

AS-Interface sensor module

VBA-4E-G16-ZEJ



- Compact design
- Connections via round connector
- AS-Interface connection via M12 metal threaded insert with SPEEDCON
- Function display for bus and inputs
- Degree of protection IP67 / IP68 / IP69K
- Inputs for 2- and 3-wire sensors
- Supply for inputs from AS-Interface
- Communication monitoring
- Detection of overload on sensor supply

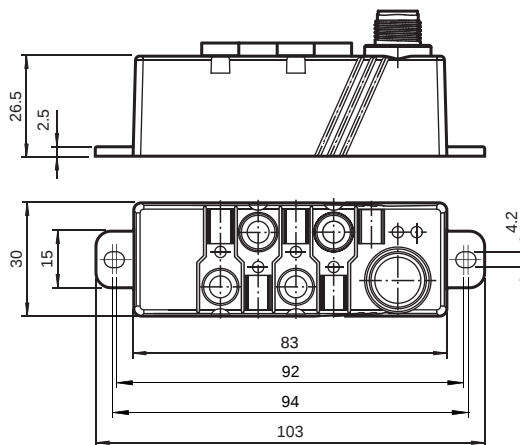
G16 compact module 4 inputs (PNP)



Function

The VBA-4E-G16-ZEJ is an AS-Interface compact module with 4 inputs. 2- and 3-wire sensors as well as mechanical contacts can be connected to the plus switching electronic inputs. The particularly slim design with 30 mm is ideally suited for the common profile widths with simple sliding block mounting or screw fitting in narrow shafts. To guarantee the protection category the electronics is compound-filled. All module connections are implemented with metal inserts for high stability. The connection to the AS-Interface cable is achieved via a M12 x 1 circular connector with SPEEDCON quick locking option. The advantage of the plug-connection is that no separate base is required. For addressing a standard cable with M12 x 1 screw connections can also be used. The connections to the sensors are made via M8 x 1 screw connections. 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, to monitor the AS-Interface communication, and to indicate that the module has an address of 0, is also available. The module can be fitted in any position using two screws.

Dimensions



Technical Data

General specifications	
Node type	A/B node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.1
Profile	S-0.A.0
IO code	0
ID code	A

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

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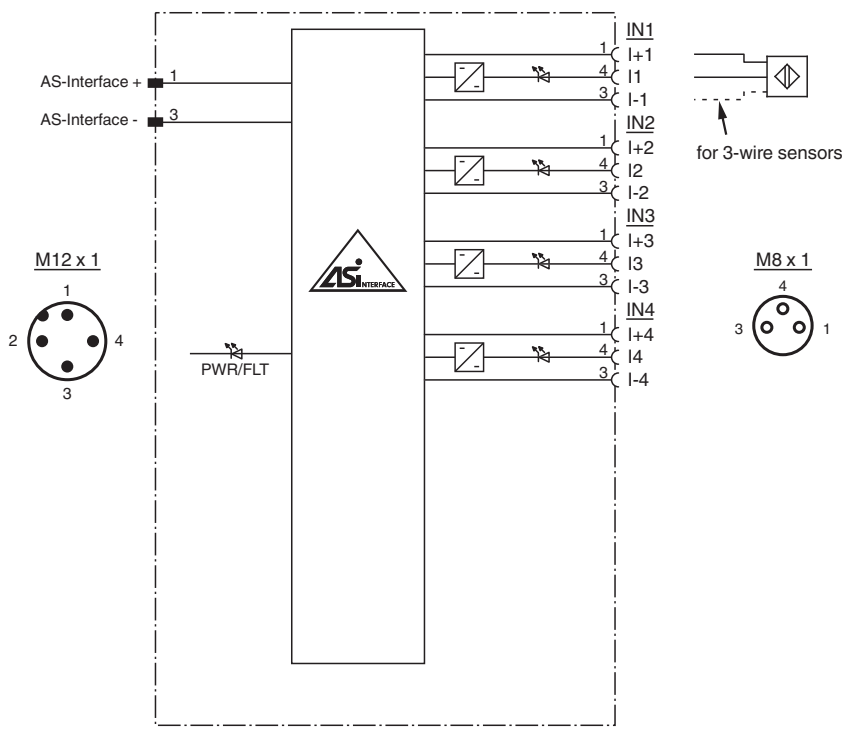
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Technical Data

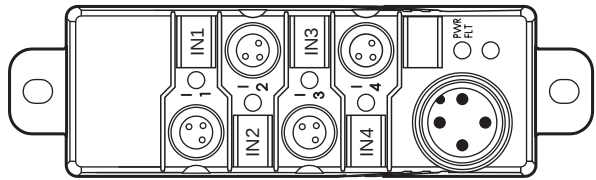
ID1 code		7
ID2 code		0
UL File Number		E223772
Indicators/operating means		
LED PWR/FAULT		Status display; multi-colour LED Green: normal operation Red: communication fault Flashing yellow/red: address 0 Flashing green/red: sensor supply overload
LED IN		switching state (input); 4 LED yellow
Electrical specifications		
Rated operating voltage	U_e	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)
Input		
Number/Type		4 inputs for 2- or 3-wire sensors (PNP), DC
Supply		from AS-Interface
Voltage		21 ... 31 V
Current loading capacity		≤ 200 mA ($T_B \leq 40^\circ\text{C}$), ≤ 150 mA ($T_B \leq 70^\circ\text{C}$), overload-proof 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
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
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		IP67 / IP68 / IP69k
Connection		AS-Interface: M12 x 1 quick disconnect actuators: M8 x 1 quick disconnect
Material		
Housing		PBT
Mass		100 g
Tightening torque, cable gland		0.4 Nm (M12 connector), 0.2 Nm (M8 connector)
Mounting		screw mounting

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Connection



Assembly



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

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Programming

Parameter bit	Function
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-T1-FK-0,3M-PUR-V1-G	Splitter box AS-Interface to 1x M12 round connector
	VAZ-V3-B	Blind plug for M8 sockets