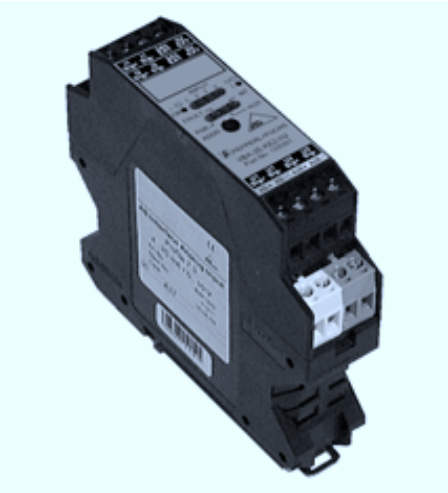


Spec 2.1

Model number

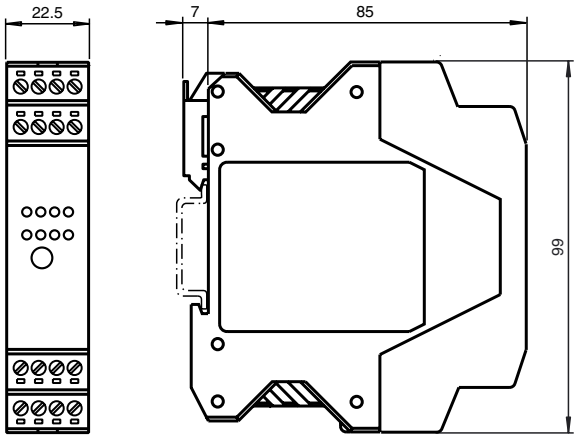
VBA-2A-KE2-I/U

KE control cabinet module
2 analog outputs

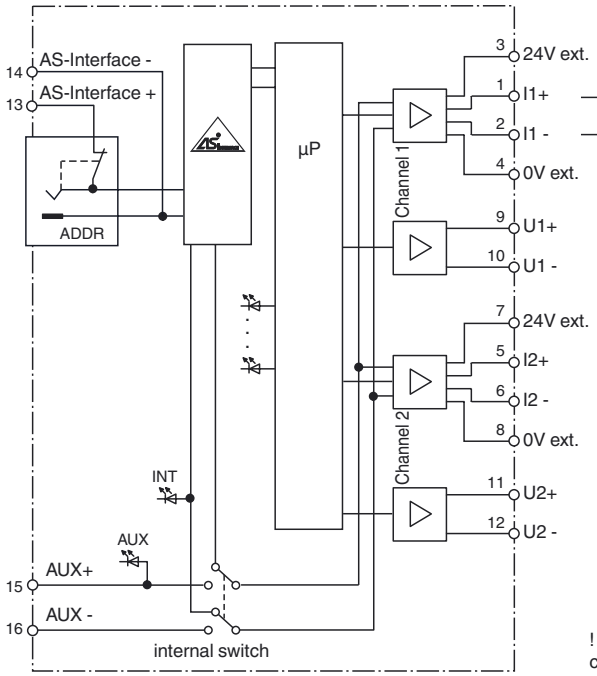
Features

- Housing with removable terminals
- Communication monitoring
- Addressing jack
- Function display for bus, external auxiliary voltage and outputs
- Power supply of outputs external or from the module, as required

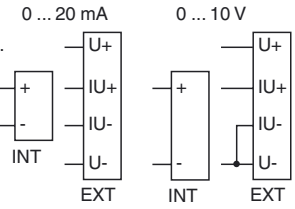
Dimensions



Electrical connection



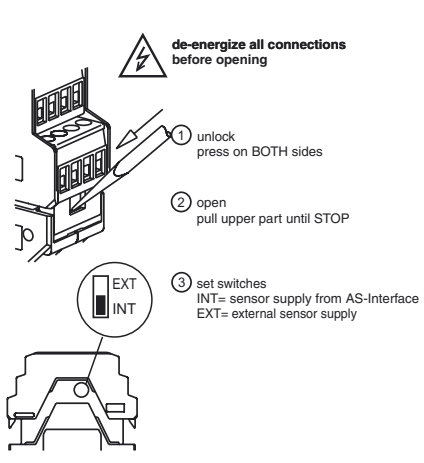
Connection example

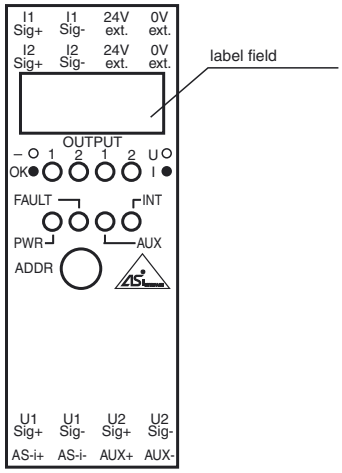


Connections	
1	I1 Sig. +
2	I1 Sig. -
3	24 V ext.
4	0 V ext.
5	I2 Sig. +
6	I2 Sig. -
7	24 V ext.
8	0 V ext.
9	U1 Sig. +
10	U1 Sig. -
11	U2 Sig. +
12	U2 Sig. -
13	AS-Interface +
14	AS-Interface -
15	AUX +
16	AUX -

! Output channels which are not connected must remain open and may not be bridged.

Indicating / Operating means





Release date: 2012-10-12 15:43 Date of issue: 2014-01-13 206360_eng.xml

Technical data

General specifications		
Slave type		Standard slave
AS-Interface specification		V3.0
Required master specification		≥ V2.1
UL File Number		E223772
Indicators/operating means		
LED FAULT		error display; LED red red: communication error red flashing: peripheral error or address 0
LED INT		Internal input supply active; LED green
LED PWR		AS-Interface voltage; LED green green: AS-Interface voltage OK green flashing: peripheral error or address 0
LED AUX		ext. auxiliary voltage U_{AUX} ; LED green
LED -/OK		Status of output signal; green LED off: not connected (current module only) to: Signal within value range flashing: Signal outside value range
LED U/I		Current or voltage module; LED green off: Voltage output on: Current output
Electrical specifications		
Auxiliary voltage (output)	U_{AUX}	24 V DC ± 15 % PELV (protection class 3 according to VDE 0106/IEC 364-4-41)
Insulation voltage	U_i	≥ 500 V
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	Supply via AS-Interface: ≤ 100 mA supply via AS-Interface and U_{AUX}: ≤ 120 mA
Output		
Number/Type		2 analog outputs Current: 4 ... 20 mA ± 0.5 % voltage: 0 ... 10 V ± 0.5 %
Open loop voltage	U_s	current output: max. 21 V (dependent on the supply voltage)
Supply		from AS-Interface or from external auxiliary voltage as required U_{AUX}
Load		voltage output: ≥ 1.2 kΩ current output: ≤ 600 Ω
Current loading capacity		≤ 150 mA (signal current + actuator supply) from AS-Interface; overload and short-circuit protected ≤ 500 mA (signal current + actuator supply) from external bulk power supply U_{AUX}, overload and short-circuit protected
Resolution		16 Bit / 1 µA (current module) or 16 bit / 1 mV (voltage module)
Short-circuit current		voltage output: ≤ 18 mA
Programming instructions		
Profile		S-7.3.5
IO code		7
ID code		3
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		P0=1: Automatic detection of module type P0=0: Manual adjustment of the module type with P1 and P3
P1		Programming channel 1 P1=1: Channel 1 current output P1=0: Channel 1 voltage output
P2		Message of peripheral error P2=1, peripheral error is reported P2=0, peripheral error is not reported
P3		Programming channel 2 P3=1: Channel 2 current output P3=0: Channel 2 voltage output
Ambient conditions		
Ambient temperature		0 ... 55 °C (32 ... 131 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications		
Protection degree		IP20
Connection		removable terminals rated connection capacity: rigid/flexible (with and without wire-end ferrules): 0.25 mm^2 ... 2.5 mm^2 for multiple-wire connection with two wires of equal cross-section: flexible with twin wire-end ferrules: 0.5 mm^2 ... 1.5 mm^2
Material		
Housing		PA 66-FR
Mass		350 g
Mounting		DIN mounting rail

Function

The VBA-2A-KE2-I/U analog module has two analog outputs onto which the actuators with current input (4 mA ... 20 mA) or voltage input (0 ... 10 V) can be connected. The module automatically recognises whether or not an actuator processing current or voltage is situated at the output. Accordingly, the type of module must be the same for each channel.
The voltage supply to the actuators takes place depending on the position of the internal slide switch, via the module (from the AS-Interface) or through an external voltage source. The choice of output supply is displayed by the INT and AUX LEDs.
The conversion of the measured value and data transmission take place asychronously according to AS-Interface Profile 7.3. The resolution of the analog values amounts to 16 Bit (1 µA and/or. 1 mV) with a value range from 0 ... 20000 (current module) and/or. 0 ... 10000 (voltage module). The 2nd channel can be switched off with a second slide switch.
The housing which is only 22.5 mm wide occupies only a little space in the switch cabinet. The module is mounted by snapping onto the 35-mm support rail in compliance with EN 50022.
The connection is made using pluggable terminal (COMBICON). Four-terminal blocks (black) are used for the outputs. The connection of the external bulk power and the AS Interface is made using 2-terminal blocks (bulk power grey, AS-Interface yellow). This enables easy separation of the individual actuators or the supply during commissioning or service.

Accessories

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

VBP-HH1-V3.0
AS-Interface Handheld

VAZ-PK-1,5M-V1-G
Adapter cable module/hand-held programming device

VBP-HH1-V3.0-V1
AS-Interface Handheld

Release date: 2012-10-12 15:43 Date of issue: 2014-01-13 206360_eng.xml

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 4411 fa-info@de.pepperl-fuchs.com
Singapore: +65 6779 9091 fa-info@sg.pepperl-fuchs.com
PEPPERL+FUCHS SENSING YOUR NEEDS

Compliance with standards and directives	
Directive conformity	
EMC Directive 2004/108/EC	EN 61000-6-2:2005, EN 61000-6-4:2007, EN 50295:1999
Standard conformity	
Noise immunity	EN 61000-6-2:2005, EN 50295:1999
Protection degree	EN 60529

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.

Release date: 2012-10-12 15:43 Date of issue: 2014-01-13 206360_eng.xml