



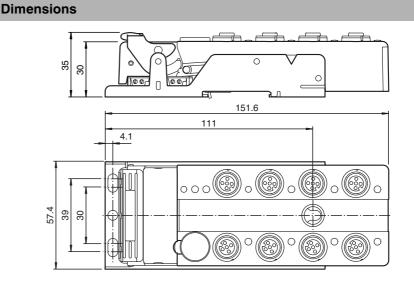
Model number

VAA-4E4A-G12-ZAJ/EA2L

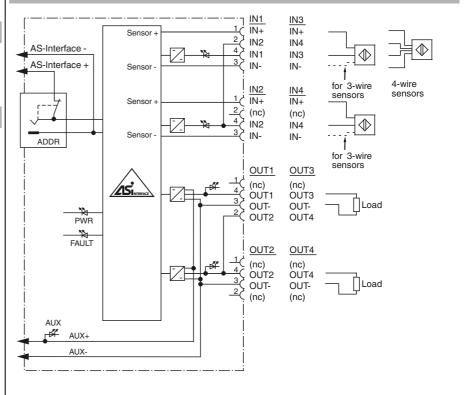
G12 flat module 4 inputs (PNP) and 4 electronic outputs

Features

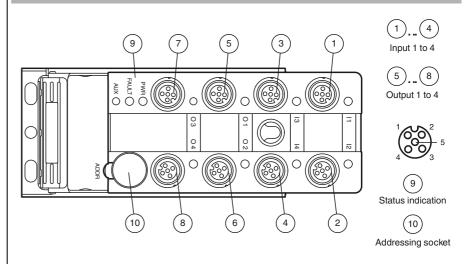
- One-piece housing with stainless steel base
- Installation without tools
- Metal threaded inserts with SPEED-CON technology
- Flat cable connection with cable piercing technique, variable flat cable guide
- Red LED per channel, lights up in the event of output overload
- Communication monitoring, configurable
- Inputs for 2-, 3-, and 4-wire sensors
- DIN rail mounting
- AS-Interface certificate



Electrical connection



Indicating / Operating means



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AS-Interface sensor/actuator module

Technical data

Technical data			
General specifications			
Slave type		Standard slave	
AS-Interface specification		V3.0	
Required master specification		≥ V2.1	
UL File Number		E223772	
Functional safety related paramet	ters		
MTTF _d		190 a	
Mission Time (T _M)		20 a	
Diagnostic Coverage (DC)		0 %	
Indicators/operating means			
LED FAULT		error display; LED red red: communication error or address is red flashing: overload of sensor power	
LED PWR		AS-Interface voltage; green LED green: voltage OK flashing green: address 0	
LED AUX		ext. auxiliary voltage U _{AUX} ; dual LED g green: voltage OK red: reverse voltage	green/red
LED IN		switching state (input); 4 LED yellow	
LED OUT		Switching status (output); 4 yellow/red	LEDs
		Yellow: output active Red: output overload	
Electrical specifications			
Auxiliary voltage (output)		24 V DC ± 15 % PELV	
Rated operating voltage	U _e	26.5 31.6 V from AS-Interface	
Rated operating current Protection class	le	\leq 40 mA (without sensors) / max. 240	ma
		III U _{ALIX} , U _{in} : Over voltage category III, sa	to isolated newer supplies
Surge protection		(PELV) derived from mains up to 300 V	
Input			
Number/Type		4 inputs for 2- or 3-wire sensors (PNP)), DC
21		option 2 inputs for 4-wire sensors (PN	
Supply		from AS-Interface	
Voltage		21 31 V	
Current loading capacity		\leq 200 mA, overload and short-circuit p	protected
Input current		\leq 8 mA (limited internally)	
Switching point		according to DIN EN 61131-2 (Type 2)
0 (unattenuated)		≤2 mA	
1 (attenuated)		≥6 mA	
Signal delay		< 1 ms (input/AS-Interface)	
Output			
Number/Type		4 electronic outputs, PNP, overload an	id short-circuit proof
Supply		from external auxiliary voltage U _{AUX}	
Current		2 A per output 6 A total (TB \leq 40 °C)	
		4 A total (TB \leq 70 °C)	
Voltage		≥ (U _{AUX} - 0.5 V)	
Directive conformity			
Electromagnetic compatibility			
Directive 2014/30/EU		EN 62026-2:2013	
Standard conformity			
Degree of protection		EN 60529:2000	
Fieldbus standard		EN 62026-2:2013	
Input		EN 61131-2	
Emitted interference		EN 61000-6-4:2007	
AS-Interface		EN 62026-2:2013	
Noise immunity		EN 61000-6-2:2005 EN 62026-2:2013	
Programming instructions		0.75	
Profile		S-7.F	
IO code		7 F	
ID code ID1 code		F	
ID1 code		E	
Data bits (function via AS-Interface	2)	⊏ input	output
D0	-)	IN1	OUT1
D1		IN2	OUT2
D2		IN3	OUT3
D3		IN4	OUT4
Parameter bits (programmable via	a AS-i)	function	
PO	,	communication monitoring P0 = 1 (default settings), monitoring = fails, the outputs are de-energised P0 = 0, monitoring = OFF, if communic maintain their condition	

VAA-4E4A-G12-ZAJ/EA2L

Function

The VAA-4E4A-G12-ZA/EA2L is an AS-Interface trigger module with 4 inputs and 4 outputs. 2- and 3-wire sensors as well as mechanical contacts can be connected to the plus switching electronic inputs. The outputs are electronic outputs which can be energized with max. 24 V DC and 2 A per output.

The solid housing permits fast mounting without tools as well as easy removal without tools. The stainless steel shell and the cast housing ensure durability and a high protection category.

The connection to the AS-Interface calbe and to the external power supply is achieved via penetration technology in the integrated flat cable. The insert for the flat cables can be turned in two orientations.

All connections to inputs and outputs are implemented via metal inserts for high stability. The connection to the sensors/actuators is achieved via a M12 x 1 circular connector with SPEEDCON quick locking option.

The inputs and the connected sensors are supplied from the internal power supply of the module (from AS-Interface), the outputs and the connected actuators via an external power source (AUX).

To indicate the current switching state there is an LED for each channel fitted to the top of the module. The outputs are protected against overload and short circuit, an output overload is indicated via an LED per channel. An LED to indicate the AS-Interface voltage and that the module has an address of 0 is available, another indicates errors in the AS-Interface communication as well as periphery faults. Another LED indicates the external power supply (AUX).

This module can be mounted in any position using three screws or can be snapped onto the DIN rail using the stainless steel holder.

An output overload is reported to the AS-Interface master via the function "periphery fault". The communcation with the AS-Interface remains intact.

Accessories

VBP-HH1-V3.0-KIT

AS-Interface Handheld with accessory

VBP-HH1-V3.0

AS-Interface Handheld

VAZ-PK-1,5M-V1-G

Adapter cable module/hand-held programming device

VAZ-CLIP-G12 lock for G12 module

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

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VAA-4E4A-G12-ZAJ/EA2L

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
Ambient conditions	
Ambient temperature	-25 70 °C (-13 158 °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
Shock and impact resistance	30 <i>g</i> , 11 ms in 6 spatial directions 3 shocks 10 <i>g</i> , 16 ms in 6 spatial directions 1000 shocks
Vibration resistance	0.75 mm 10 57 Hz , 5g 57 50 Hz
Pollution degree	3
Mechanical specifications	
Degree of protection	IP67
Connection	Cable piercing method flat cable yellow/flat cable black inputs/outputs: M12 round connector
Material	
Housing	PBT
Mass	230 g
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate
Notes	

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

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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