

AS-Interface sensor/actuator module

VBA-2E1A-G10-ZAL/E2L-P1



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

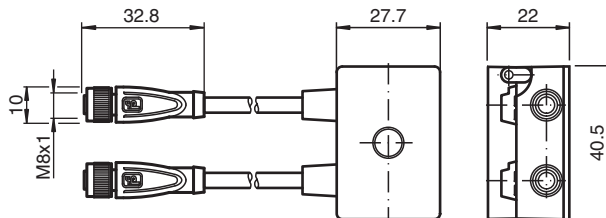
G10 ultra compact module 2 inputs and 1 output



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); 2 LED yellow

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

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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	2 inputs for 2- or 3-wire sensors (PNP), DC option 1 input for 4-wire sensor (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 61000-6-4:2011
AS-Interface		EN 62026-2:2013
Noise immunity		EN 61000-6-2:2005 , 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		IN2 -
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

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Technical Data

Approvals and certificates

UL approval	cULus Listed, Type 1 enclosure
Maximum permissible ambient temperature	max. 65 °C (max. 149 °F)

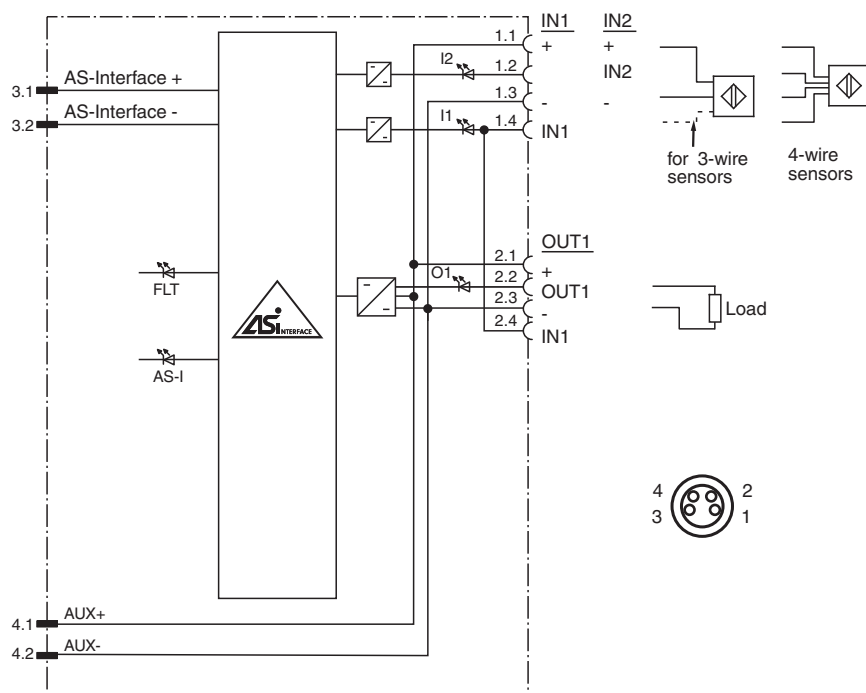
Ambient conditions

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/U _{AUX} : AS-Interface flat cable In-/outputs & matching connector: M8 round connector, 4-pin, A-coded, according to IEC 61076-2-104
Material	
Contacts	CuSn / Au
Housing	PBT PC
Body	PUR, black
Cable	PUR
Mounting screw	Stainless steel 1.4305 / AISI 303
Cable	
Sheath diameter	Ø4,3 mm
Color	black
Cores	4 x 0.34 mm ²
Length	L 0.35 m
Mass	100 g
Tightening torque, fastening screws	1.65 Nm
Tightening torque, cable gland	0.4 Nm

Connection



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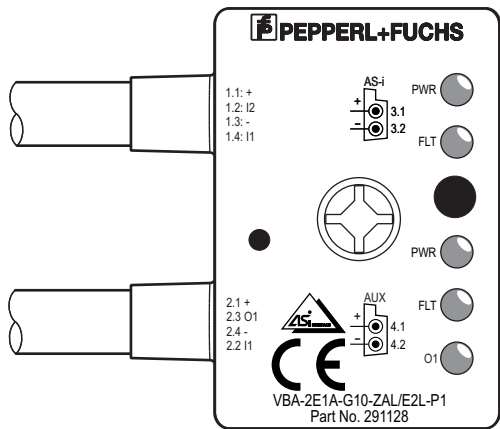
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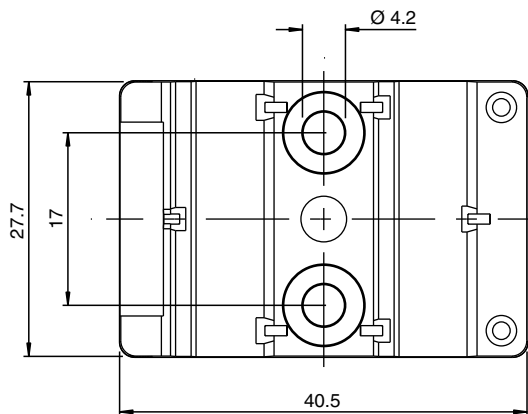
Connection

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



Mounting



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

Accessories

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