Model number

VAA-4E4A-CB1-Z/E2

Printed circuit board module encapsulated in housing for expansion to 8 inputs/8 outputs

Features

- Integrated communication monitoring function
- Inputs and outputs short-circuit and overload proof
- No external power supply required
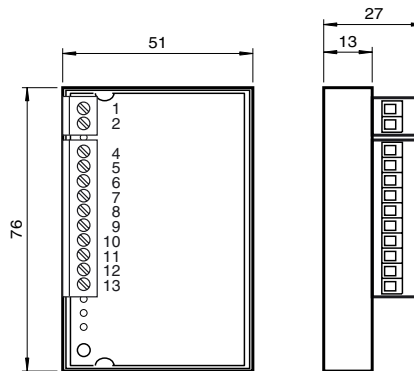- Connection via removable screw terminals

Function

The internal AS-Interface I/O module is ideally suited to integrating customer-specific electronics, for example light sensors or LED lights. The printed circuit board is supplied entirely from the AS-Interface. The inputs and outputs are protected against short circuits and overload and the connection between the display and control elements and the AS-Interface circuit board can be plugged in with screw-on plug-in terminals. The connection to the AS-Interface is implemented by means of plug-in screw terminals.

An overloading of the outputs is signalled to the AS-Interface master via the "Peripheral fault" function. Communication via the AS-Interface remains intact.
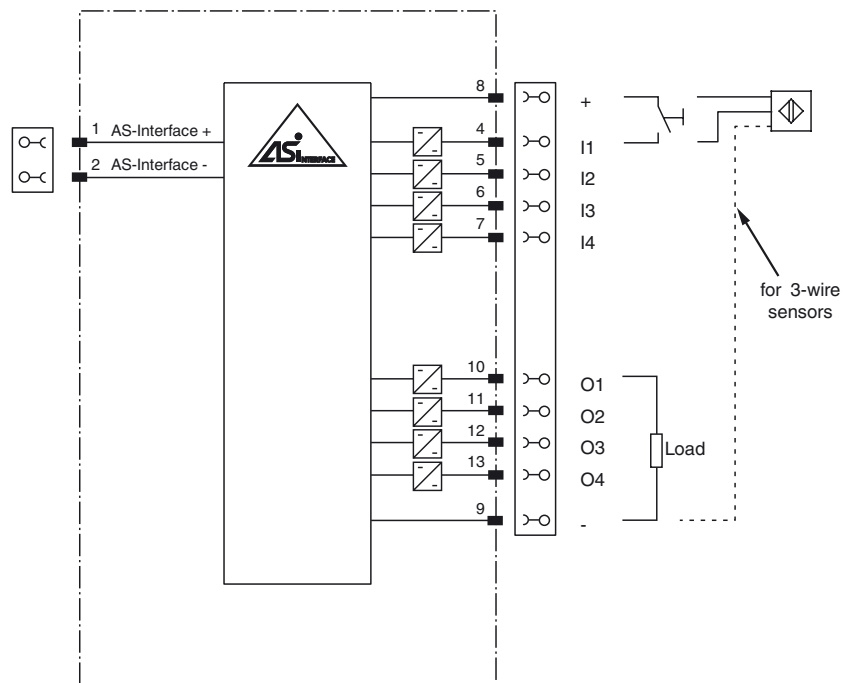
Note:

Communication monitoring is integrated. This switches the outputs to a currentless state if no communication is taking place over the AS-Interface cable.

Dimensions

Electrical connection

for 3-wire sensors

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	V2.0
Required master specification	$\geq$ V2.0
UL File Number	E87056

Electrical specifications

Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	$\leq$ 30 mA (without sensors) / max. 180 mA
Protection class		III

Input

Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC
Supply	from AS-Interface
Voltage	21 ... 31 V
Input current	$\leq$ 8 mA (limited internally)
Switching point	according to EN 61131-2 Typ 1
0 (unattenuated)	$\leq$ 1.5 mA
1 (attenuated)	$\geq$ 4 mA

Output

Number/Type	4 electronic outputs, PNP
Supply	from AS-Interface
Current	$\leq$ 100 mA per output, $\leq$ 140 mA total
Voltage	21 ... 31 V

Programming instructions

Profile	S-7.0
IO code	7
ID code	0
ID1 code	F
ID2 code	E

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	not used
P1	not used
P2	not used
P3	not used

Ambient conditions

Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection	screw terminals, removable

Compliance with standards and directives

Directive conformity	
EMC Directive 89/336/EEC	EN 61000-6-2:2001, EN 61000-6-4:2001, EN 50295:1999
Standard conformity	
Noise immunity	EN 61000-6-2:2001
Emitted interference	EN 61000-6-4:2001
Input	EN 61131-2
Fieldbus standard	EN 50295:1999

Notes

The AS-Interface I/O module is ideally suited to integrating customer-specific electronics, for example light sensors or LED lights. The printed circuit board is supplied entirely from the AS-Interface. The inputs and outputs are protected against short circuits and overload and the connection between the display and control elements and the AS-Interface circuit board can be plugged in with screw-on plug-in terminals. The connection to the AS-Interface is implemented by means removable screw terminals.

Note:
Communication monitoring is integrated. This switches the outputs to a currentless state if no communication is taking place over the AS-Interface cable.
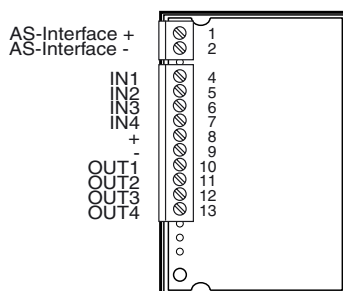
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