

AS-Interface sensor module

VBA-2E-G10-ZAJ-1M-V1-W



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

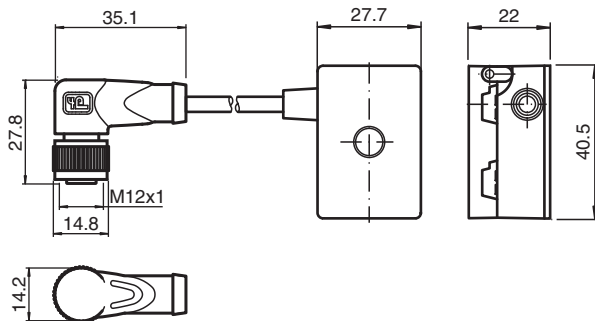
G10 ultra compact module, 2 inputs, 1 x M12 socket



Function

The AS-Interface G10 ultra-compact module is suitable for the remote connection of sensors 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 are connected to the module via M12 sockets. Multiple LEDs indicate the current status of the AS-Interface strand and the inputs and are used for diagnosis. The ultra-compact module is powered from the AS-Interface strand.

Dimensions



Technical Data

General specifications

Node type	A/B node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.0
Profile	S-0.A.2
IO code	0
ID code	A
ID1 code	7
ID2 code	2
UL File Number	E223772 "For use in NFPA 79 Applications only"

Indicators/operating means

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 221247_eng.pdf

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

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Technical Data

LED FAULT		error display; LED red red: communication error or address is 0 red flashing: overload of sensor power supply or outputs
LED AS-i		AS-Interface voltage; LED green
LED IN		switching state (input); 2 LED yellow
Electrical specifications		
Rated operating voltage	U_e	18.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 40 mA (without sensors) / max. 120 mA
Protection class		III
Input		
Number/Type		2 inputs for 2- or 3-wire sensors (PNP), DC option 1 input for 4-wire sensor (PNP), DC
Supply		from AS-Interface
Voltage		21 ... 31 V
Current loading capacity		75 mA at TB ≤ 40 °C (104 °F) 60 mA at TB ≤ 75 °C (167 °F) 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)
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		IP67 IP67 / IP68 / IP69K with flat cable VAZ-FK-S-*
Connection		AS-Interface: AS-Interface flat cable Inputs & matching connector: M12 round connector, 4-pin, A-coded, according to IEC 61076-2-101:2012
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

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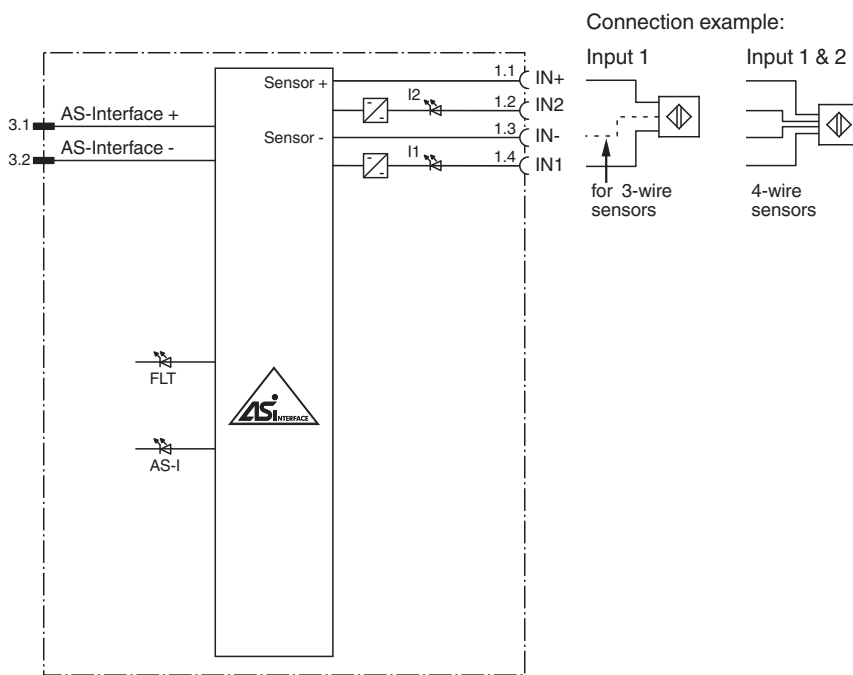
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Technical Data

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

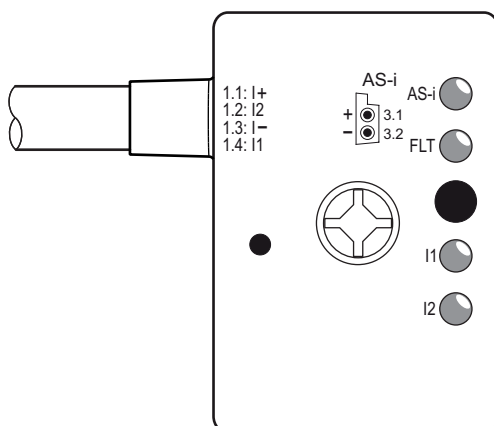
Connection



Connection

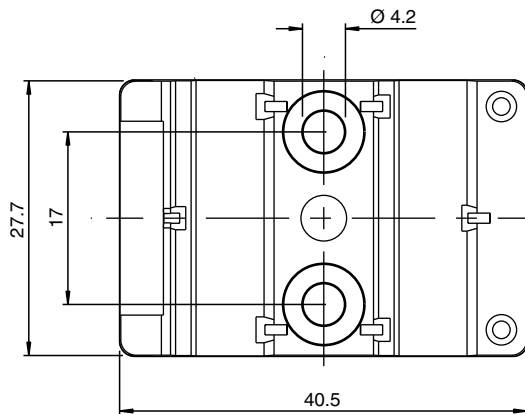
Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

Assembly



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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.

Programming

Data bits

(Function via AS-Interface)


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

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
P2	Synchronous mode P2=0 Synchronous mode on P2=1 Synchronous mode off, default setting
P3	not used

Accessories

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