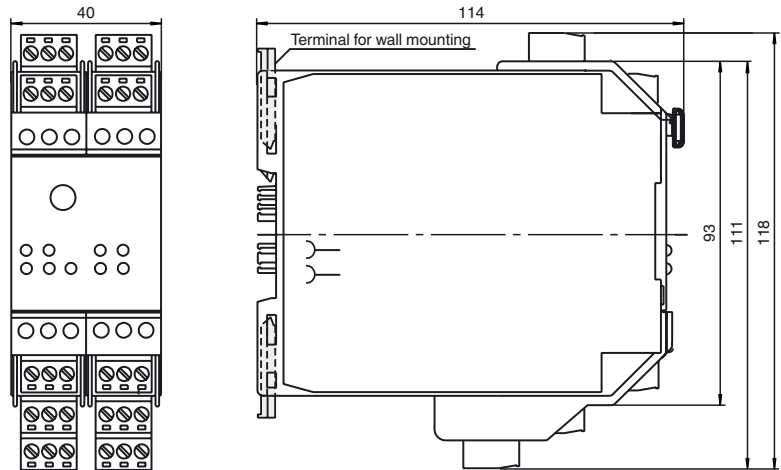CE   c(UL)us   ASi

Model number

VAA-4EA-KF2-ZE0/R
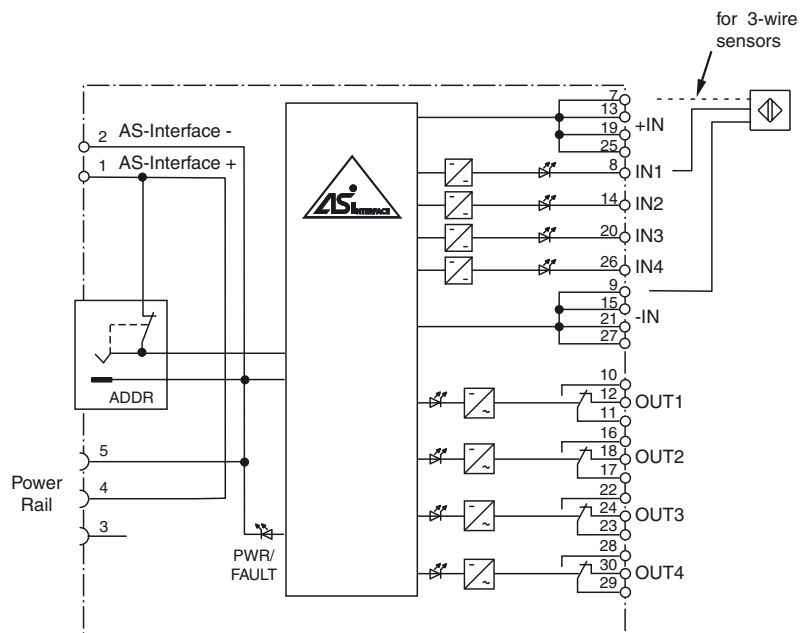
Cabinet module
4 inputs (NPN) and 4 relay outputs

Features

- Housing with removable, coded terminals

- Function display for bus, inputs and outputs

- 4 potential-free switch-contacts

- Addressing jack

- Communication monitoring, turn-off

- Outputs loadable up to 8 A (per module)

- Inputs for 2- and 3-wire sensors

- Power supply of inputs from the module
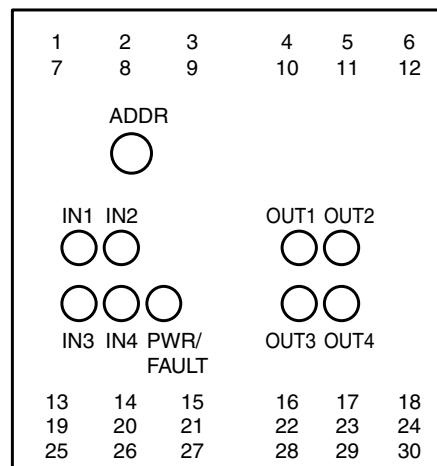
- AS-Interface connection via Power Rail

Dimensions

40

114

Terminal for wall mounting

93   111   118

Electrical connection

for 3-wire sensors

2 AS-Interface -
1 AS-Interface +

ADDR

Power Rail

5
4
3

PWR/ FAULT

7 13 19 25 +IN
8 IN1
14 IN2
20 IN3
26 IN4
9 15 21 27 -IN
10 12 11 OUT1
16 18 17 OUT2
22 24 23 OUT3
28 30 29 OUT4

Indicating / Operating means

| 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 |

ADDR

IN1 IN2   OUT1 OUT2

IN3 IN4 PWR/FAULT   OUT3 OUT4

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

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

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Technical data

General specifications

Slave type	Standard slave
UL File Number	E87056

Indicators/operating means

LED PWR/FAULT	dual LED green/red green: AS-Interface voltage red: communication error or address 0 green/red flashing: overload sensor supply
LED IN	switching state (input); 4 LED yellow
LED OUT	Switching state (output); 4 LED yellow

Electrical specifications

Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 80 mA (without sensors) / max. 230 mA

Input

Number/Type	4 inputs for 2- or 3-wire sensors (NPN), DC
Supply	from AS-Interface
Voltage	21 ... 31 V DC
Current loading capacity	≤ 150 mA, short-circuit protected
Switching point	
0 (unattenuated)	≤ 2 mA
1 (attenuated)	≥ 4 mA

Output

Number/Type	4 relay outputs
Galvanic isolation	AS-Interface - Outputs: Safe isolation according to EN 50178 (250 V AC) Output - Output: Safe isolation according to EN 50178 (250 V AC)
Contact loading	2 A/30 V DC per output 2 A/250 V AC per output
Life span	mechanical: 30×10^6 switching cycles electrical: 1×10^6 operations (30 V DC, 2 A, ohmic) 5×10^6 operations (250 V AC, 2 A, $\cos\phi = 1$) 4.5×10^6 switching cycles (250 V AC, 2 A, $\cos\phi = 0.7$)

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 according to EN 60529
Connection	removable coded terminals, Power Rail
Mass	170 g
Mounting	DIN mounting rail

Function

The VAA-4EA-KF2-ZE0/R AS-Interface coupling module is a cabinet module with 4 inputs and 4 relay outputs. Its design, only 40 mm wide, occupies little space in a cabinet installation. The VAA-4EA-KF2-ZE0/R is installed by snapping it onto the 35 mm DIN rail, according to 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 pluggable 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 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
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

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