



## AS-Interface analog module

### VBA-2A-G11-I-F

- Addressing jack
- Degree of protection IP68 / IP69K
- Function display for bus and outputs
- 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-I-F has two analog current outputs (0 mA ... 20 mA). Power is supplied to the outputs through the yellow AS-Interface cable. 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.

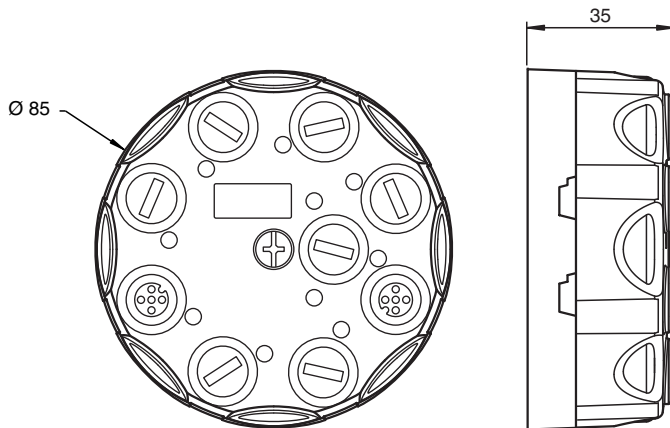
If the analog value "0" is returned, lead breakages are not monitored on the respective channel. In this case, peripheral faults are not signaled when there is no active connection to an actuator. If the internal "watchdog" monitoring function is enabled, the output signals are reset to zero if communication 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 via the addressing socket. The connection to the AS-Interface transfer line is established using the AS-Interface flat cable.

**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

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

## 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 $I > 23 \text{ mA}$	
<b>Electrical specifications</b>		
Rated operating voltage	$U_e$	26.5 ... 31.6 V from AS-Interface
Rated operating current	$I_e$	$\leq 100 \text{ mA}$
Protection class	III	
Surge protection	$U_e$ : Over voltage category III, safe isolated power supplies (PELV)	
<b>Output</b>		
Number/Type	2 analog outputs (current), 0 ... 20 mA	
Supply	from AS-Interface	
Load	max. 600 $\Omega$	
Resolution	6 $\mu\text{A}$	
Accuracy	0.15 % of full-scale value	
Temperature influence	1 $\mu\text{A/K}$	
<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 °C (-13 ... 158 °F)	
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)	
Relative humidity	85 % , noncondensing	
Climatic conditions	For indoor use only	
Altitude	$\leq 2000 \text{ m}$ above MSL	
Pollution degree	3	
<b>Mechanical specifications</b>		
Degree of protection	IP68 / IP69K	
Connection	cable piercing technique, AS-i flat cable Outputs: M12 round connector	
Material		
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	

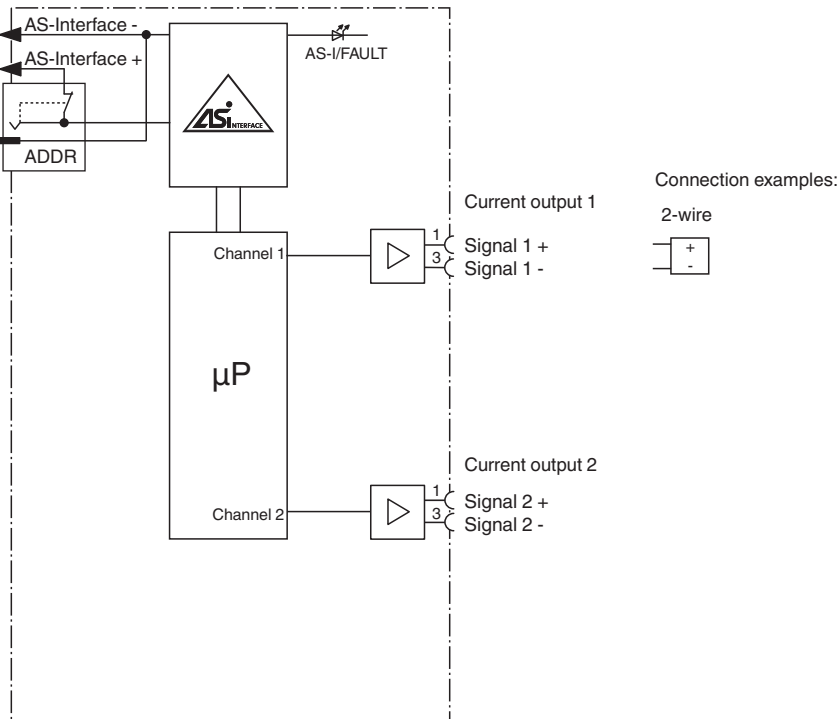
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fa-info@sg.pepperl-fuchs.com

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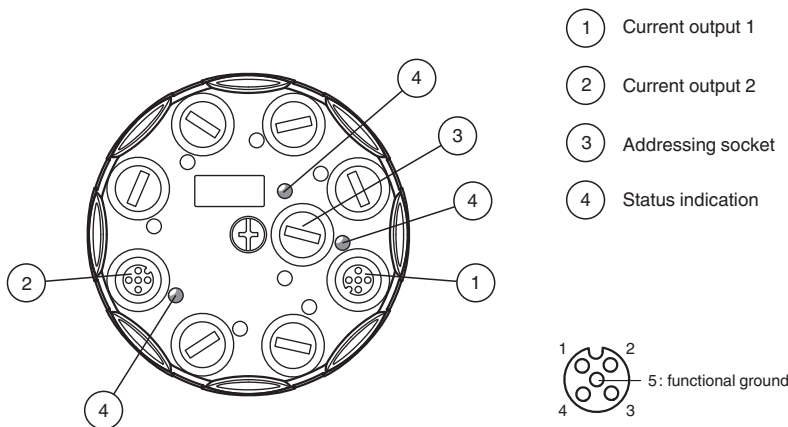
Connection



Connection

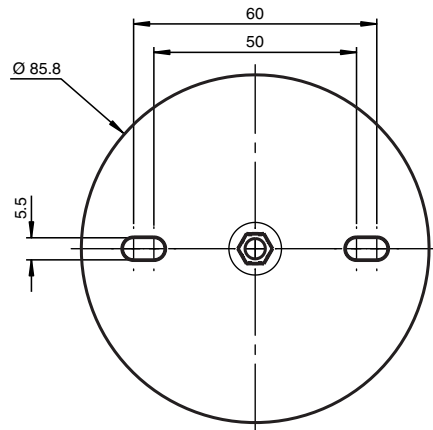
Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

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>VAZ-V1-B3</b>	Blind plug for M12 sockets
	<b>VBP-HH1-V3.0-KIT</b>	AS-Interface Handheld with accessory
	<b>VAZ-PK-1,5M-V1-G</b>	Adapter cable module/hand-held programming device