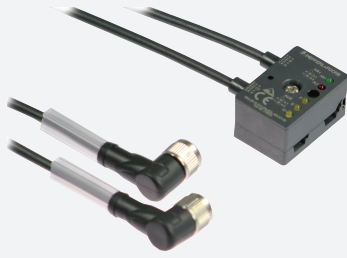


AS-Interface sensor/actuator module

VBA-2E1A-G10-ZAL/E2L-1M-2V1-W



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

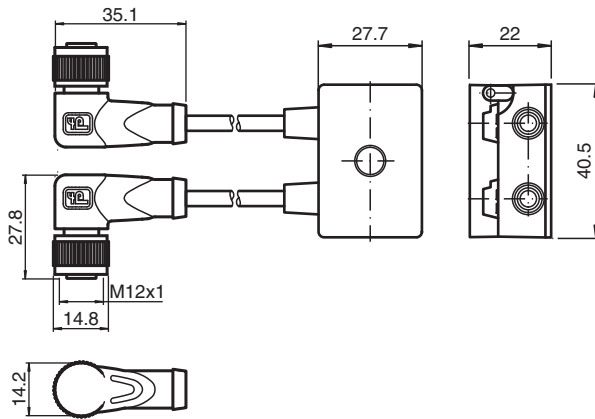
G10 ultra compact module, 2 inputs and 1 output



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 M12 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
Profile	S-7.A.E
IO code	7
ID code	A
ID1 code	7
ID2 code	E
UL File Number	E223772 "For use in NFPA 79 Applications only"

Indicators/operating means

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

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PF PEPPERL+FUCHS

Technical Data

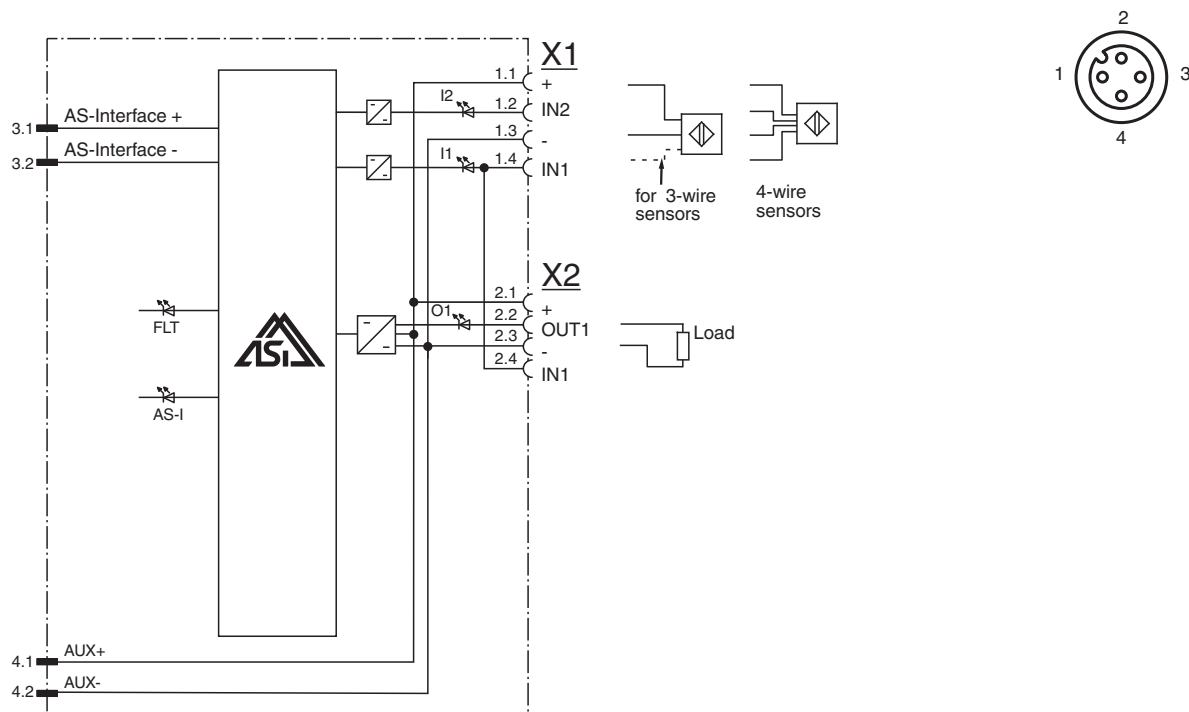
LED FAULT		error display; LED red red: communication error or address is 0 red flashing: overload of sensor power supply or overload of outputs or external auxiliary voltage U_{AUX} missing
LED AS-i		AS-Interface voltage; LED green
LED IN		switching state (input); 2 LED yellow
LED OUT		Switching state (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 61000-6-4:2007
AS-Interface		EN 62026-2:2013
Noise immunity		EN 61000-6-2:2005, EN 61326-1:2006, EN 62026-2:2013
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		housing: IP67 IP67 / IP68 / IP69K with flat cable VAZ-FK-S- M12 socket: IP67/IP68/IP69K
Connection		AS-Interface/ U_{AUX} : AS-Interface flat cable In-/outputs & matching connector: X1 & X2, M12 plug, 4-pin, A-coded, in accordance with IEC 61076-2-101:2012
Material		

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Technical Data

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	1 m
Mass		100 g
Tightening torque, fastening screws		1.65 Nm
Tightening torque, cable gland		0.4 Nm

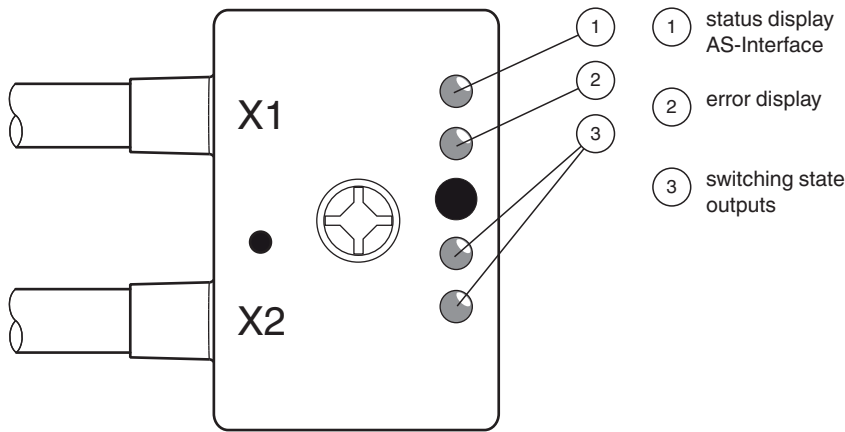
Connection



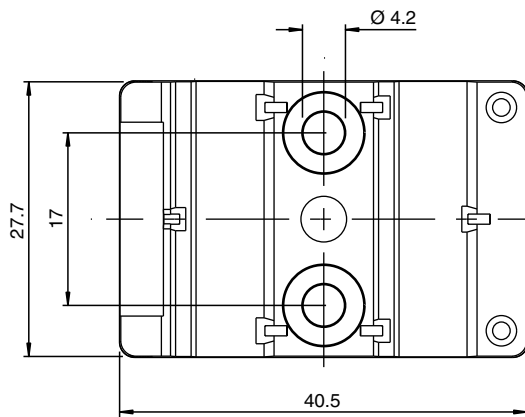
Connection

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



Mounting



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

Programming

Data bits
(function via AS-Interface)

Data bit	Input	Output
D0	IN1	OUT1
D1	IN2	-
D2	-	-
D3	-	-


Parameter bits
(programmable via AS-Interface)

Parameter bit	Function
P0	Communication monitoring P0=0 monitoring off, the outputs maintain the status if communication fails P0=1 monitoring on, if communication fails, the outputs are deenergised, default setting
P1	Input filter P1=0 input filter on, pulse suppression ≤ 2 ms P1=1 input filter off, default setting
P2	Synchronous mode P2=0 Synchronous mode on P2=1 Synchronous mode off, default setting
P3	not used

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Programming

Accessories

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