Dimensions

118

18.7

4 73.5 34.5

Base is sold separately

60

36

Electrical connection

U_{AUX}

AS-Interface -
AS-Interface +

ADDR

4 IN1
1 AUX+
2 OUT1
3 AUX-
5 FE

Load

4 IN2
1 AUX+
2 OUT2
3 AUX-
5 FE

Load

4 IN3
1 AUX+
2 n.c.
3 AUX-
5 FE

PWR

FAULT

4 IN4
1 AUX+
2 n.c.
3 AUX-
5 FE

AUX

AUX+
AUX-

Functional ground (FE)
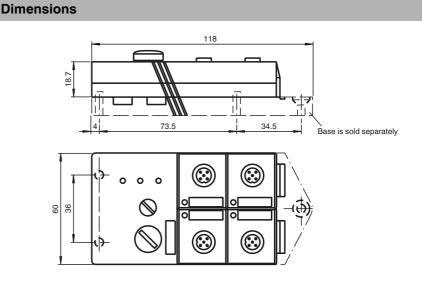Ground connection via mounting base

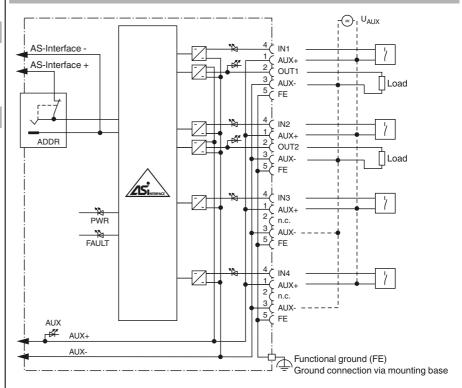## Model number

VBA-4E2A-G2-XE/E2

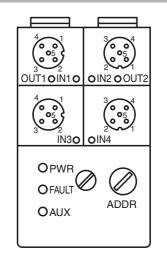G2 flat module
4 inputs and 2 electronic outputs

Features

- AS-Interface certificate

- Degree of protection IP67

- A/B slave with extended addressing possibility for up to 62 slaves

- Addressing jack

- Flat cable connection with cable piercing technique, variable flat cable guide

- Communication monitoring

- Inputs for 3-wire sensors (PNP) and mechanical contacts

- Power supply of the inputs and outputs from the external auxiliary voltage

- Ground connection (FE) possible

- Function display for bus, ext. auxiliary voltage, inputs and outputs

- Detection of output overload

Indicating / Operating means

OUT1 IN1 IN2 OUT2

IN3 IN4

PWR

FAULT

AUX

ADDR

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical data

General specifications

Slave type	A/B slave
AS-Interface specification	V2.1
Required master specification	$\geq$ 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 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	$\leq$ 30 mA
Protection class		III
Current loading capacity		2 A (I_{AUX})
Surge protection		U_{AUX}, U_{in}: Over voltage category III, safe isolated power supplies (PELV)

Input

Number/Type	4 inputs for mechanical contacts or 3-wire sensors (PNP), DC
Supply	from external auxiliary voltage U_{AUX}
Input current	3 mA (typically)
Switching point	according to DIN EN 61131-2 (type 1)
0 (unattenuated)	$\leq$ 0.5 mA
1 (attenuated)	$\geq$ 2 mA
Signal delay	< 2 ms (input/AS-Interface)
Signal frequency	$\leq$ 250 Hz

Output

Number/Type	2 electronic outputs, PNP, overload and short-circuit proof
Supply	from external auxiliary voltage U_{AUX}
Current	1 A per output , 2 A per module
Voltage	$\geq$ (U_{AUX} - 0.5 V)
Usage category	DC-13

Galvanic isolation

Input/Output	none
Input/AS-Interface	Basic insulation, rated insulation voltage 120 V DC
Output/AS-Interface	Basic insulation, rated insulation voltage 120 V DC

Directive conformity

Electromagnetic compatibility	observe notices on the certificate of conformity.
Directive 2014/30/EU	EN 62026-2:2013

Standard conformity

Galvanic isolation	EN 60947-1:2007
Degree of protection	EN 60529:2000
Mech. capacity	EN 60068-2-6:2008, EN 60068-2-27:1995
Input	EN 61131-2:2007
Usage category	EN 60947-5-1:2005
Emitted interference	EN 61000-6-4:2001
AS-Interface	EN 62026-2:2013
Noise immunity	EN 61326-1:2006

Programming instructions

Profile	S-7.A.E
IO code	7
ID code	A
ID1 code	7
ID2 code	E

Data bits (function via AS-Interface)	input	output
D0	IN1	O1
D1	IN2	O2
D2	IN3	-
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	$\leq$ 2000 m above MSL

Function

The VBA-4E2A-G2-XE/E2 is an AS-Interface I/O module with 4 inputs and 2 electronic outputs. Mechanical contacts (for example buttons) or 3-wire sensors (PNP) can be connected to the inputs. The outputs are electronic outputs designed for a load of 1 A per output. The sensors and actuators connected to the module input and output must receive power externally through an auxiliary power source.

The IP67 flat module is ideally suited for use in the field. An addressing socket is built into the module.

The connection to the sensors/actuators is made by a M12 x 1 rounded connector. An LED is available on the top of the module to display the current switching state for each channel. There is also an LED for monitoring AS-Interface communication and to display whether the module has 0 as an address. One LED indicates when the AS-Interface voltage is applied, while a second one indicates external power supply.

In the standard configuration, the base (mounting plate) of the U-G3FF is used to connect the yellow AS-Interface flat cable and the black flat cable of the external auxiliary power. This lower section allows for contact with the flat cable from both sides.

It is also possible to feed in the external auxiliary voltage with the M12 x 1 rounded connectors. In this case, the seal included in the base of the U-G3FF should be placed in the cage for the black flat cable to ensure protection type IP67.

The device includes communication monitoring, which switches power off to the outputs if no communication takes place on the AS-Interface line for more than 40 ms.

An output overload is reported by the "periphery error" to the AS-Interface master. Communication over the AS-Interface remains in effect.

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

VAZ-FK-ED-G2
AS-Interface end seal for G2 modules

Matching system components

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

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	approx. 100 g
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

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.

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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