AS-Interface analog module

VBA-2A-G11-I-V1

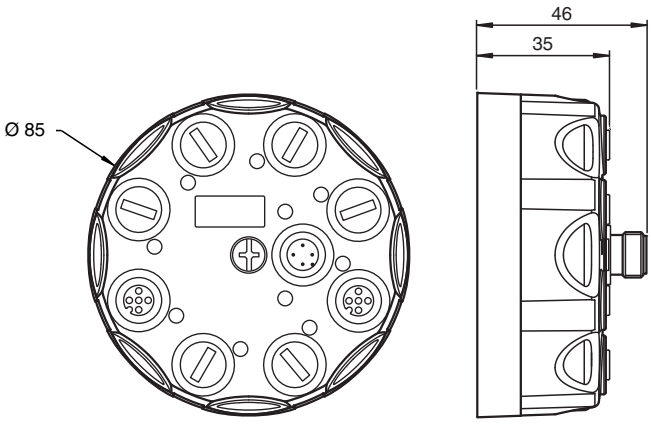
- Degree of protection IP68 / IP69K
- Function display for bus and outputs
- Accuracy ± 0.15 %
- Integrated shielding
- Channel-specific output monitoring
- Communication monitoring

G11 analog module, 2 analog outputs

Function

The analog module VBA-2A-G11-I-V1 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.
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 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	≥ V2.1
Profile	S-7.3.5
IO code	7
ID code	3
ID1 code	F

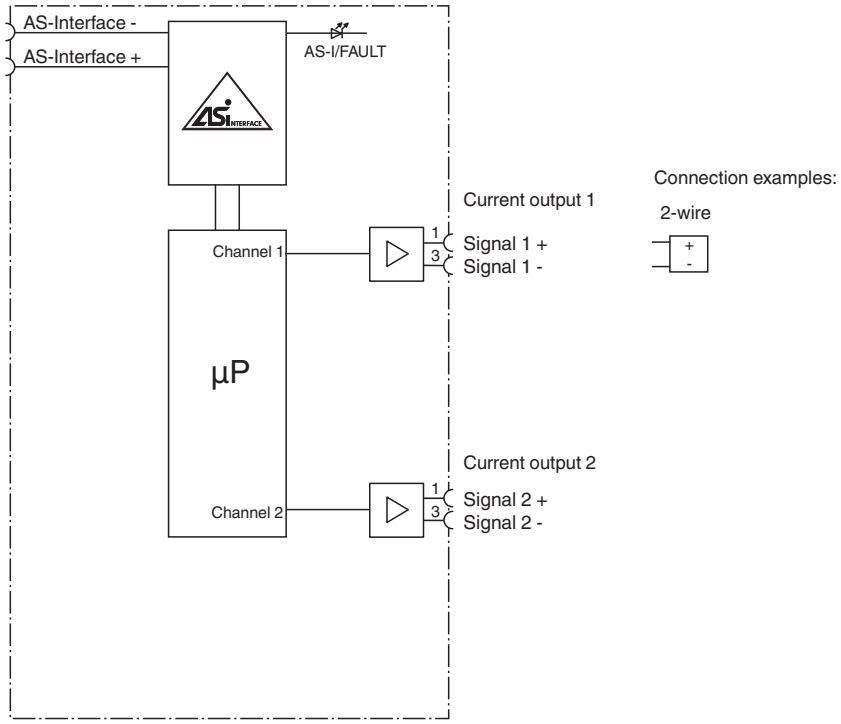
Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 237499_eng.pdf

Technical Data

ID2 code		5
UL File Number		E223772
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
Electrical specifications		
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 100 mA
Protection class		III
Surge protection		U_e: Over voltage category III, safe isolated power supplies (PELV)
Output		
Number/Type		2 analog outputs (current), 0 ... 20 mA
Supply		from AS-Interface
Load		max. 600 Ω
Resolution		6 µA
Accuracy		0.15 % of full-scale value
Temperature influence		1 µA/K
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013
Standard conformity		
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
Ambient conditions		
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		≤ 2000 m above MSL
Pollution degree		3
Mechanical specifications		
Degree of protection		IP68 / IP69K
Connection		AS-Interface: M12 round connector 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

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 237499_eng.pdf

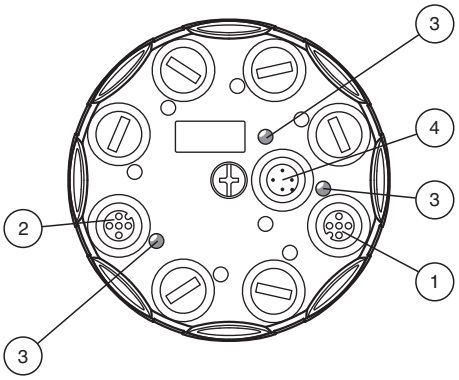
Connection



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



1 Current output 1

2 Current output 2

5: functional ground

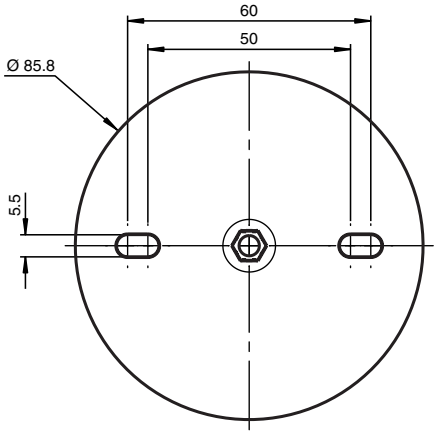
3 Status indication

4 AS-i / AUX

1: AS-Interface +
2: n.c.
3: AS-Interface -
4. n.c.

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 237499_eng.pdf

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

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

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 237499_eng.pdf