

# AS-Interface sensor module

## VBA-2E-G10-ZEJ-1M-2V1-W



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

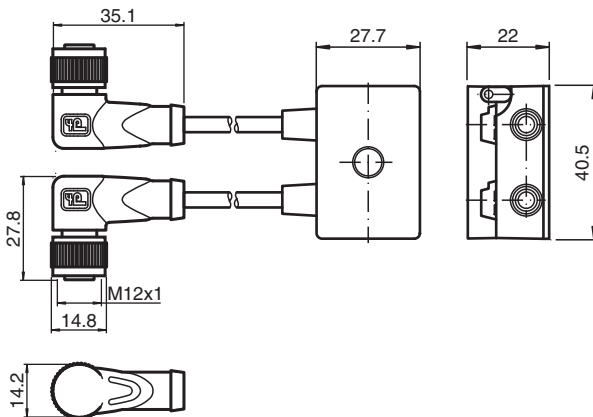
G10 ultra compact module, 2 inputs, 2 x M12 socket



### 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: 233665\_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
<b>Electrical specifications</b>		
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
<b>Input</b>		
Number/Type		2 inputs for 2- or 3-wire sensors (PNP), DC
Supply		from AS-Interface
Voltage		21 ... 31 V
Current loading capacity		75 mA at $T_B \leq 40^\circ\text{C}$ (104 °F) 60 mA at $T_B \leq 75^\circ\text{C}$ (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)
<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>Approvals and certificates</b>		
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		housing: IP67 IP67 / IP68 / IP69K with flat cable VAZ-FK-S* M12 socket: IP67/IP68/IP69K
Connection		AS-Interface: AS-Interface flat cable Inputs & matching connector: X1 & X2, M12 plug, 4-pin, A-coded, in accordance with IEC 61076-2-101:2012
<b>Material</b>		
Contacts		CuSn / Au
Housing		PBT PC
Body		PUR, black
Cable		PUR
Mounting screw		Stainless steel 1.4305 / AISI 303
<b>Cable</b>		
Sheath diameter		Ø4,3 mm
Color		black

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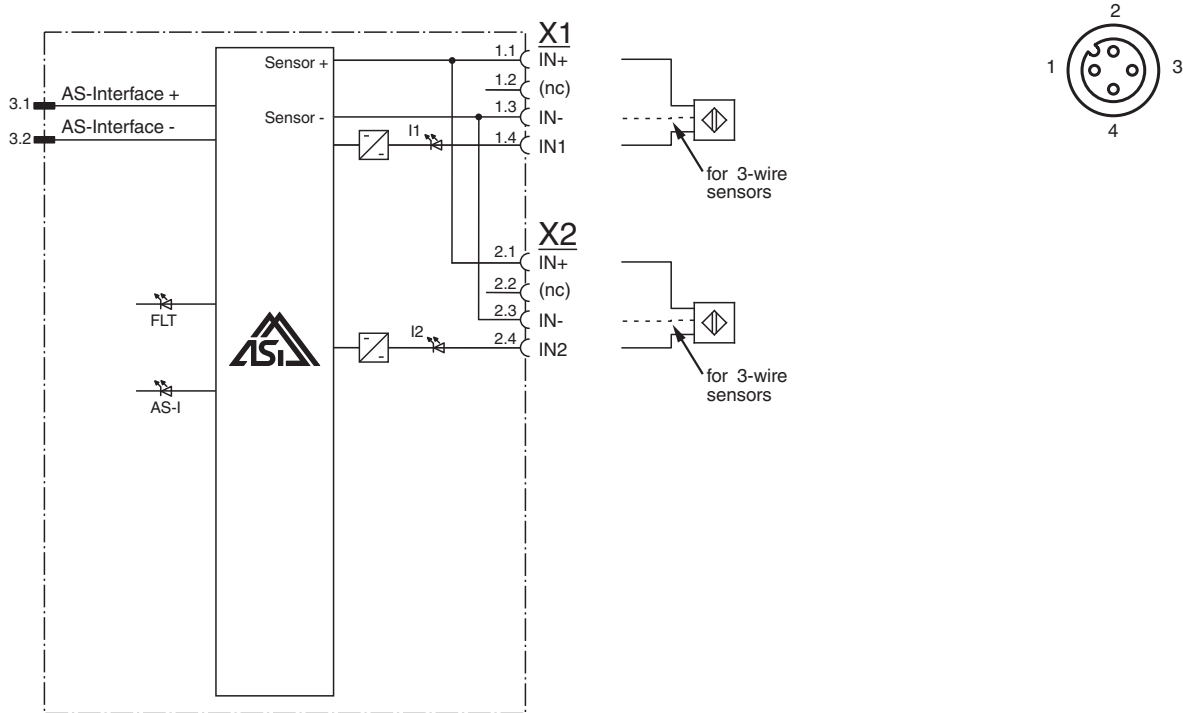
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### Technical Data

Cores		4 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

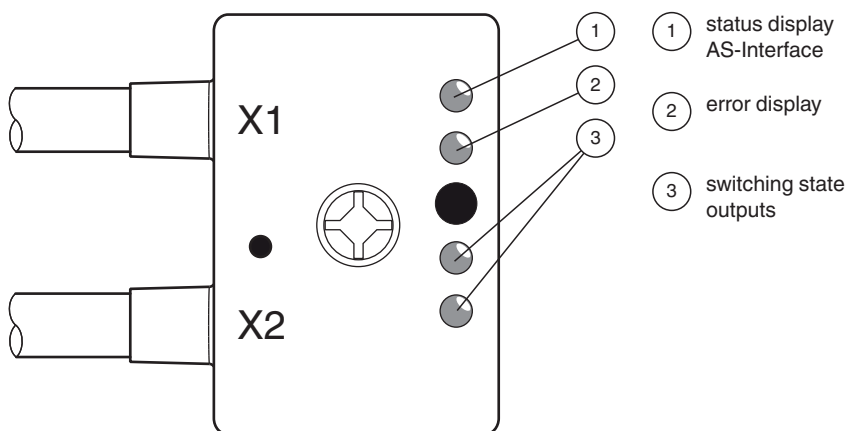
### Connection



### Connection

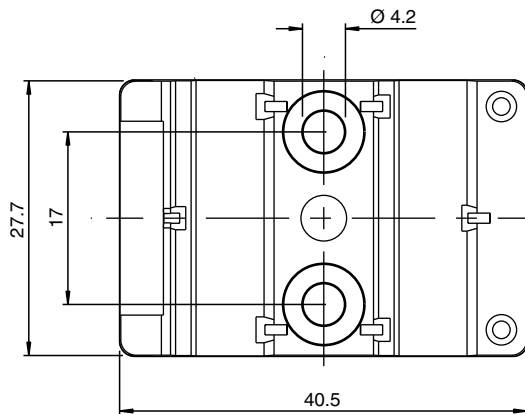
Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

### 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.

## 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

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