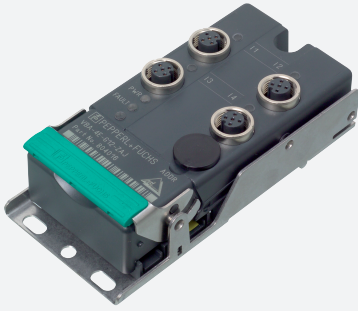# AS-Interface sensor module
VBA-4E-G12-ZAJ

- A/B node with extended addressing possibility for up to 62 nodes
- One-piece housing with stainless steel base
- Installation without tools
- Metal threaded inserts with SPEEDCON technology
- Flat cable connection with cable piercing technique, variable flat cable guide
- Communication monitoring
- Inputs for 2-, 3-, and 4-wire sensors
- DIN rail mounting
- AS-Interface certificate

G12 flat module, 4 inputs (PNP)

Function

The VBA-4E-G12-Z*J is an AS-Interface trigger module with 4 inputs. 2- and 3-wire sensors as well as mechanical contacts can be connected to the plus switching electronic inputs.
The solid housing permits fast mounting without tools as well as easy removal without tools. The stainless steel shell and the cast housing ensure durability and a high protection category.
The connection to the AS-Interface cable is achieved via penetration technology in the integrated flat cable. The insert for the flat cables can be turned in two orientations.
All connections to inputs are implemented via metal inserts for high stability. The connection to the sensors is achieved via a M12 x 1 circular connector with SPEEDCON quick locking option.
The inputs and the connected sensors are supplied via the internal power supply of the module (from AS-Interface).
To indicate the current switching state there is an LED for each channel fitted to the top of the module.
An LED to indicate the AS-Interface voltage and that the module has an address of 0 is available, another indicates errors in the AS-Interface communication as well as periphery faults.
This module can be mounted in any position using three screws or can be snapped onto the DIN rail using the stainless steel holder.

Application

For 4-wire sensors, it is only possible to use plug-in slot IN1 or IN3 for inputs 1+2 or 3+4 (jumpered internally).

Dimensions
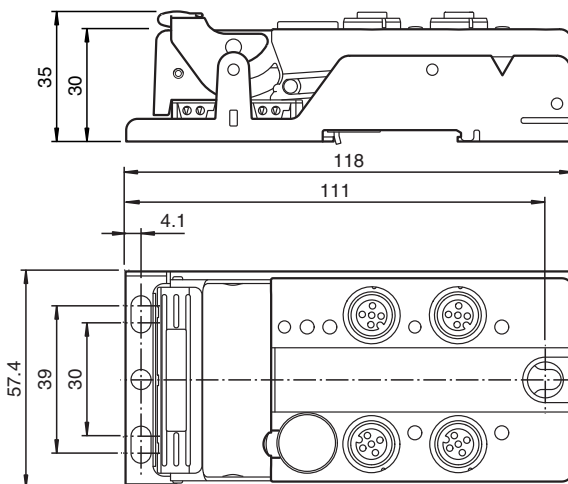
Technical Data

General specifications

Node type	A/B node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.1

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
1

Technical Data

|		
Profile		S-0.A.2
IO code		0
ID code		A
ID1 code		7
ID2 code		2
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 supply
LED PWR		AS-Interface voltage; green LED green: voltage OK flashing green: address 0
LED IN		switching state (input); 4 LED yellow
Electrical specifications		
Rated operating voltage	U_e	26.5 ... 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) derived from mains up to 300 V AC line-to-neutral
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		21 ... 31 V
Current loading capacity		≤ 200 mA, overload 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)		≥ 6 mA
Signal delay		< 1 ms (input/AS-Interface)
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013
Standard conformity		
Degree of protection		EN 60529:2000
Fieldbus standard		EN 62026-2:2013
Input		EN 61131-2
Emitted interference		EN 61000-6-4:2007
AS-Interface		EN 62026-2:2013
Noise immunity		EN 61000-6-2:2005 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
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		IP67
Connection		cable piercing method flat cable yellow inputs: M12 round connector
Material		

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

2

Technical Data

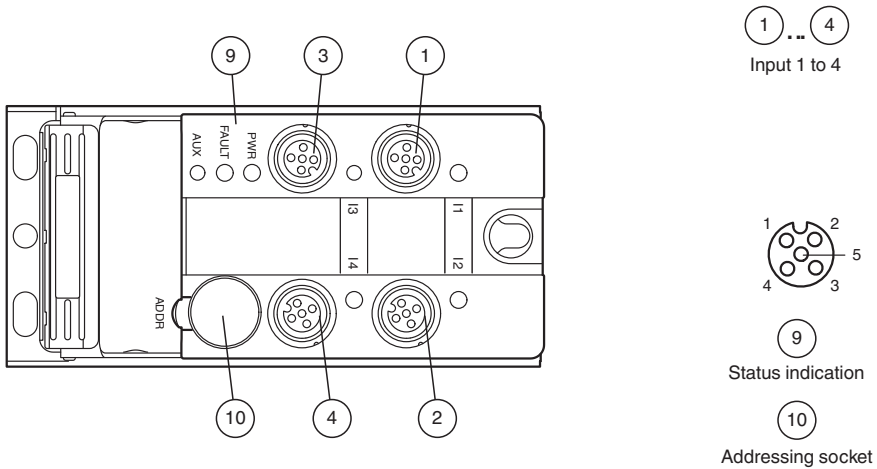| Housing	PBT
Mass	200 g
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

Connection
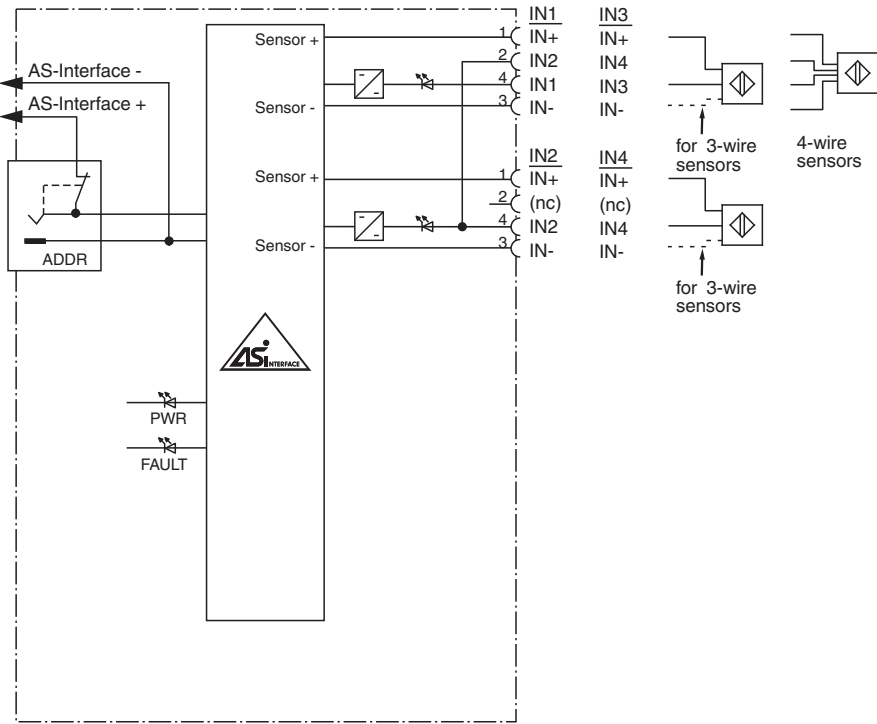
Connection

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

Input 1 to 4

Status indication

Addressing socket

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 | 3

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
	VAZ-CLIP-G12	lock for G12 module

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

Pepperl+Fuchs Group   USA: +1 330 486 0001   Germany: +49 621 776 1111   Singapore: +65 6779 9091
www.pepperl-fuchs.com   fa-info@us.pepperl-fuchs.com   fa-info@de.pepperl-fuchs.com   fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

4