



# 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

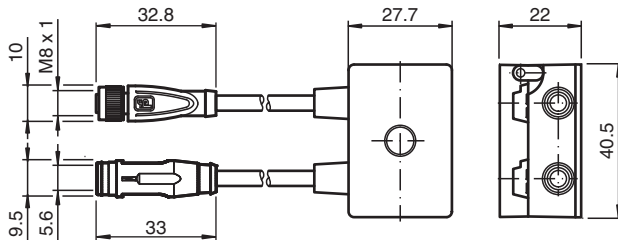
G10 ultra-compact module 1 input and 1 output



## 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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## Technical Data

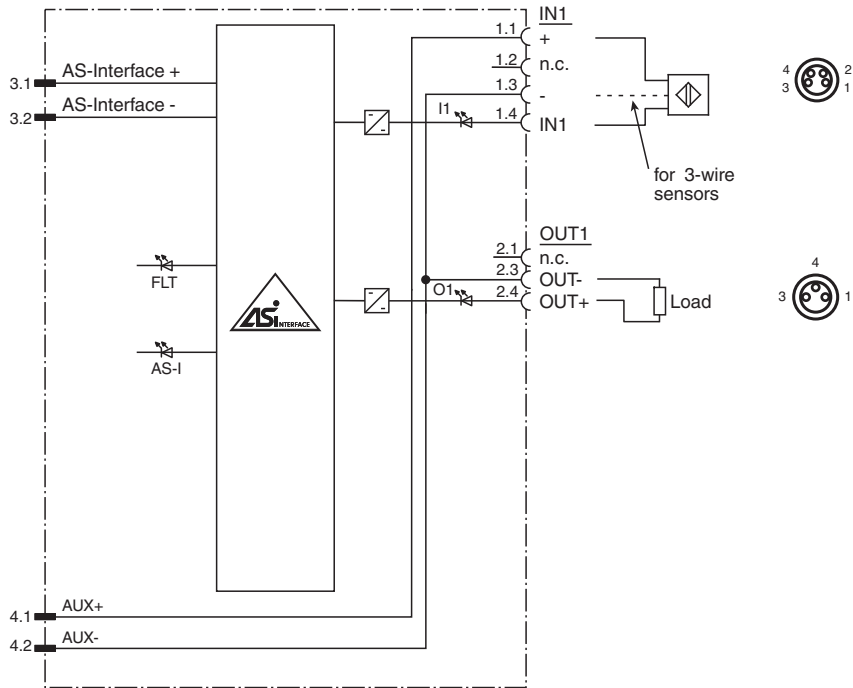
LED OUT	Switching state (output); LED yellow	
<b>Electrical specifications</b>		
Auxiliary voltage	$U_{AUX}$	20 ... 30 V DC PELV
Rated operating voltage	$U_e$	18.5 ... 31.6 V from AS-Interface
Rated operating current	$I_e$	≤ 40 mA
Protection class		III
Surge protection	$U_{AUX}$ , $U_{in}$ : Over voltage category III, safe isolated power supplies (PELV)	
<b>Input</b>		
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)	
<b>Output</b>		
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	
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU	EN 62026-2:2013	
<b>Standard conformity</b>		
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	
<b>Programming instructions</b>		
Profile	S-7.A.E	
IO code	7	
ID code	A	
ID1 code	7	
ID2 code	E	
<b>Data bits</b> (function via AS-Interface)	<b>InputOutput</b>	
D0	IN1 O1	
D1	- -	
D2	- -	
D3	- -	
<b>Parameter bits</b> (programmable via AS-i)	<b>function</b>	
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	
<b>Approvals and certificates</b>		

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

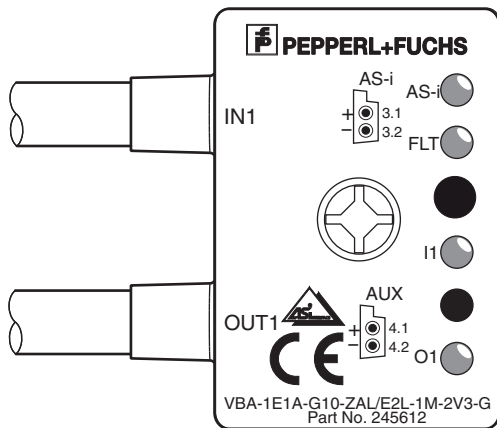
**Connection**



**Connection**

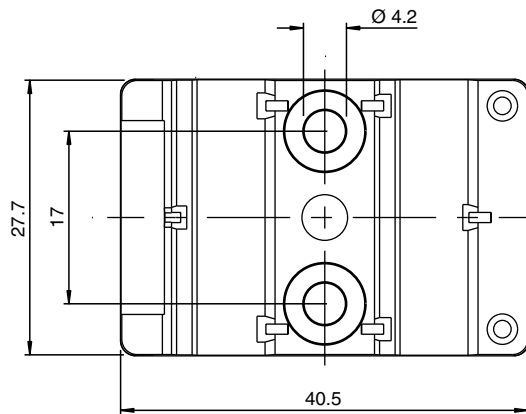
Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

**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

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