



## AS-Interface sensor module

### VAA-4E-G2-ZA

- AS-Interface certificate
- Degree of protection IP67
- Addressing jack
- Flat cable connection with cable piercing technique, variable flat cable guide
- Inputs for 2- and 3-wire sensors
- Power supply of inputs from the module
- Function display for bus and inputs
- Monitoring of sensor overloads

G2 flat module 4 inputs (PNP)



### Function

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

The IP67 flat module features an integrated addressing jack and is ideal for applications in the field.

Sensors are connected via M12 x 1 quick disconnects. The current switching state of each channel is indicated by an LED. An additional LED monitors the AS-Interface communication and indicates when the module has an address of zero.

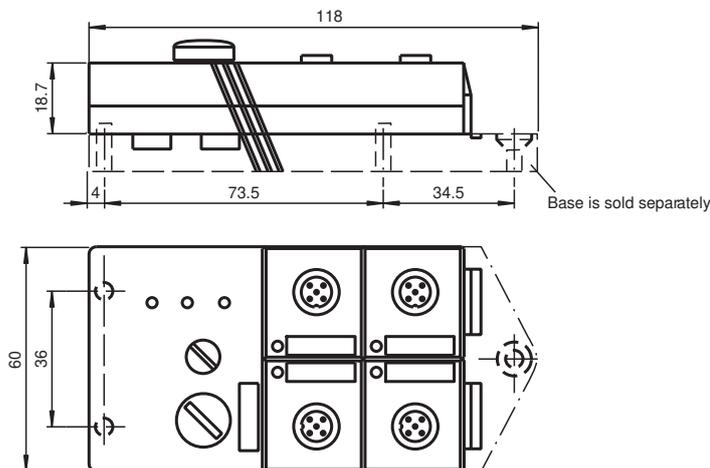
The input is monitored for short circuits. In a failure case, the module disconnects from the AS-Interface and an error is indicated.

The U-G3FF mounting base is used as a standard connection to the AS-Interface. The flat cables can be installed in two orientation within the base. This means, for example, that 90° curves can be laid with very tight radii (variable flat cable guide). If input and output modules are used in an application, the flat cable for the external power supply can be placed in the base of the module, since the module does not access this line. The advantage is that both flat cables can be placed in parallel without destroying the module due to a wrong connection.

**Note:**

The mounting base for the module is sold separately.

### Dimensions



### Technical Data

#### General specifications

Node type	Standard node
AS-Interface specification	V3.0
Required gateway specification	≥ V2.0
UL File Number	E223772

#### Indicators/operating means

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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## Technical Data

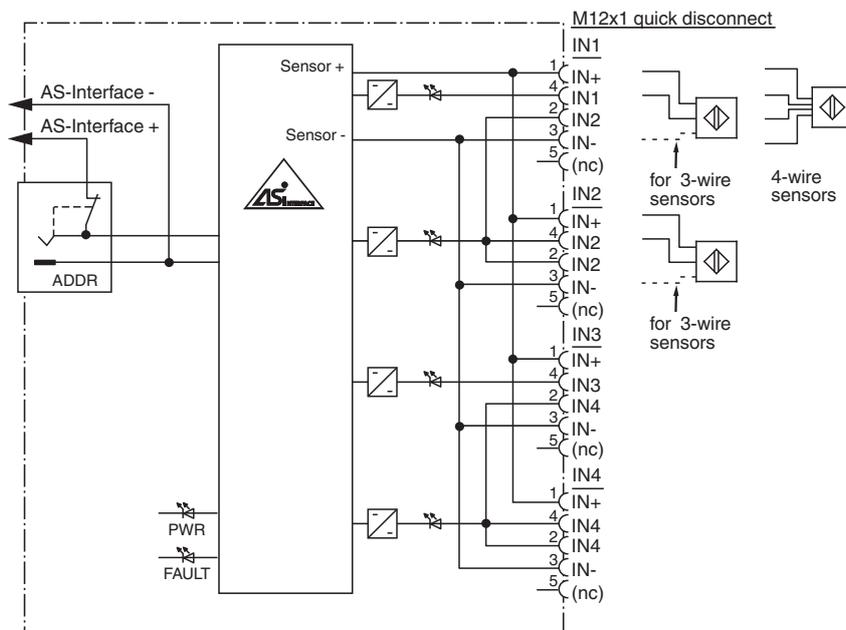
LED FAULT		error display; LED red red: communication error or address is 0 red flashing: overload of sensor supply
LED PWR		AS-Interface voltage; LED green
LED IN		switching state (input); 4 LED yellow
<b>Electrical specifications</b>		
Rated operating voltage	$U_e$	26.5 ... 31.6 V from AS-Interface
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
Supply		from AS-Interface
Voltage		21 ... 31 V
Current loading capacity		≤ 200 mA ( $T_B \leq 40 \text{ °C}$ ), ≤ 150 mA ( $T_B \leq 60 \text{ °C}$ ), short-circuit protected
Input current		≤ 8 mA (limited internally)
Switching point		
0 (unattenuated)		≤ 1.5 mA
1 (attenuated)		≥ 4.5 mA
Signal delay		< 2 ms (input/AS-Interface)
Signal frequency		≤ 250 Hz
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013 EN 61000-6-2:2001 EN 61000-6-4:2001
<b>Standard conformity</b>		
Degree of protection		EN 60529:2000
Fieldbus standard		EN 62026-2:2013
Input		EN 61131-2:2007
Emitted interference		EN 61000-6-4:2001
AS-Interface		EN 62026-2:2013
Noise immunity		EN 61000-6-2:2001
<b>Programming instructions</b>		
Profile		S-0.1
IO code		0
ID code		1
ID1 code		F
ID2 code		F
<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		Communication monitoring P0 = 0 monitoring = off, the outputs maintain the status if communication fails P0 = 1 monitoring = on, i.e. if communication fails, the outputs are deenergised (default settings)
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)

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Storage temperature	-25 ... 85 °C (-13 ... 185 °F)
Relative humidity	85 % , noncondensing
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

### Connection

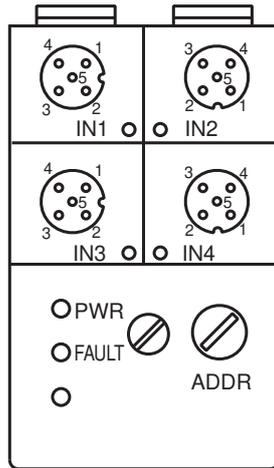


### Connection

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.

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## Assembly



## 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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