

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

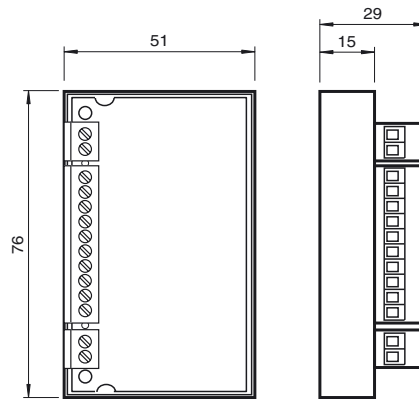
The AS-Interface module is ideal for integrating customer-specific electronics, for example light sensors or LED lights. The external auxiliary power supplies all the inputs and outputs, which are short-circuit proof and protected from overload. The connection between display and control elements and 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.

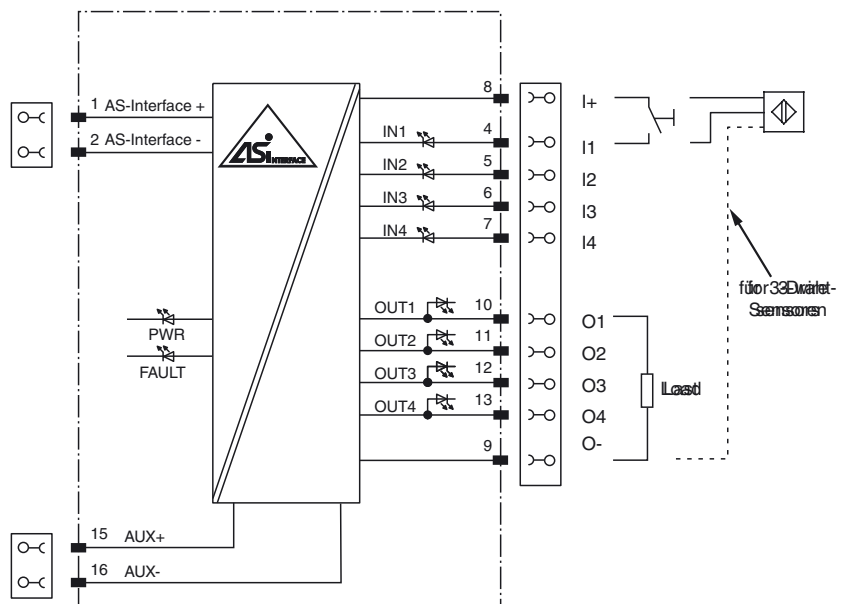
Note:

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

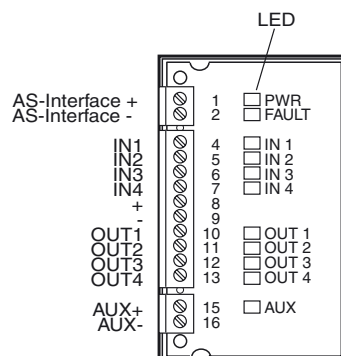
Dimensions



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