



## AS-Interface sensor module

VBA-4E-G2-ZAJ-Y241077

- Ideal for applications that require a high degree of vibration resistance
- AS-Interface certificate
- Communication monitoring
- Function display for bus and inputs
- Detection of overload on sensor supply

G2 flat module 4 inputs (PNP)



### Function

The VBA-4E-G2-ZA is an AS-Interface interface module with 4 Inputs. Mechanical contacts (e. g. push buttons) as well as 2-, 3- and 4-wire sensors can be connected to the inputs.

The IP67 flat module is ideal for applications in the field. An addressing jack is integrated in the module.

The sensors are connected by means of M12 x 1 screw connections. An LED is provided for each channel to indicate the current switching status. Similarly, an LED is available to monitor the AS-Interface communication and the indication that the module has the address 0.

The mounting plate U-G3FF is used, as standard, for connection to the AS-Interface. This lower section enables the flat cable to be contacted from both sides. If input and output modules are used in a mixed system, the flat cable for the internal power supply can be inserted in the lower section of this module. The module does not access this cable. The advantage is that both flat cables can be laid in parallel, without the danger of the module being destroyed by an incorrect connection.

An overloading of the internal input supply is signalled to the AS-Interface master via the "Peripheral fault" function. Communication via the AS-Interface remains unaffected.

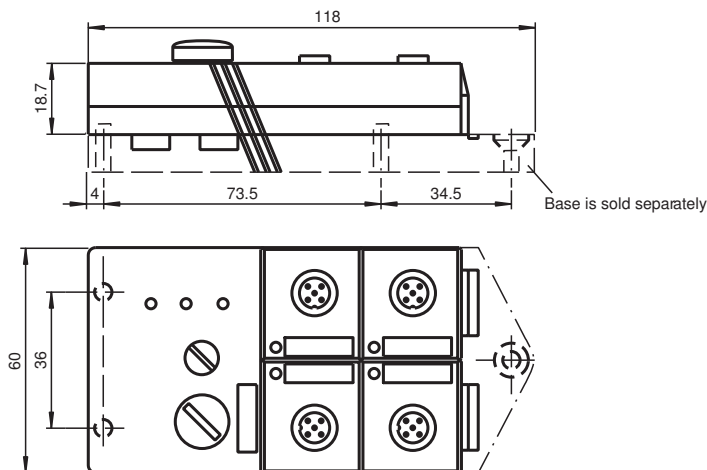
**Note:**

The mounting base for the module is sold separately.

### Application

For 4-wire sensors, it is only possible to use plug-in slot IN1 or IN3 for inputs 1+2 or 3+4 (jumped internally).

### Dimensions



### Technical Data

**General specifications**

Node type	A/B node
AS-Interface specification	V2.1

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## Technical Data

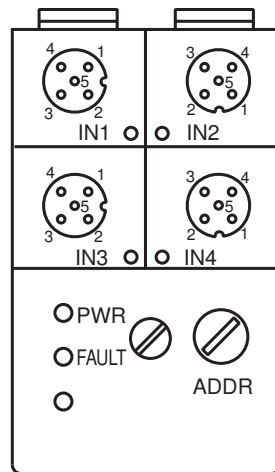
Required gateway specification		≥ V2.0
UL File Number		E223772
<b>Indicators/operating means</b>		
LED FAULT		error display; LED red red: communication error or address is 0 red flashing: overload of sensor supply
LED PWR		AS-Interface voltage; LED green
LED IN		switching state (input); 4 LED yellow
<b>Electrical specifications</b>		
Rated operating voltage	$U_e$	26.5 ... 31.6 V from AS-Interface
Rated operating current	$I_e$	≤ 40 mA (without sensors) / max. 240 mA
Protection class		III
Surge protection		$U_e$ : Over voltage category III, safe isolated power supplies (PELV)
<b>Input</b>		
Number/Type		4 inputs for 2- or 3-wire sensors (PNP), DC option 2 inputs for 4-wire sensors (PNP), DC
Supply		from AS-Interface
Voltage		21 ... 31 V
Current loading capacity		≤ 200 mA ( $T_B \leq 40 \text{ °C}$ ), ≤ 150 mA ( $T_B \leq 60 \text{ °C}$ ), overload-proof and short-circuit protected
Input current		≤ 8 mA (limited internally)
Switching point		according to DIN EN 61131-2 (Type 2)
0 (unattenuated)		≤ 2 mA
1 (attenuated)		≥ 4 mA
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013
<b>Standard conformity</b>		
Degree of protection		EN 60529:2000
Input		EN 61131-2:2007
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-0.A.2
IO code		0
ID code		A
ID1 code		7
ID2 code		2
<b>Data bits</b> (function via AS-Interface)		<b>Input</b> <b>Output</b>
D0		IN1 -
D1		IN2 -
D2		IN3 -
D3		IN4 -
<b>Parameter bits</b> (programmable via AS-i)		<b>function</b>
P0		not used
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>Ambient conditions</b>		
Ambient temperature		-25 ... 60 °C (-13 ... 140 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Relative humidity		85 % , noncondensing

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## Technical Data

Climatic conditions	For indoor use only
Altitude	≤ 2000 m above MSL
Pollution degree	3
<b>Mechanical specifications</b>	
Degree of protection	IP67
Connection	cable piercing method flat cable yellow inputs: M12 round connector
<b>Material</b>	
Housing	PBT
Mass	100 g
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

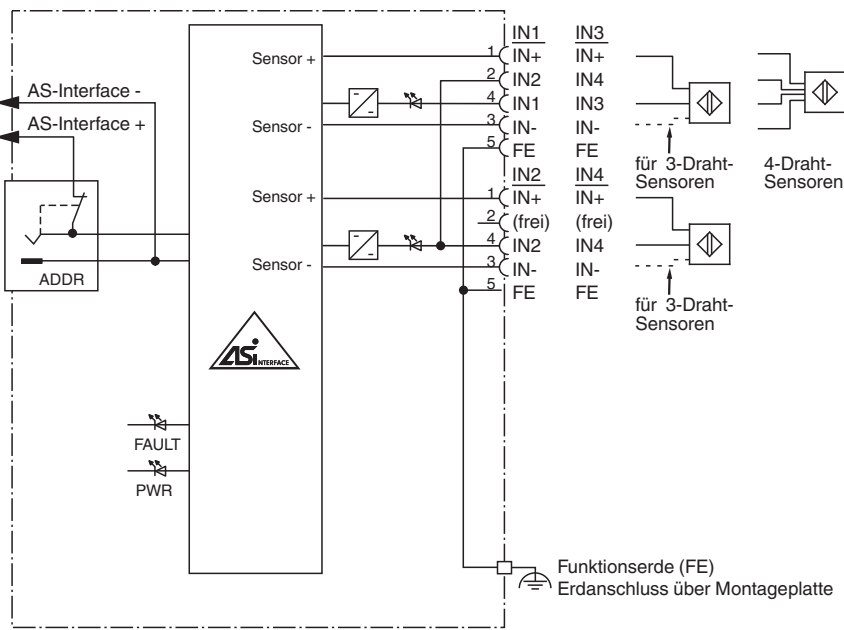
## Assembly



## 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.

**Connection**



**Matching System Components**

	<p><b>U-G3FF</b></p>	<p>AS-Interface module mounting base for connection to flat cable (AS-Interface and external auxiliary power)</p>
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**Accessories**

	<p><b>VAZ-PK-1,5M-V1-G</b></p>	<p>Adapter cable module/hand-held programming device</p>
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