

# **Electrical connection**

Dimensions

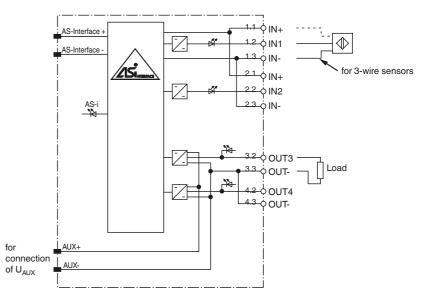
### **Model number**

VAA-2EA-G4-ZE0/E0

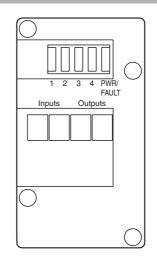
G4 PG module IP67 2 inputs (NPN) and 2 electronic outputs

### Features

- AS-Interface certificate
- Degree of protection IP67
- Flat or round cable connection (via standardized EEMS base, not included with delivery)
- Cable piercing method or terminal compartment flat cable yellow/flat cable black or standard round cable inputs: PG7 screwed connection and cage-clamp terminals
- Communication monitoring, turn-off
- Power supply of outputs from the external auxiliary voltage
- Power supply of inputs from the module
- Function display for bus, inputs and outputs
- Monitoring of sensor overloads



### Indicating / Operating means



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

Pepperl+Fuchs Group USA: www.pepperl-fuchs.com fa-info@us

USA: +1 330 486 0001 fa-info@us.pepperl-fuchs.com Germany: +49 621 776 4411 fa-info@de.pepperl-fuchs.com Singapore: +65 6779 9091 fa-info@sg.pepperl-fuchs.com



1

Technical data	_		
Technical data			
General specifications			
Slave type		Standard slave	
Indicators/operating means			
LED AS-i		dual LED green/red green: AS-Interface voltage red: communication error or ad green/red flashing: overload se	
LED IN		switching state (input); 2 LED years	
LED OUT		Switching state (output); 2 LED	yellow
Electrical specifications			
	//	24 V DC ± 15 % PELV	
	U <sub>e</sub>	26.5 31.6 V from AS-Interfac	
Rated operating current Protection class	l <sub>e</sub>	≤ 60 mA (without sensors) / ma	x. 240 mA
		III	
Input		Q inputo for Q or Q wire concorr	
Number/Type Supply		2 inputs for 2- or 3-wire sensors from AS-Interface	
Voltage		21 31 V	
Current loading capacity		$\leq$ 180 mA (T <sub>B</sub> $\leq$ 40 °C), $\leq$ 140 mA (T <sub>B</sub> $\leq$ 60 °C), short-circuit protected	
Input current		$\leq$ 8 mA (limited internally)	
Switching point			
0 (unattenuated)		≤ 1.5 mA	
1 (attenuated)		≥ 4.5 mA	
Output			
Number/Type		2 electronic outputs, NPN	
Supply		from external auxiliary voltage UAUX	
Current		1.5 A per output	
Voltage		≥ (U <sub>AUX</sub> - 0.5 V)	
Programming instructions			
Profile		S-3.F	
IO code		3	
ID code	,	F	
Data hita (function dia AO Intenfore			
Data bits (function via AS-Interface	e)	input	output
D0	9)	IN1	output -
D0 D1	9)	•	-
D0	9)	IN1	
D0 D1 D2		IN1 IN2 -	- OUT3
D0 D1 D2 D3		IN1 IN2 - function communication monitoring	OUT3 OUT4 oring = ON, i.e. if communication
D0 D1 D2 D3 Parameter bits (programmable via P0 P1		IN1 IN2 - - function Communication monitoring P0 = 1 (default settings), monitor fails, the outputs are de-energis P0 = 0, monitoring = OFF, if com maintain their condition not used	OUT3 OUT4 oring = ON, i.e. if communication
D0 D1 D2 D3 Parameter bits (programmable via P0 P1 P2		IN1 IN2 - function communication monitoring PO = 1 (default settings), monito fails, the outputs are de-energis PO = 0, monitoring = OFF, if com maintain their condition not used not used	OUT3 OUT4 oring = ON, i.e. if communication
D0 D1 D2 D3 Parameter bits (programmable via P0 P1 P2 P3		IN1 IN2 - - function Communication monitoring P0 = 1 (default settings), monitor fails, the outputs are de-energis P0 = 0, monitoring = OFF, if com maintain their condition not used	OUT3 OUT4 oring = ON, i.e. if communication
D0 D1 D2 D3 Parameter bits (programmable via P0 P1 P2 P3 Ambient conditions		IN1 IN2 - function communication monitoring P0 = 1 (default settings), monitor fails, the outputs are de-energis P0 = 0, monitoring = OFF; if com maintain their condition not used not used not used	OUT3 OUT4 oring = ON, i.e. if communication
D0 D1 D2 D3 Parameter bits (programmable via P0 P1 P2 P3 Ambient conditions Ambient temperature		IN1 IN2 - function communication monitoring P0 = 1 (default settings), monito fails, the outputs are de-energis P0 = 0, monitoring = OFF, if com maintain their condition not used not used not used -25 60 °C (-13 140 °F)	OUT3 OUT4 oring = ON, i.e. if communication
D0 D1 D2 D3 Parameter bits (programmable via P0 P1 P2 P3 Ambient conditions Ambient temperature Storage temperature		IN1 IN2 - function communication monitoring P0 = 1 (default settings), monitor fails, the outputs are de-energis P0 = 0, monitoring = OFF; if com maintain their condition not used not used not used	OUT3 OUT4 oring = ON, i.e. if communication
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D0 D1 D2 D3 Parameter bits (programmable via P0 P1 P2 P3 Ambient conditions Ambient temperature Storage temperature Mechanical specifications Degree of protection		IN1 IN2 IN2 - function communication monitoring P0 = 1 (default settings), monito fails, the outputs are de-energis P0 = 0, monitoring = OFF, if com maintain their condition not used not used not used -25 60 °C (-13 140 °F) -25 85 °C (-13 140 °F) IP67 according to EN 60529	OUT3 OUT4 pring = ON, i.e. if communication sed nmunication fails, the outputs
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Function

The VAA-2EA-G4-ZE0/E0 is an AS-Interface coupling module with two inputs and two outputs. Mechanical contacts and 2- and 3-wire sensors can be connected to the inputs.The sensors are supplied via the module. The outputs are electronic outputs, which can be loaded to 24 V DC and 1.5 A per output.

The G4 module in IP67 is especially suitable for rough conditions. The connection to sensors and actuators is established via cable glands and cage tension spring terminals thus making the installation especially userfriendly. For pre-addressing the module, it can be directly plugged onto the adapter of the VBP-HH1 hand held programming device.

An LED is provided for each channel, on the top of the module, to indicate the current switching status. In the case of communication errors on the bus, the outputs are de-energised via an integrated communication control, which can be disabled by the P0 parameter bit.

The AS-Interface transmission cable and the external 24 V DC supply can be connected through flat cables or round cables. Use the U-G1FF base for the AS-Interface flat cable. The connection to both cables is established using the AS-Interface standardised EEMS interface, i. e. the cable piercing method.

Use the U-G1PP base for a round cable. The AS-Interface cable as well as the external power supply may be connected within the U-G1PP base.

#### **Accessories**

### VBP-HH1-V3.0-KIT

AS-Interface Handheld with accessory

# VBP-HH1

Handheld programming device

## VAZ-G4-B

Blind plug PG7

VAZ-G4-B1

Blind plug M12

### Matching system components

### U-G1FF

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

#### **U-G1FFA**

AS-Interface module mounting base with adressing jack for connection to flat cable adressing(AS-Interface and external auxiliary power)

### U-G1PP

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

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Germany: +49 621 776 4411 fa-info@de.pepperl-fuchs.com

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



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2