



AS-Interface sensor/actuator module VBA-2E2A-G2-ZA/EA2

- AS-Interface certificate
- Degree of protection IP67
- A/B node with extended addressing possibility for up to 62 nodes
- Addressing jack
- Flat cable connection with cable piercing technique, variable flat cable guide
- Communication monitoring
- Inputs for 2-, 3-, and 4-wire sensors
- Power supply of outputs from the external auxiliary voltage
- Supply for inputs from AS-Interface
- Ground connection (FE) possible
- Function display for bus, ext. auxiliary voltage, inputs and outputs
- Detection of overload on sensor supply
- Detection of output overload

G2 flat module 2 inputs (PNP) and 2 electronic outputs



Function

The VBA-2E2A-G2-ZA/EA2 is an AS-Interface interface module with 2 Inputs and 2 outputs. Mechanical contacts (e. g. push buttons) as well as 2-, 3- and 4-wire sensors can be connected to the inputs. The outputs are electronic outputs, which can be loaded to 24 V DC and 1 A per output. The IP67 flat module is ideal for applications in the field. An addressing jack is integrated in the module. Connection to the sensors/actuators is provided via M12 x 1 screw connections. An LED is provided for each channel, on the top of the module, to indicate the current switching status. Similarly, an LED is provided to monitor the AS-Interface communication and to indicate that the module has the address 0. LEDs are also provided to indicate the ASInterface voltage and the external power supply. The U-G3FF mounting base is normally used for the connection of the AS-Interface flat cable and the external 24 V DC power supply. The specially designed base enables the user to connect flat cable from both sides. The device is equipped with communication monitoring, which switches off power to the inputs if no communication has taken place for longer than 40 ms.

An overloading of the internal power supply or of the outputs is signalled to the AS-interface master via the "Peripheral fault" function. Communication via the AS-Interface remains intact.

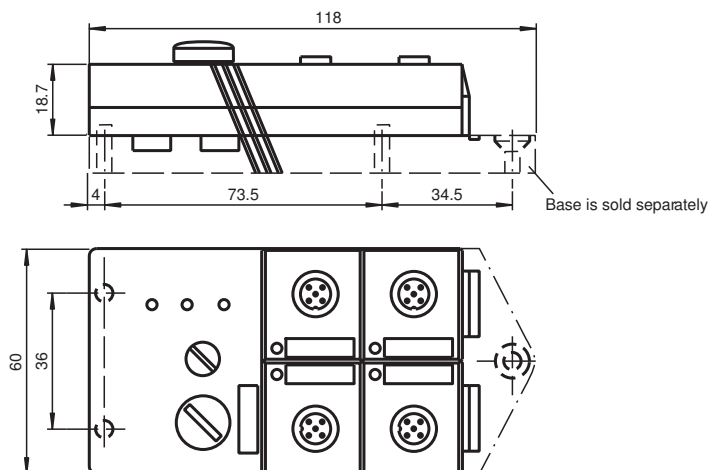
Note:

The mounting base for the module is sold separately.

Application

In the case of 4-wire sensors, you must use slot IN3 for the inputs (internally bridged).

Dimensions



Technical Data

General specifications

Node type	A/B node
AS-Interface specification	V2.1
Required gateway specification	≥ V2.1
UL File Number	E223772

Indicators/operating means

LED FAULT	error display; LED red red: communication error or address is 0 red flashing: overload of sensor power supply or outputs
LED PWR	AS-Interface voltage; LED green
LED AUX	ext. auxiliary voltage U_{AUX} ; LED green
LED IN	switching state (input); 2 LED yellow
LED OUT	Switching state (output); 2 LED yellow

Electrical specifications

Auxiliary voltage (output)	U_{AUX}	20 ... 30 V DC PELV
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 40 mA (without sensors) / max. 140 mA
Protection class		III
Surge protection		U_{AUX} , U_{in} : Over voltage category III, safe isolated power supplies (PELV)

Input

Number/Type	2 inputs for 2- or 3-wire sensors (PNP), DC option 1 input for 4-wire sensor (PNP), DC
Supply	from AS-Interface
Voltage	21 ... 31 V
Current loading capacity	≤ 100 mA ($T_B \leq 40^\circ\text{C}$), ≤ 75 mA ($T_B \leq 60^\circ\text{C}$), overload-proof and short-circuit protected
Input current	≤ 8 mA (limited internally)
Switching point	according to DIN EN 61131-2 (Type 2)
0 (unattenuated)	≤ 2 mA
1 (attenuated)	≥ 4 mA

Output

Number/Type	2 electronic outputs, PNP overload and short-circuit proof
Supply	from external auxiliary voltage U_{AUX}
Voltage	≥ ($U_{AUX} - 0.5\text{ V}$)
Current	1 A per output

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 62026-2:2013 EN 61000-6-2:2001 EN 61000-6-4:2001

Standard conformity

Degree of protection	EN 60529:2000
Input	EN 61131-2:2007
Emitted interference	EN 61000-6-4:2001
AS-Interface	EN 62026-2:2013
Noise immunity	EN 61000-6-2:2001

Programming instructions

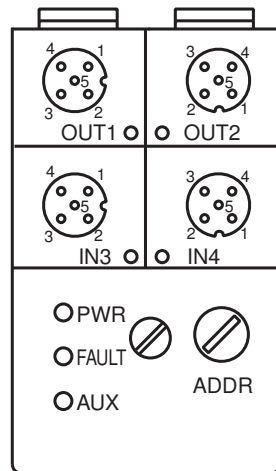
Profile	S-B.A.2
IO code	B
ID code	A
ID1 code	7
ID2 code	2
Data bits (function via AS-Interface)	Input Output
D0	- OUT1
D1	- OUT2
D2	IN3 -

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Technical Data

D3	IN4 -
Parameter bits (programmable via AS-i)	function
P0	not used
P1	not used
P2	not used
P3	not used
Ambient conditions	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °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	IP67
Connection	Cable piercing method flat cable yellow/flat cable black inputs/outputs: M12 round connector
Material	
Housing	PBT
Mass	100 g
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

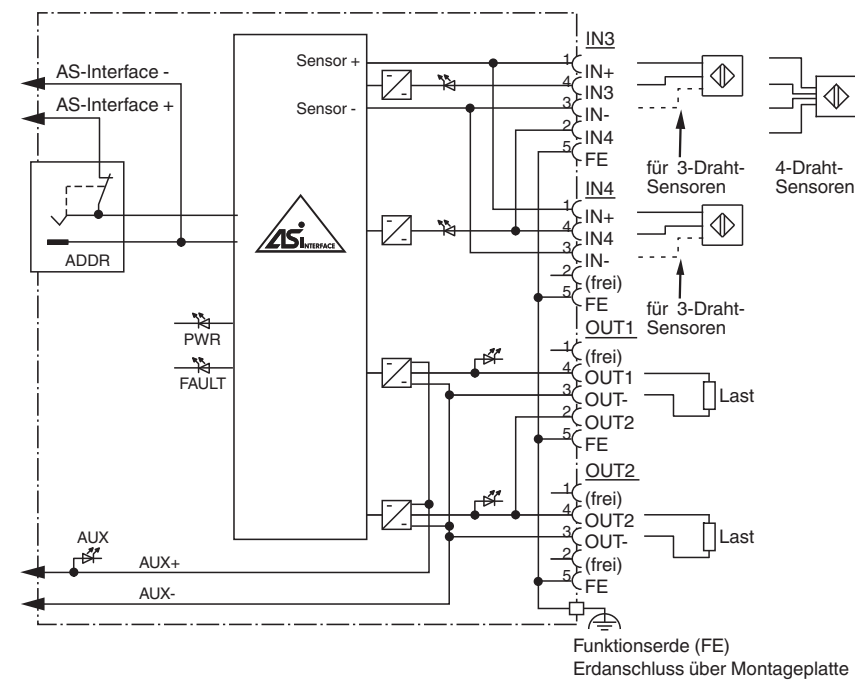
Assembly



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.

Connection



Matching System Components

	U-G3FF	AS-Interface module mounting base for connection to flat cable (AS-Interface and external auxiliary power)
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Accessories

	VBP-HH1-V3.0-KIT	AS-Interface Handheld with accessory
	VAZ-PK-1,5M-V1-G	Adapter cable module/hand-held programming device