Dimensions

Base is sold separately

Electrical connection

M12x1 quick disconnect

for 3-wire sensors

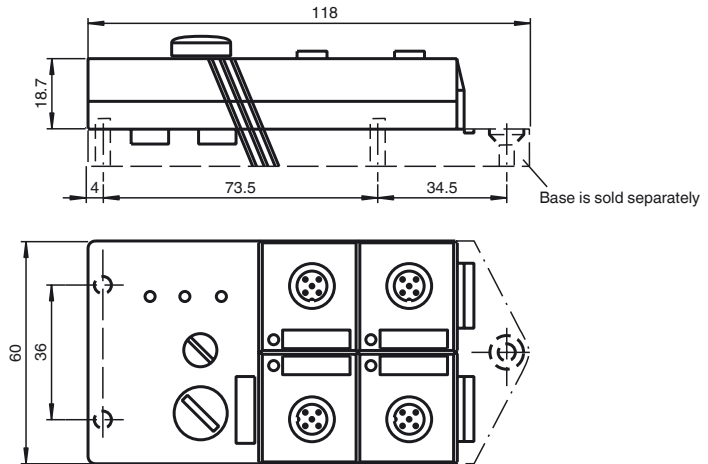4-wire sensors

for 3-wire sensors

Model number

VAA-4E-G2-ZA
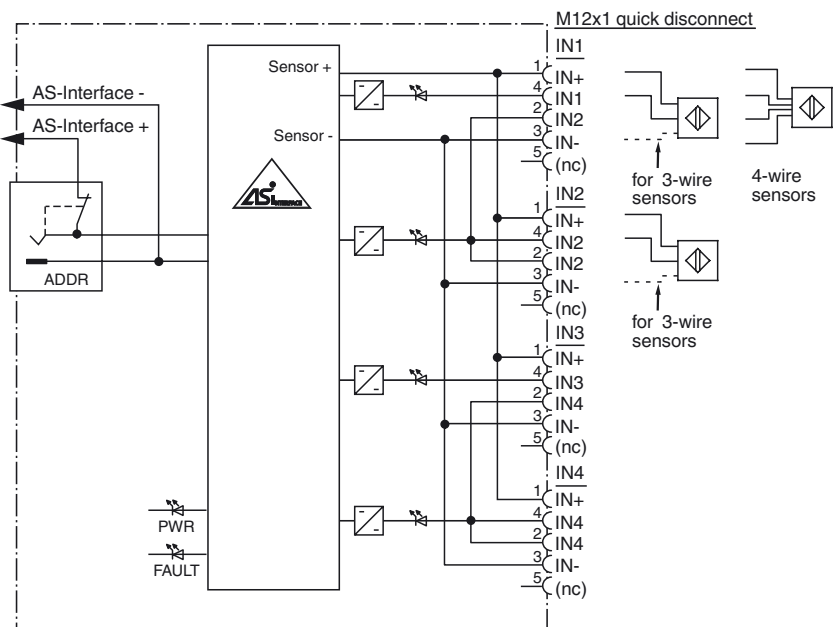
G2 flat module
4 inputs (PNP)

Features

- 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
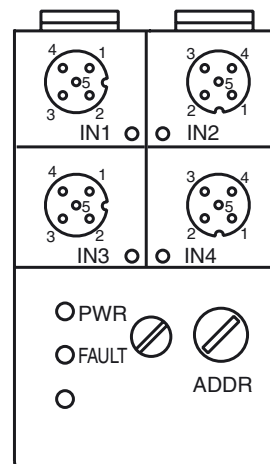- Monitoring of sensor overloads

Indicating / Operating means

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

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Technical data

General specifications

Slave type	Standard slave
AS-Interface specification	V3.0
Required master specification	$\geq$ V2.0
UL File Number	E223772

Indicators/operating means

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

Electrical specifications

Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	$\leq$ 40 mA (without sensors) / max. 240 mA
Protection class		III
Surge protection		U_e: Over voltage category III, safe isolated power supplies (PELV)

Input

Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC
Supply	from AS-Interface
Voltage	21 ... 31 V
Current loading capacity	$\leq$ 200 mA ($T_B \leq$ 40 °C), $\leq$ 150 mA ($T_B \leq$ 60 °C), short-circuit protected
Input current	$\leq$ 8 mA (limited internally)
Switching point	
0 (unattenuated)	$\leq$ 1.5 mA
1 (attenuated)	$\geq$ 4.5 mA
Signal delay	< 2 ms (input/AS-Interface)
Signal frequency	$\leq$ 250 Hz

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 62026-2:2013 EN 61000-6-2:2001 EN 61000-6-4:2001

Standard conformity

Degree of protection	EN 60529:2000
Fieldbus standard	EN 62026-2:2013
Input	EN 61131-2:2007
Emitted interference	EN 61000-6-4:2001
AS-Interface	EN 62026-2:2013
Noise immunity	EN 61000-6-2:2001

Programming instructions

Profile	S-0.1
IO code	0
ID code	1
ID1 code	F
ID2 code	F

Data bits (function via AS-Interface)	input	output
D0	IN1	-
D1	IN2	-
D2	IN3	-
D3	IN4	-

Parameter bits (programmable via AS-i)	function
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 $\leq$ 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

Ambient conditions

Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)
Relative humidity	85 % , noncondensing
Climatic conditions	For indoor use only
Altitude	$\leq$ 2000 m above MSL
Pollution degree	3

Mechanical specifications

Degree of protection	IP67
Connection	cable piercing method flat cable yellow inputs: M12 round connector
Material	

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.

Accessories

VBP-HH1-V3.0
AS-Interface Handheld

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

VAZ-FK-ED-G2
AS-Interface end seal for G2 modules

Matching system components

U-G3FF
AS-Interface module mounting base for connection to flat cable (AS-Interface and external auxiliary power)

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Housing	PBT
Mass	100 g
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

Notes

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.

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

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