Model number

VBA-4E4A-CB1-ZEJ/E2J

Printed circuit board module
4 inputs/4 outputs

Features

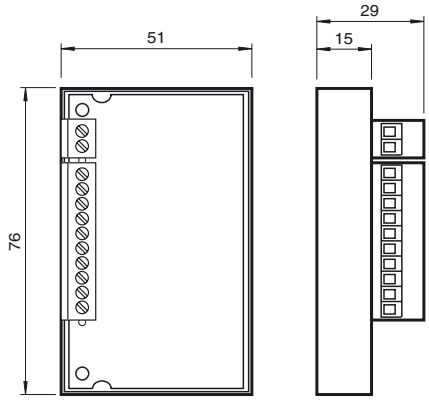
- Integrated communication monitoring function
- Inputs and outputs short-circuit and overload proof
- Supply of the inputs and the outputs from AS-Interface
- Function display for bus, inputs and outputs
- Connection via removable screw terminals

Function

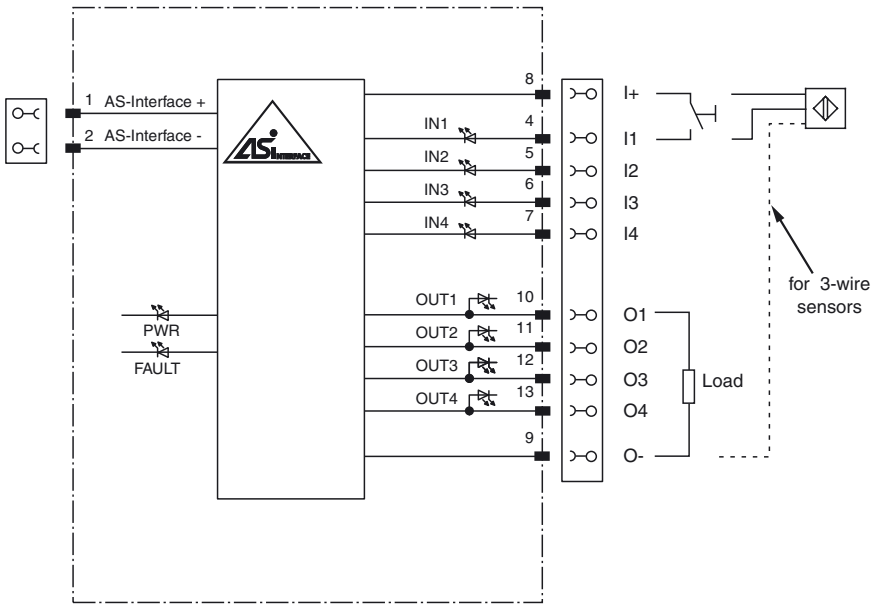
The internal AS-Interface I/O module is ideally suited to integrating customer-specific electronics, for example light sensors or LED lights. The printed circuit board is supplied entirely from the AS-Interface. The inputs and outputs are protected against short circuits and overload and the connection 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.

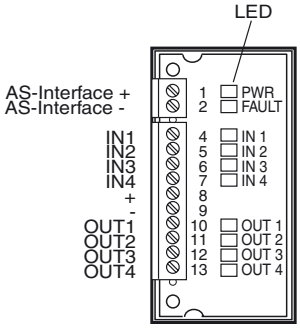
Dimensions



Electrical connection



Indicating / Operating means



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Technical data

General specifications		
Slave type		A/B slave
AS-Interface specification		V3.0
Required master specification		V3.0
UL File Number		E87056
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 (basic setting)
P1	Input filter P1 = 0 input filter on, pulse suppression ≤ 2 ms P1 = 1 input filter off (basic setting)
P2	Synchronous mode P2 = 0 synchronous mode on P2 = 1 synchronous mode off (basic setting)
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
Mass	90 g
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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