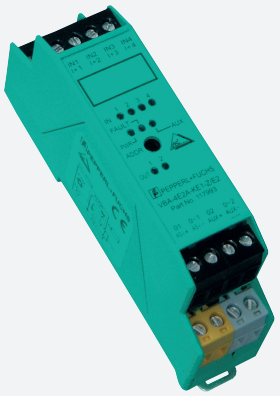


AS-Interface sensor/actuator module

VBA-4E2A-KE1-Z/E2

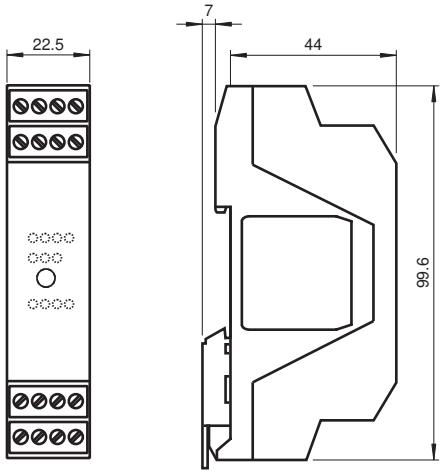
- A/B node with extended addressing possibility for up to 62 nodes
- Housing with removable terminals
- Communication monitoring
- Inputs for 2-wire sensors and mechanical contacts
- Addressing jack
- Power supply of outputs from the external auxiliary voltage
- Power supply of inputs from the module
- Function display for bus, ext. auxiliary voltage, inputs and outputs

KE1 switch cabinet module4 inputs and 2 outputs

Function

The VBA-4E2A-KE1-Z/E2 AS-interface coupling module is a cabinet module with 4 inputs and 2 electronic outputs. The housing, only 22.5 mm in width and 48.5 mm in height, takes up little place in the switch cabinet. The module is mounted by snapping onto the 35 mm DIN rail in accordance with EN 50022.
Plug-in terminals are used for connection. 4-way terminal blocks (black) are used for the inputs. The connection of the outputs and the external auxiliary supply and AS-Interface is made through the 2-way terminal blocks (outputs black, auxiliary voltage gray and AS-Interface yellow). This makes it possible to separate individual actuators or to supply power during commissioning or servicing.
The supply of the inputs and the connected sensors occurs internally via the module (from AS-Interface). An LED on the front control plate is used to display the current switching state for each input and output.
Note:
The device is equipped with a watchdog, which switches the outputs to their de-energized state, when on the AS-interface cable is no communication for more than 40 ms.
An overload of the outputs is reported by the 'periphery error' to the AS-Interface master. Communication over the AS-Interface remains in effect.

Dimensions



Technical Data

General specifications		
Node type		A/B node
AS-Interface specification		V2.1
Required gateway specification		≥ V2.1
Profile		S-7.A.0
IO code		7
ID code		A

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ID1 code		7
ID2 code		0
UL File Number		E223772
Indicators/operating means		
LED FAULT		error display; LED red red: communication error or address is 0 red flashing: overload of outputs
LED PWR		AS-Interface voltage; LED green
LED AUX		ext. auxiliary voltage U_{AUX}; LED green
LED IN		switching state (input); 4 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	≤ 25 mA (without sensors) / max. 60 mA
Protection class		III
Surge protection		U_{AUX}, U_{in}: Over voltage category III, safe isolated power supplies (PELV)
Input		
Number/Type		4 inputs for 2-wire sensors (PNP), DC or for mechanical contacts
Supply		from AS-Interface
Input current		≤ 8 mA (limited internally)
Switching point		according to DIN EN 61131-2 (Type 2)
0 (unattenuated)		≤ 2 mA
1 (attenuated)		≥ 4 mA
Signal delay		< 2 ms (input/AS-Interface)
Signal frequency		≤ 250 Hz
Output		
Number/Type		2 electronic outputs, PNP, overload and short-circuit proof
Supply		from external auxiliary voltage U_{AUX}
Voltage		≥ (U_{AUX} - 0.5 V)
Current		O1/O2 max. 1.5 A, total 3 A (T_B ≤ 40 °C) O1/O2 max. 1 A, total 2 A (T_B ≤ 70 °C)
Usage category		DC-13
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
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Relative humidity		90 % , noncondensing
Pollution degree		2
Mechanical specifications		
Degree of protection		IP20
Connection		removable terminals rated connection capacity: rigid/flexible (with and without wire-end ferrules): 0.25 mm² ... 2.5 mm² for multiple-wire connection with two wires of equal cross-section: flexible with twin wire-end ferrules: 0.5 mm² ... 1.5 mm²
Material		
Housing		PA 66-FR

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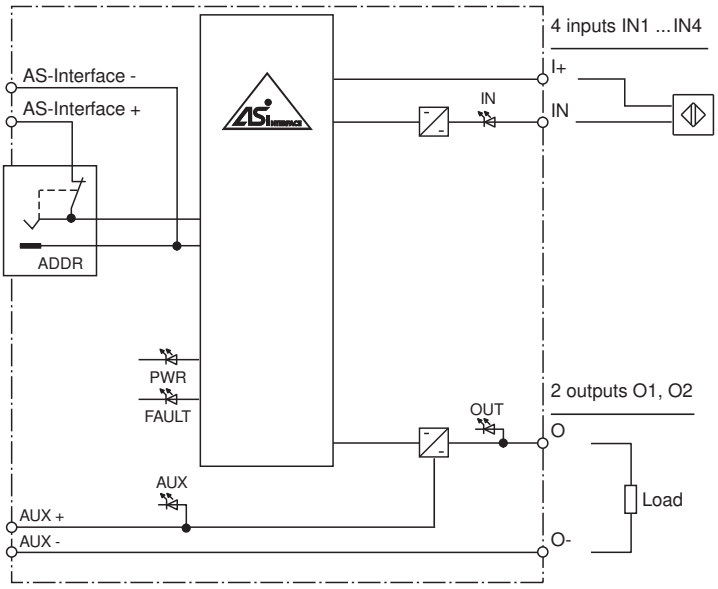
Mass	80 g
Mounting	DIN mounting rail

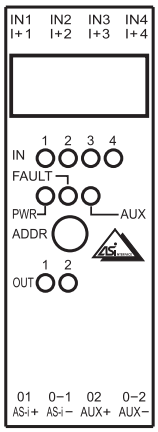
Connection



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



Programming

Data bits
(function via AS-Interface)

Data bits	Input	Output
D0	IN1	O1

Programming

Data bits	Input	Output
D1	IN2	O2
D2	IN3	-
D3	IN4	-

Parameter bits
(programmable via AS-Interface)

Parameter bit	Function
P0	Communication monitoring P0=0 monitoring off, the outputs maintain the status if communication fails P0=1 monitoring on, if communication fails, the outputs are deenergised, default setting
P1	Input filter P1=0 input filter on, pulse suppression ≤ 2 ms P1=1 input filter off, default setting
P2	Synchronous mode P2=0 Synchronous mode on P2=1 Synchronous mode off, default setting
P3	not used

Accessories

	**VBP-HH1-V3.0-KIT**	AS-Interface Handheld with accessory
	**VAZ-PK-1,5M-V1-G**	Adapter cable module/hand-held programming device
	**VAZ-CHAIN-BU/BN70MM/1,0-25**	25-point wiring link for control cabinet modules with screw terminals

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