

AS-Interface sensor/actuator module VBA-1E1A-G10-ZAL/E2L-1M-2V3-G



- Ultra-compact enclosure
- Gold-plated and machined contacts
- One piece housing
- Degree of protection IP68 / IP69K
- Direct connection via cable outlet

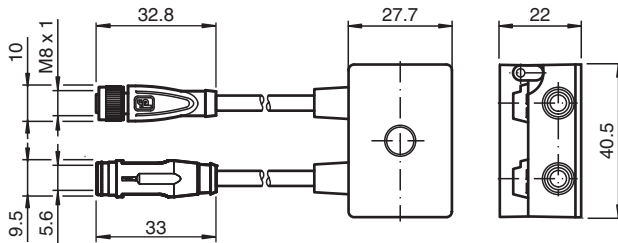
G10 ultra-compact module 1 input and 1 output



Function

The AS-Interface G10 ultra-compact module is suitable for the remote connection of sensors and actuators within very limited space. The one-piece enclosure has the protection degree IP68/IP69K. The AS-Interface flat cable is contacted via pointy, gold-plated contact pins. The exact location of the pins on the lead is ensured by the swivel mechanism. Sensors and actuators are connected to the module via M8 sockets. Multiple LEDs indicate the current status of the AS-Interface strand and the inputs and outputs and are used for diagnosis. The ultra-compact module is powered from UAUX.

Dimensions



Technical Data

General specifications	
Node type	A/B node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.1
UL File Number	E223772 "For use in NFPA 79 Applications only"
Indicators/operating means	
LED FAULT	error display; LED red red: communication error or address is 0 red flashing: overload of sensor power supply or overload of outputs or external auxiliary voltage U_{AUX} missing
LED AS-i	AS-Interface voltage; LED green
LED IN	switching state (input); LED yellow

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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

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Technical Data

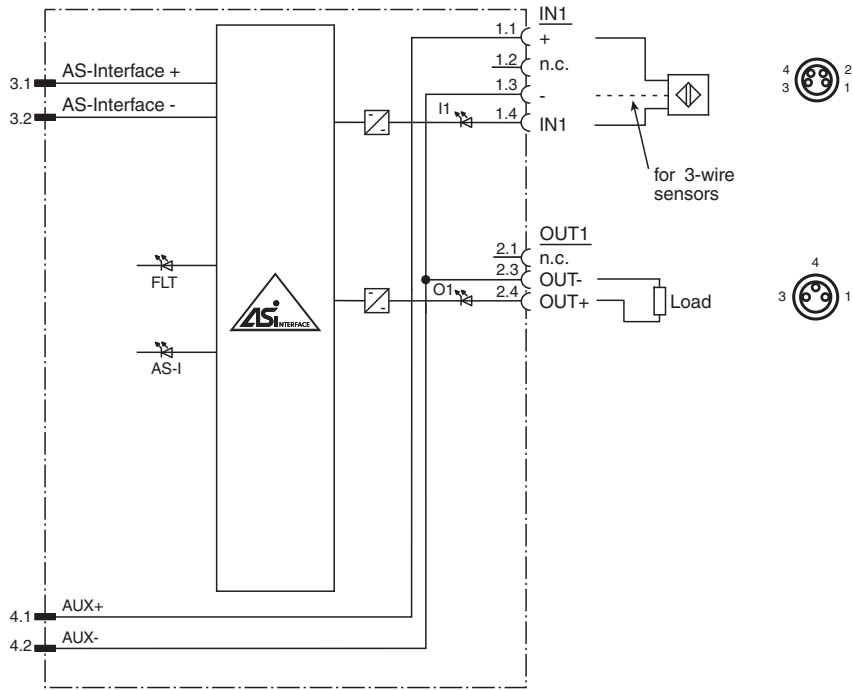
LED OUT	Switching state (output); LED yellow	
Electrical specifications		
Auxiliary voltage	U_{AUX}	20 ... 30 V DC PELV
Rated operating voltage	U_e	18.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 40 mA
Protection class		III
Surge protection	U_{AUX} , U_{in} : Over voltage category III, safe isolated power supplies (PELV)	
Input		
Number/Type	1 input for 2- or 3- wire sensors (PNP), DC	
Supply	from external auxiliary voltage U_{AUX}	
Voltage	20 ... 30 V	
Current loading capacity	≤ 1000 mA overload and short-circuit resistant	
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)	
Output		
Number/Type	1 electronic output, PNP,	
Supply	from external auxiliary voltage U_{AUX}	
Voltage	≥ (U_{AUX} - 0.5 V)	
Current loading capacity	≤ 1000 mA overload and short-circuit resistant	
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 61131-2:2007	
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	
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)	InputOutput	
D0	IN1 O1	
D1	- -	
D2	- -	
D3	- -	
Parameter bits (programmable via AS-i)	function	
P0	communication monitoring P0 = 1 (default settings), monitoring = ON, i.e. if communication fails, the outputs are de-energised P0 = 0, monitoring = OFF, if communication fails, the outputs maintain their condition	
P1	Input filter P1 = 0 input filter on, pulse suppression ≤ 2 ms P1 = 1 input filter off (default settings)	
P2	Synchronous mode P2 = 0 synchronous mode on P2 = 1 synchronous mode off (default settings)	
P3	not used	
Approvals and certificates		

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UL approval		cULus Listed, Type 1 enclosure
Maximum permissible ambient temperature		max. 65 °C (max. 149 °F)
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
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
Mechanical specifications		
Degree of protection		IP67 IP67 / IP68 / IP69K with flat cable VAZ-FK-S*
Connection		AS-Interface, AUX: Insulation piercing technology Yellow flat cable/black flat cable Inputs/outputs: M8 round plug connector in accordance with EN 61076-2-104 Inputs: LF004-GS1-A (4-pin, bushing contacts, screw lock, A-coded) Matching connector: LM004-Gx1-A or similar Outputs: NF003-SS1-A (3-pin, bushing contacts, snap lock, A-coded) Matching connector: NM003-Sx1-A or similar
Material		
Contacts		CuSn / Au
Housing		PBT PC
Body		PUR, black TPU, gray
Cable		PUR
Mounting screw		Stainless steel 1.4305 / AISI 303
Cable		
Sheath diameter		Ø4,3 mm
Color		black
Cores		3 x 0.34 mm ²
Length	L	1 m
Mass		100 g
Tightening torque, fastening screws		1.65 Nm
Tightening torque, cable gland		0.4 Nm

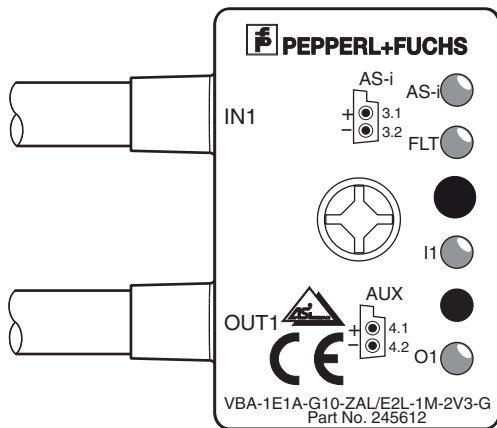
Connection



Connection

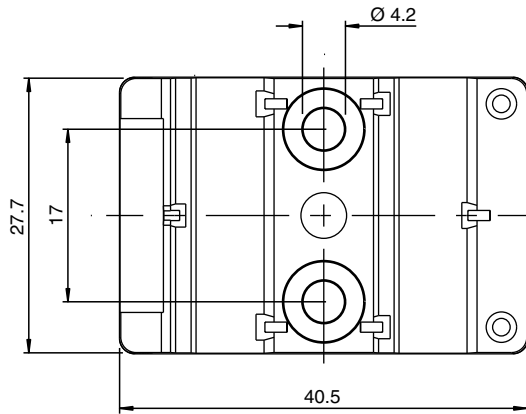
Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

Assembly



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Mounting



You may screw the device onto a level mounting surface using two M4 attachment screws. The attachment screws are not included.

Accessories

	<p>VAZ-PK-FK-0,2M-V1-W</p>	<p>Adapter cable G10 module/hand-held programming device</p>
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