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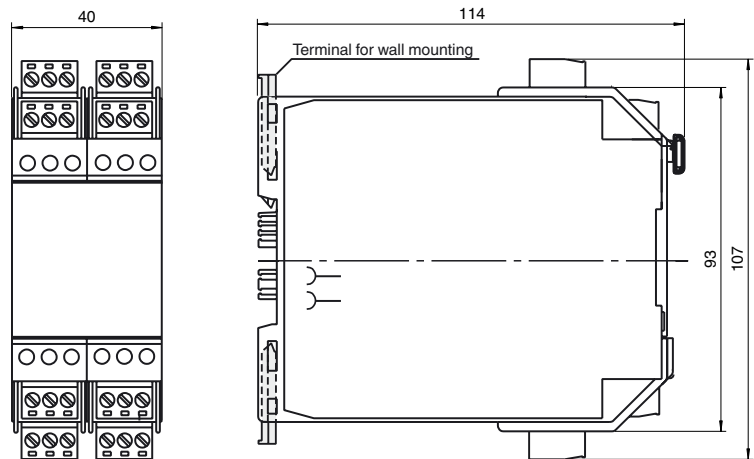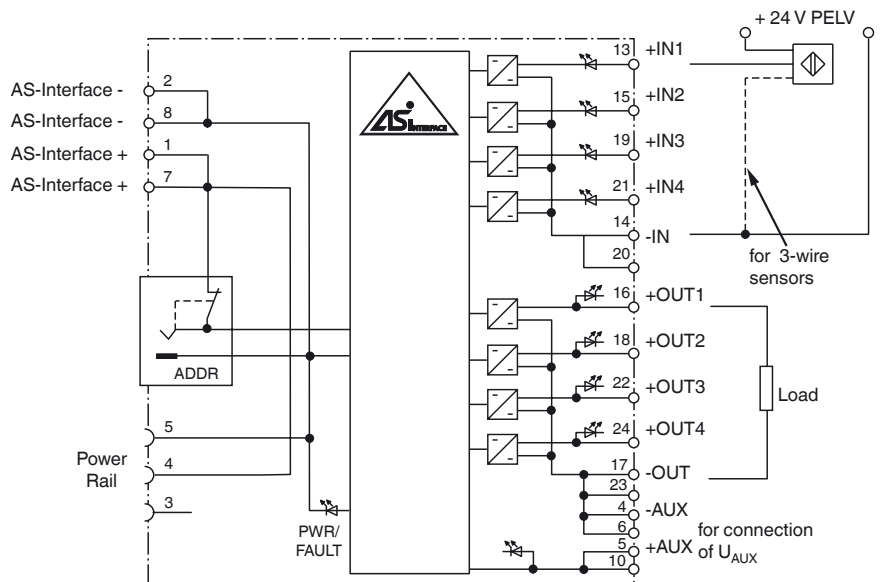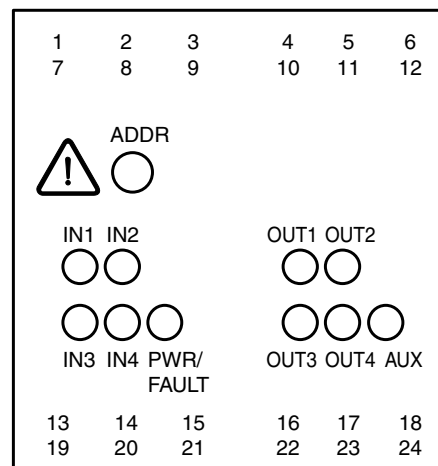
Model number

VAA-4EA-KF-ZE/E2

Cabinet module
4 inputs (PNP) and 4 electronic outputs

Features

- AS-Interface certificate
- Housing with removable, coded terminals
- AS-Interface connection via Power Rail
- Communication monitoring, turn-off
- Outputs loadable up to 8 A (per module)
- Addressing jack
- Power supply of outputs from the external auxiliary voltage
- External power supply of sensors
- Function display for bus, ext. auxiliary voltage, inputs and outputs

Dimensions

Electrical connection

Indicating / Operating means

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

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1

Technical data

General specifications
Slave type	Standard slave
AS-Interface specification	V2.0
Required master specification	≥ V2.0
UL File Number	E87056

Indicators/operating means
LED PWR/FAULT	dual-LED green/red green: AS-Interface voltage, normal operation red: communication error or address 0
LED AUX	ext. auxiliary voltage U_{AUX} ; LED green
LED IN	switching state (input); 4 LED yellow
LED OUT	Switching state (output); 4 LED yellow

Electrical specifications
Auxiliary voltage (output)	U_{AUX}	20 ... 30 V DC PELV
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 30 mA
Protection class		III

Input
Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC
Supply	external
Switching point	
0 (unattenuated)	≤ 2 mA
1 (attenuated)	≥ 4 mA

Output
Number/Type	4 electronic outputs, PNP
Supply	from external auxiliary voltage U_{AUX}
Current	2 A per output , 8 A per module
Voltage	≥ (U_{AUX} - 0.5 V)

Programming instructions
Profile	S-7.F
IO code	7
ID code	F

Data bits (function via AS-Interface)	input	output
D0	IN1	OUT1
D1	IN2	OUT2
D2	IN3	OUT3
D3	IN4	OUT4

Parameter bits (programmable via AS-i)	function
P0	communication monitoring P0 = 1 (default settings), monitoring = ON, i.e. if communication fails, the outputs are de-energised P0 = 0, monitoring = OFF, if communication fails, the outputs maintain their condition
P1	not used
P2	not used
P3	not used

Ambient conditions
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications
Degree of protection		IP20
Connection		removable coded terminals, Power Rail
Cable		
Length	L	max. 30 m (Inputs)
Mass		170 g
Mounting		DIN mounting rail

Compliance with standards and directives
Directive conformity	
EMC Directive 89/336/EEC	EN 61326, EN 50295
Standard conformity	
Electromagnetic compatibility	EN 61000-6-2, EN 61326, EN 50295
Degree of protection	EN 60529

Function

The VAA-4EA-KF-ZE/E2 AS-Interface coupling module is a cabinet module with 4 inputs and 4 electronic outputs. Its design, only 40 mm wide, occupies little space in a cabinet installation. The VAA-4EA-KF-ZE/E2 is installed by snapping it onto the 35 mm DIN Rail per EN 50022, with the integrated Power Rail.

When an AS-Interface master/gateway is used in the cabinet housing, the AS-Interface signal is automatically transmitted via the Power Rail. The connection of the module to the AS-Interface cable is accomplished by simply snapping it onto the DIN Rail.

The plug-in coded terminals of the inputs and outputs allow "online" maintenance, i. e. while the system is under power. The terminals are coded to prevent incorrect connections.

If a master/gateway other than the one in the cabinet housing is used, the connection to the AS-Interface cable is established via the same terminals. Once the AS-Interface cable has been connected to the terminals, the AS-Interface signal is automatically transferred to the Power Rail.

Power to the module is supplied by the AS-Interface cable and the inputs and outputs are powered externally (see connection diagram). A programming jack is available for address configuration.

Note:
The outputs are de-energised by means of an integrated watchdog, whenever communication on the AS-Interface cable is interrupted for more than 80 ms. The watchdog can be disabled by the parameter bit P0.

Accessories

VBP-HH1-V3.0-KIT
AS-Interface Handheld with accessory

VBP-HH1
Handheld programming device

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

UPR-05
Universal Power Rail with end caps and cover, 5 conductors, length: 2 m