Model number

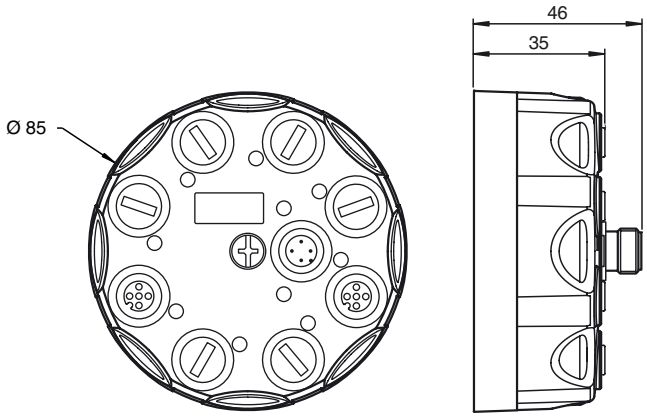
VBA-2A-G11-IL-V1

G11 analog module
2 analog outputs

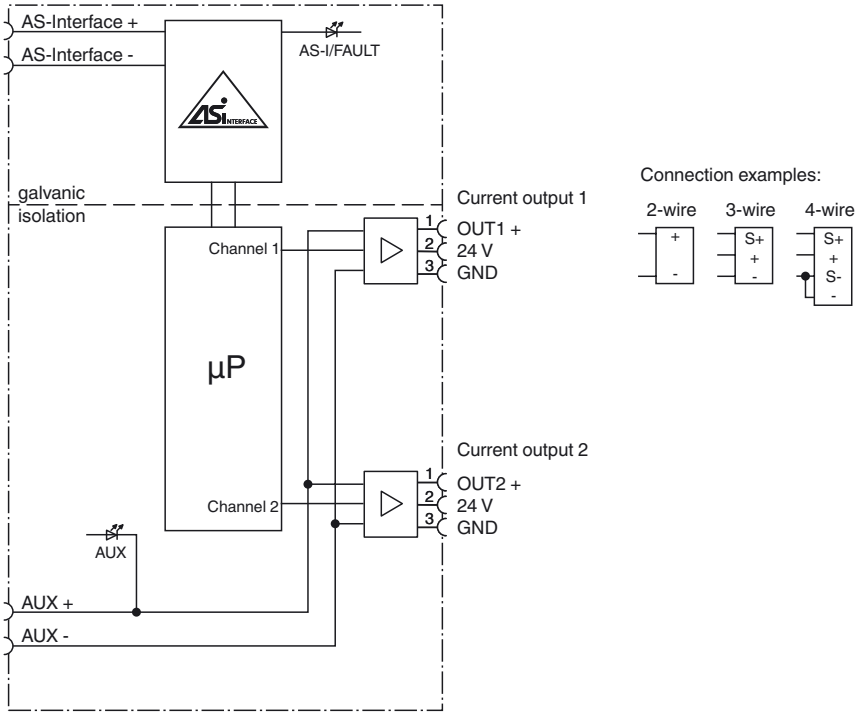
Features

- Protection degree IP68/IP69K
- Function display for bus, external auxiliary voltage and outputs
- Power supply of outputs from the external auxiliary voltage
- Accuracy ± 0.15 %
- Integrated shielding
- Channel-specific output monitoring
- Communication monitoring

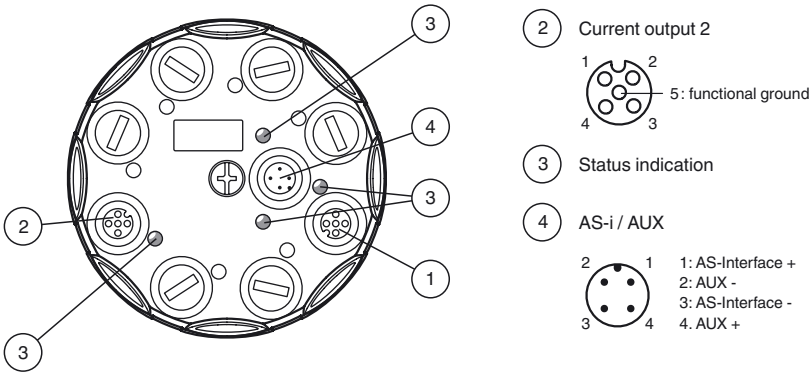
Dimensions



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		≥ V2.1
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		
Protection degree		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
Protection degree		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

VBP-HH1-V3.0-KIT
AS-Interface Handheld with accessory

VAZ-V1-B3
Blind plug for M12 sockets

VAZ-V1-B
Blind plug for M12 sockets

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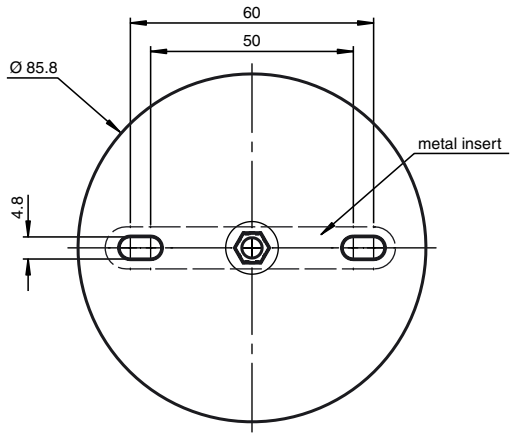
Notes

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.

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