



## AS-Interface analog module

### VBA-2A-G11-IL-V1

- 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

G11 analog module, 2 analog outputs



### 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.

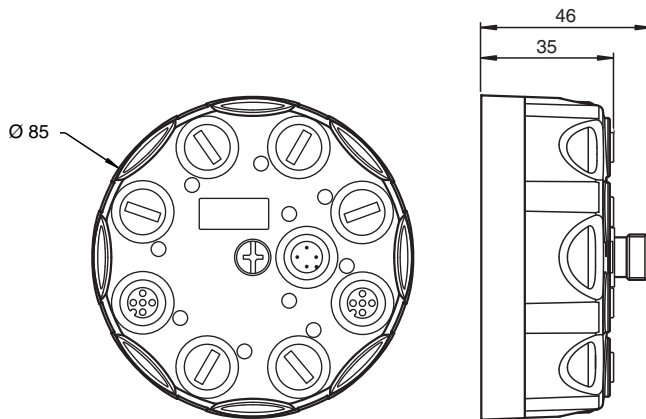
If the analog value "0" is returned, lead breakages are not monitored on the respective channel. Peripheral faults are not signaled when there is no active connection to an actuator. If the internal "watchdog" monitoring function is enabled, the output signals are reset to zero if communication with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

### Dimensions



### Technical Data

**General specifications**

Node type	Standard node
AS-Interface specification	V3.0
Required gateway specification	$\geq V2.1$
Profile	S-7.3.5
IO code	7
ID code	3

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 257493\_eng.pdf

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

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## Technical Data

ID1 code	F
ID2 code	5
UL File Number	E223772
<b>Indicators/operating means</b>	
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: $0 \text{ mA} \leq I \leq 23 \text{ mA}$ Yellow flashing: lead breakage or $I > 23 \text{ mA}$
LED AUX	ext. auxiliary voltage $U_{AUX}$ ; dual LED green/red green: voltage OK red: reverse voltage
<b>Electrical specifications</b>	
Auxiliary voltage (output)	$U_{AUX}$ 24 V DC $\pm$ 15 % PELV
Rated operating voltage	$U_e$ 26.5 ... 31.6 V from AS-Interface
Rated operating current	$I_e$ $\leq$ 35 mA
Protection class	III
Surge protection	$U_{AUX}$ , $U_{in}$ : Over voltage category III, safe isolated power supplies (PELV)
<b>Output</b>	
Number/Type	2 analog outputs (current), 0 ... 20 mA
Supply	from AUX
Load	max. 600 $\Omega$
Current loading capacity	$\leq$ 700 mA (signal current + actuator supply) from external bulk power supply $U_{AUX}$ , overload and short-circuit protected
Resolution	6 $\mu$ A
Accuracy	0.15 % of full-scale value
Temperature influence	1 $\mu$ A/K
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 62026-2:2013
<b>Standard conformity</b>	
Degree of protection	EN 60529:2000
Fieldbus standard	EN 62026-2:2013
Emitted interference	EN 61000-6-4:2007
AS-Interface	EN 62026-2:2013
Noise immunity	EN 61000-6-2:2005, EN 61326-1:2006, IEC 62026-2:2008
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 70 $^{\circ}$ C (-13 ... 158 $^{\circ}$ F)
Storage temperature	-25 ... 85 $^{\circ}$ C (-13 ... 185 $^{\circ}$ F)
Relative humidity	85 % , noncondensing
Climatic conditions	For indoor use only
Altitude	$\leq$ 2000 m above MSL
Pollution degree	3
<b>Mechanical specifications</b>	
Degree of protection	IP68 / IP69K
Connection	AS-Interface/ $U_{AUX}$ : M12 round connector Outputs: M12 round connector
<b>Material</b>	
Housing	PBT PC
Mounting screw	Stainless steel 1.4305 / AISI 303
Mass	200 g
Tightening torque, housing screws	1.8 Nm
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

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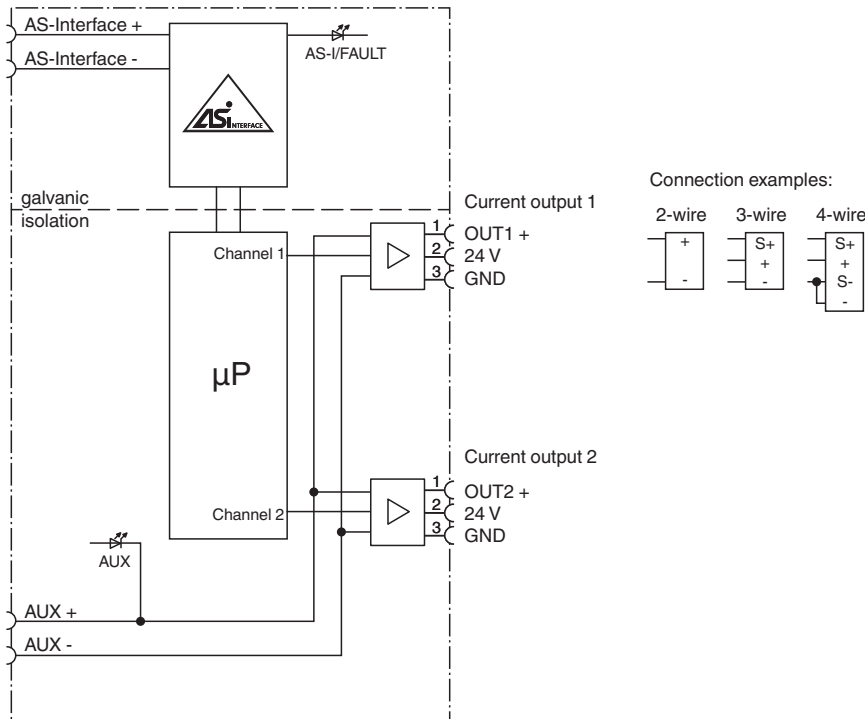
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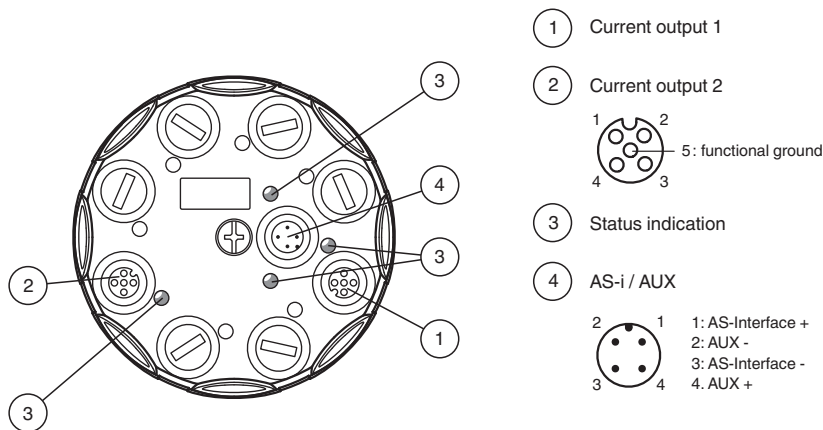
Connection



Connection

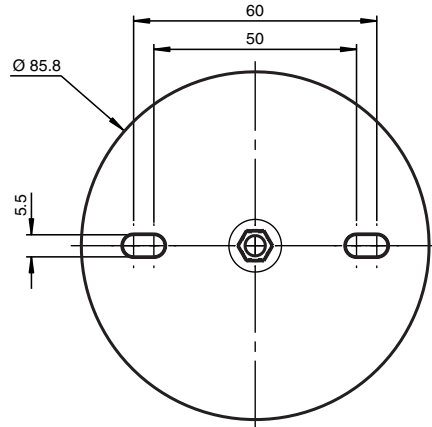
Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

Assembly



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## Mounting



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.

## Programming

### 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-Interface)

Parameter bit	Function
P0	Watchdog P0=0 watchdog inactive P0=1 watchdog active, default
P1	not used
P2	Indication of peripheral fault P2=0 peripheral fault is not reported P2=1 peripheral fault is reported, default
P3	nicht verwendet

## Accessories

	<b>VBP-HH1-V3.0-KIT</b>	AS-Interface Handheld with accessory
	<b>VAZ-V1-B3</b>	Blind plug for M12 sockets