

Model number

VAA-4E4A-CB2-Z/E2

Printed circuit board module
encapsulated in housing
4 inputs/4 outputs

Features

- Integrated communication monitoring function
- Inputs and outputs short-circuit and overload proof
- Power supply of the inputs and outputs from the external auxiliary voltage
- Function display for bus, ext. auxiliary voltage, inputs and outputs
- Connection via removable screw terminals

Function

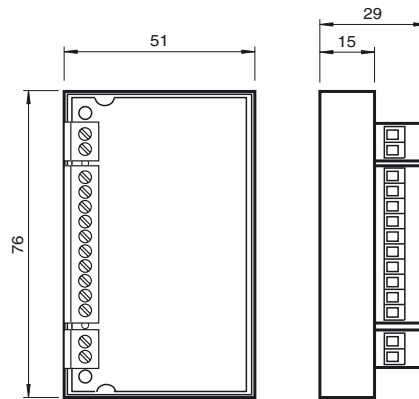
The AS-Interface module is ideal for integrating customer-specific electronics, for example light sensors or LED lights. The external auxiliary power supplies all the inputs and outputs, which are short-circuit proof and protected from overload. The connection between display and control elements and the AS-Interface circuit board can be made with screw plug terminals. The connection on the AS-Interface and external auxiliary power supply are also implemented with plug-in screw terminals.

An output overload is reported by the "periphery error" to the AS-Interface master. Communication over the AS-Interface remains in effect.

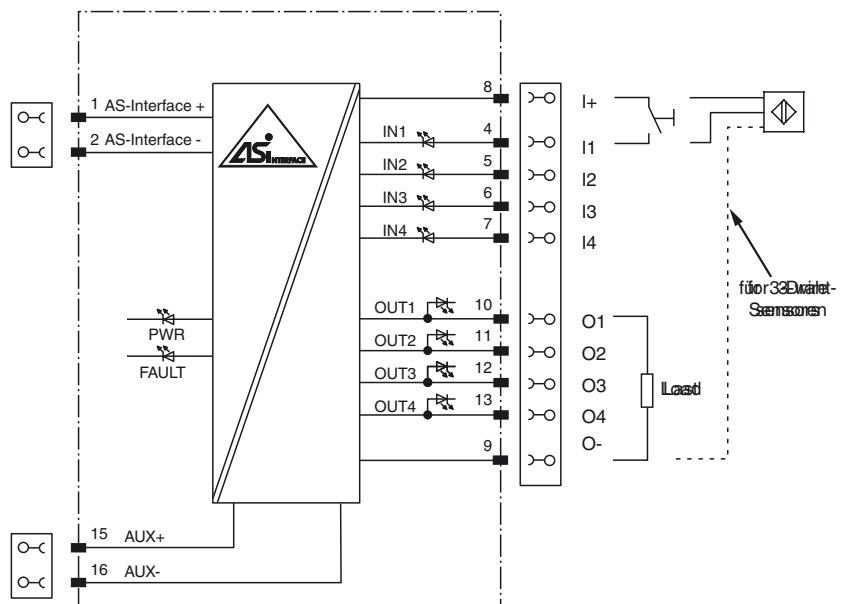
Note:

Communication monitoring is integrated to switch the outputs to no current if there is no communication on the AS-Interface line.

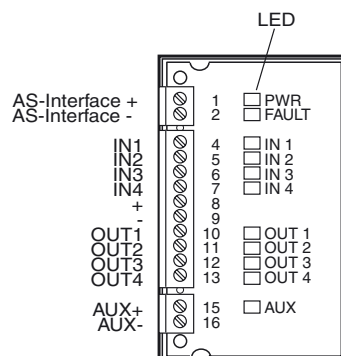
Dimensions



Electrical connection



Indicating / Operating means



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Technical data**General specifications**

| | |
|-------------------------------|----------------|
| Slave type | Standard slave |
| AS-Interface specification | V2.0 |
| Required master specification | ≥ V2.0 |
| UL File Number | E223772 |

Indicators/operating means

| | |
|-----------|---|
| LED FAULT | error display; LED red red: communication error or address is 0 red flashing: overload of outputs |
| LED PWR | AS-Interface voltage; LED green |
| 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

| | | |
|-------------------------|-------|---|
| Rated operating voltage | U_e | 26.5 ... 31.6 V from AS-Interface |
| Rated operating current | I_e | ≤ 30 mA |
| Protection class | | III |
| Surge protection | | U_{AUX} , U_{in} : Over voltage category III, safe isolated power supplies (PELV) |

Input

| | |
|------------------|---|
| Number/Type | 4 inputs for 2- or 3-wire sensors (PNP), DC |
| Supply | from external auxiliary voltage U_{AUX} |
| Voltage | 20 ... 30 V DC PELV |
| Input current | 5 mA (typically) |
| Switching point | according to EN 61131-2 Typ 1 |
| 0 (unattenuated) | ≤ 0.5 mA |
| 1 (attenuated) | ≥ 2 mA |
| Signal delay | < 2 ms (input/AS-Interface) |
| Signal frequency | ≤ 250 Hz |

Output

| | |
|-------------|---|
| Number/Type | 4 electronic outputs, PNP |
| Supply | from external auxiliary voltage U_{AUX} |
| Voltage | 20 ... 30 V DC PELV |
| Current | ≤ 100 mA per output, ≤ 140 mA total |

Directive conformity

| | |
|-------------------------------|---|
| Electromagnetic compatibility | |
| Directive 2014/30/EU | EN 61326-1:2013 EN 61000-6-4:2007 EN 62026-2:2015 |

Standard conformity

| | |
|----------------------|-------------------|
| Degree of protection | EN 60529:2000 |
| Fieldbus standard | EN 62026-2:2013 |
| Input | EN 61131-2:2015 |
| Emitted interference | EN 61000-6-4:2007 |
| AS-Interface | EN 62026-2:2013 |
| Noise immunity | EN 61326-1:2013 |

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) |
| Relative humidity | 85 % , noncondensing |
| Climatic conditions | For indoor use only |
| Altitude | ≤ 2000 m above MSL |
| Pollution degree | 2 |

Mechanical specifications

| | |
|--------------------------------------|--|
| Connection | screw terminals, removable rated connection capacity: rigid/flexible (with and without wire-end ferrules): 0.25 mm ² ... 1.5 mm ² In case of wire end ferrule with plastic sleeve: 0.25 mm ² ... 0.5 mm ² On connection of multiple conductors when using two conductors with the same cross section: Flexible with twin wire end ferrule: |
| Mass | 90 g |
| Mounting | Self-adhesive velcro for mounting enclosed |
| Tightening torque of clamping screws | 0.22 ... 0.25 Nm |

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

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