AS-Interface Handheld with accessory

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.

Mounting instructions

Screw the device onto a level mounting surface using two M4 attachment screws. The functional earth of the M12 round connectors is connected with the metal insert in the base via the tightened central screw. This metal insert can be connected to functional earth via the mounting screws to improve the EMC. The mounting screws are not included.



Screw a blind plug onto spare connections to ensure the protection category.