



Model number

VBA-4E4A-CB1-ZEJ/E2J

Printed circuit board module
4 inputs/4 outputs

Features

- Integrated communication monitoring function
- Inputs and outputs short-circuit and overload proof
- Supply of the inputs and the outputs from AS-Interface
- Function display for bus, inputs and outputs
- Connection via removable screw terminals

Function

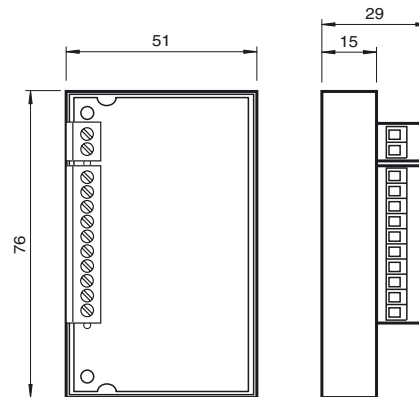
The AS-Interface connecting module is ideal for integrating custom electronics, such as illuminated pushbuttons or LED lights. The PCB is supplied with power entirely via AS-Interface. The inputs and outputs are resistant to short circuits and overloading. The display and control elements and AS-Interface are connected via cable strands.

A signal indicating an overload of the outputs is transmitted to the AS-Interface master via the "peripheral fault" function. The communication via AS-Interface remains unaffected.

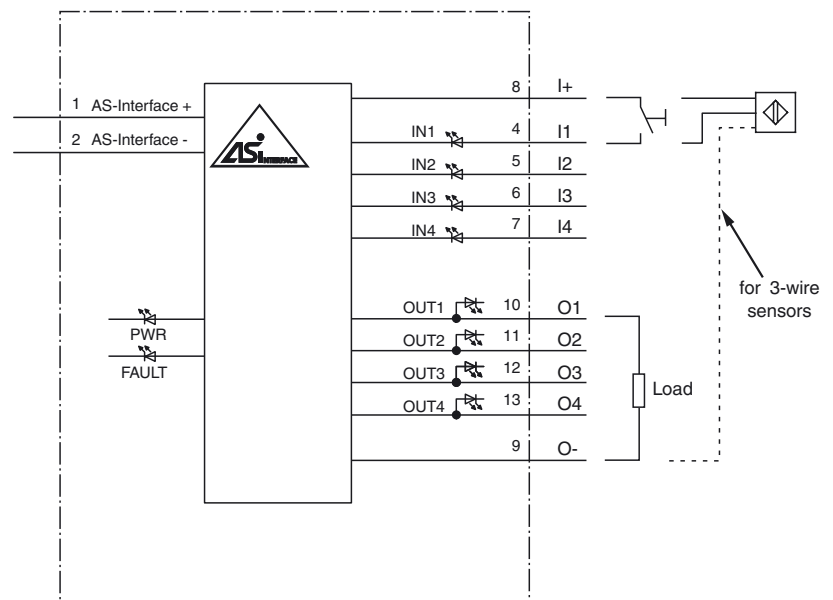
Note:

A communication monitoring function is integrated into the system. This function disconnects the outputs from the power supply when no communication is taking place on the AS-Interface line.

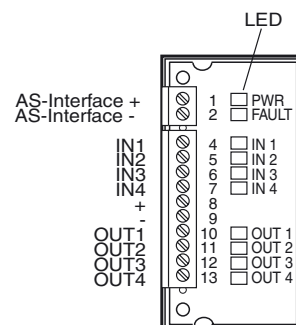
Dimensions



Electrical connection



Indicating / Operating means



Technical data**General specifications**

Slave type	A/B slave
AS-Interface specification	V3.0
Required master specification	V3.0
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 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 (without sensors) / max. 180 mA
Protection class		III
Surge protection		U_e : Over voltage category III, safe isolated power supplies (PELV)

Input

Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC
Supply	from AS-Interface
Voltage	21 ... 31 V
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)

Output

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

Programming instructions

Profile	S-7.A.7
IO code	7
ID code	A
ID1 code	7
ID2 code	7

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 = 0 monitoring = off, the outputs maintain the status if communication fails P0 = 1 monitoring = on, i.e. if communication fails, the outputs are deenergised (default settings)
P1	Input filter P1 = 0 input filter on, pulse suppression ≤ 2 ms P1 = 1 input filter off (default settings)
P2	Synchronous mode P2 = 0 synchronous mode on P2 = 1 synchronous mode off (default settings)
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
Tightening torque of clamping screws	0.22 ... 0.25 Nm

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

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