



AS-Interface sensor module VBA-4E-G11-ZAJ-F

- Inputs for 2-, 3-, and 4-wire sensors
- Supply of sensors from AS-Interface
- Function display for bus and inputs
- Degree of protection IP68 / IP69K
- Communication monitoring
- Cable piercing method with gold plated contact pins
- AS-Interface POWER24

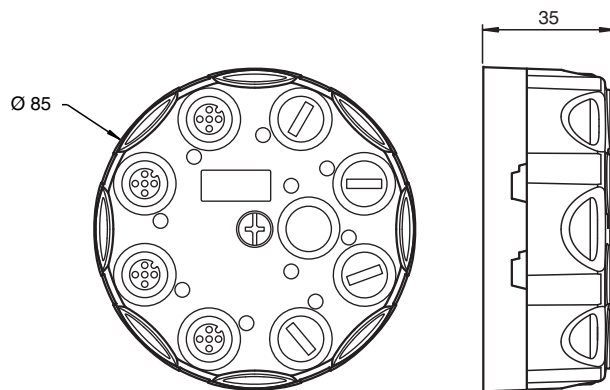
G11 module4 inputs



Function

The VBA-4E-G11-ZAJ-F is an AS-Interface switch-on module with 4 inputs. 2, 3 and 4 wire sensors can also be connected as mechanical contacts to the 4 sourcing electronic inputs. The housing with a central screw enables fast mounting on the base plate. The connection to the sensors is via an M12x1 plug-in connection on the top side of the device. The AS-Interface flat cable and external energy supply are connected via the insulation piercing technology on the underside of the module. The inputs and the connected sensors are powered by the internal supply of the module (from the AS-Interface). The current switching state of each input is indicated via an IN LED. The AS-i/FAULT LED indicates the status of the AS-Interface (normal operation, communication error, peripheral fault, address 0). The switch-on module is compatible with AS-Interface POWER24.

Dimensions



Technical Data

General specifications

Node type	A/B node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.1
Profile	S-0.A.2
IO code	0
ID code	A
ID1 code	7
ID2 code	2
UL File Number	E223772

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 1111
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

Technical Data

Functional safety related parameters

MTTF _d	120 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

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: sensor supply overload
LED IN	switching state (input); 4 LED yellow

Electrical specifications

Rated operating voltage	U _e	18,0 ... 31.6 V from AS-Interface
Rated operating current	I _e	≤ 40 mA (without sensors) / max. 240 mA
Protection class		III
Surge protection		U _e : Over voltage category III, safe isolated power supplies (PELV)

Input

Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC option 2 inputs for 4-wire sensors (PNP), DC
Supply	from AS-Interface
Voltage	12 ... 31 V
Current loading capacity	≤ 200 mA, overload and short-circuit protected
Input current	≤ 9 mA (limited internally)
Switching point	according to DIN EN 61131-2 (Type 2)
0 (unattenuated)	≤ 3 mA
1 (attenuated)	≥ 5 mA
Signal delay	< 1 ms (input/AS-Interface)

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 62026-2:2013 EN 61000-6-2:2005, EN 61000-6-4:2007

Standard conformity

Degree of protection	EN 60529:2000
Fieldbus standard	EN 62026-2:2013
Input	EN 61131-2:2007
Emitted interference	EN 61000-6-4:2007
AS-Interface	EN 62026-2:2013
Noise immunity	EN 61000-6-2:2005, EN 61326-1:2006, EN 62026-2:2013

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
Shock and impact resistance	30 g, 11 ms in 6 spatial directions 3 shocks 10 g, 16 ms in 6 spatial directions 1000 shocks
Vibration resistance	0.75 mm 10 ... 57 Hz , 5 g 57 ... 150 Hz, 20 cycles
Pollution degree	3

Mechanical specifications

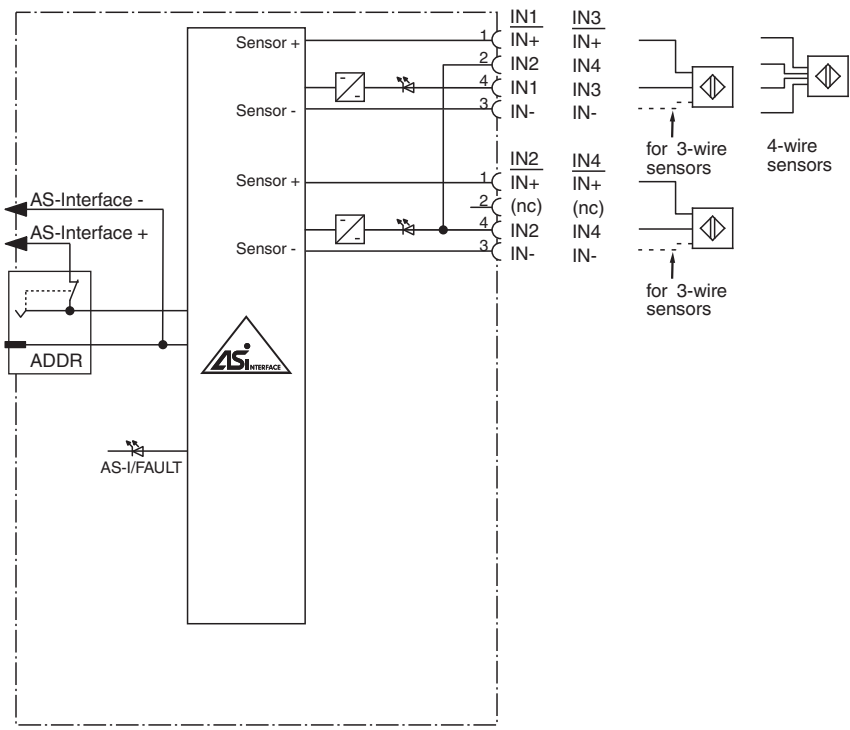
Degree of protection	IP68 / IP69K
Connection	AS-Interface: AS-Interface flat cable Inputs: M12 round connector
Material	
Housing	PBT PC
Mounting screw	Stainless steel 1.4305 / AISI 303
Mass	200 g
Tightening torque, housing screws	1.8 Nm

Release date: 2021-07-20 Date of issue: 2021-07-20 Filename: 220207_eng.pdf

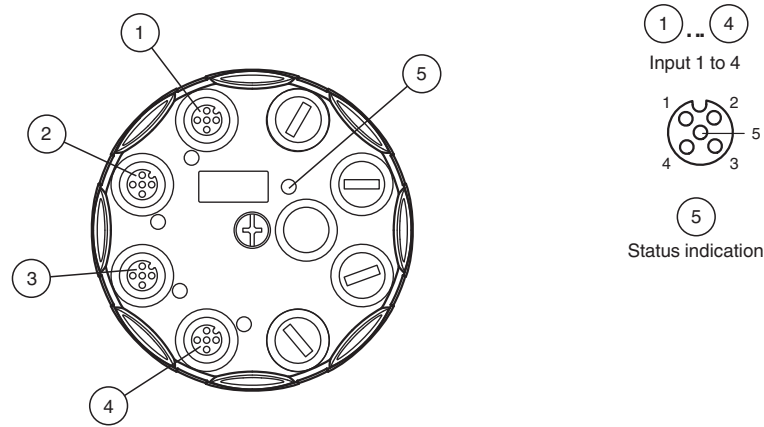
Technical Data

Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

Connection

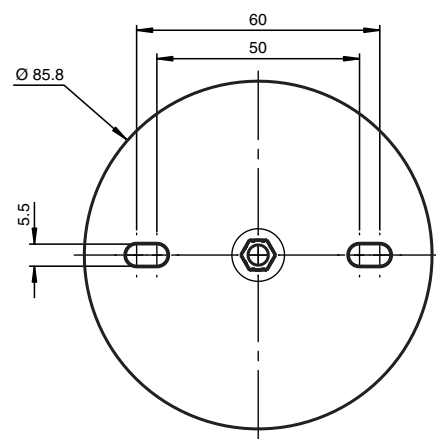


Assembly



Release date: 2021-07-20 Date of issue: 2021-07-20 Filename: 220207_eng.pdf

Mounting



Screw the device onto a level mounting surface using two M5 attachment screws. The attachment screws are not included. Screw a blind plug onto spare connections to ensure the protection category.

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.

Programming

Data bits
(Function via AS-Interface)

Data bit	Input	Output
D0	IN1	-
D1	IN2	-
D2	IN3	-
D3	IN4	-

Parameter bit
(programmable via AS-Interface)

Parameter bit	Function
P0	not used
P1	Input filter P1=0 filter on, pulse suppr. ≤ 2 ms P1=1 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-V1-B3	Blind plug for M12 sockets
	VAZ-PK-1,5M-V1-G	Adapter cable module/hand-held programming device

Release date: 2021-07-20 Date of issue: 2021-07-20 Filename: 220207_eng.pdf