Model number

VBA-4E4A-CB10-ZJ/E1J-FL

Printed circuit board module
4 inputs/4 outputs

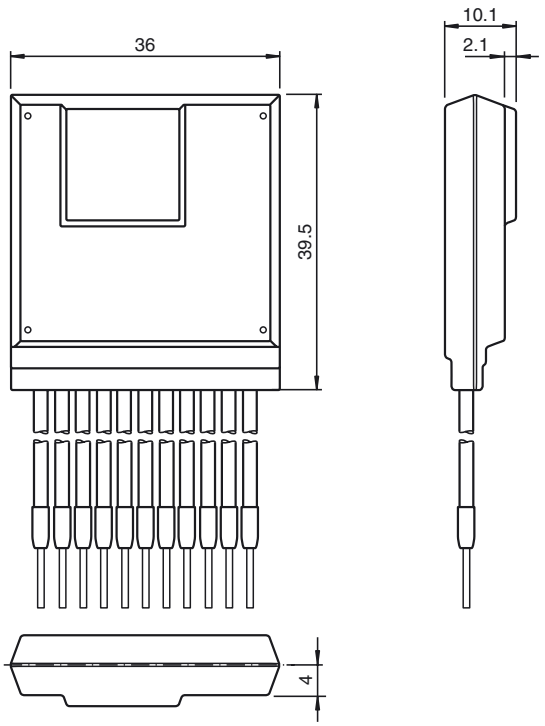
Features

- Integrated communication monitoring function
- 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 lead

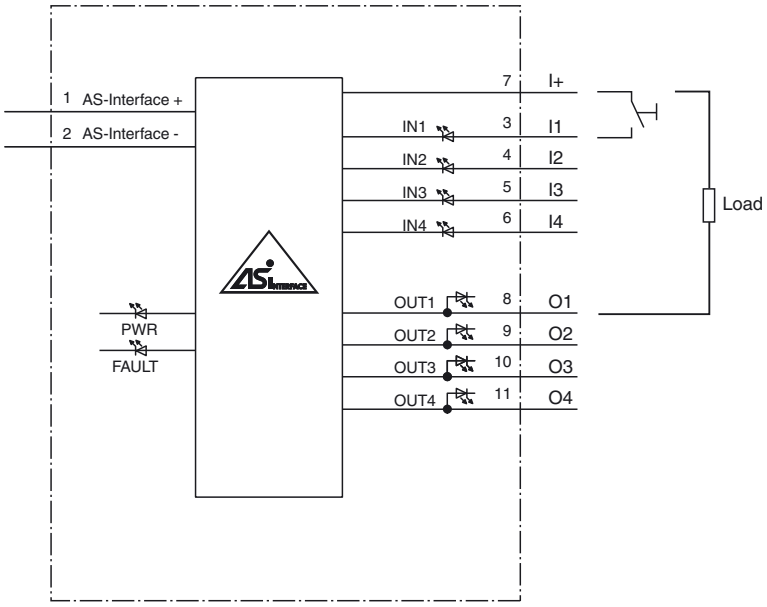
Function

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



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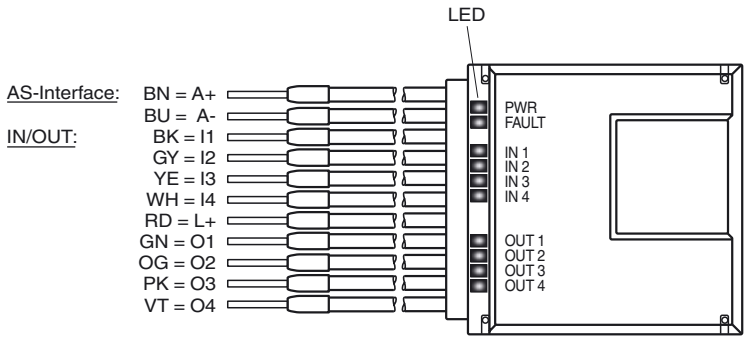
Indicating / Operating means



Technical data

General specifications		
Slave type		A/B slave
AS-Interface specification		V3.0
Required master specification		≥ V3.0
UL File Number		E223772
MTBF		267 a
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; green LED green: voltage OK flashing green: address 0
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 (PELV)
Rated operating current	I_e	≤ 40 mA (without inputs/outputs)/max. 160 mA
Protection class		III
Surge protection		U_e: overvoltage category II, safe isolated power supplies (PELV)
Input		
Number/Type		4 inputs for mechanical contacts
Supply		from AS-Interface
Voltage		12 ... 31 V
Input current		≤ 4 mA (limited internally)
Switching point		
0 (unattenuated)		≤ 0.15 mA
1 (attenuated)		≥ 1.3 mA
Signal delay		< 1 ms (input/AS-Interface)
Output		
Number/Type		4 electronic outputs, NPN, overload proof and short-circuit proof
Supply		from AS-Interface
Current		≤ 100 mA per output, ≤ 100 mA total
Voltage		12 ... 31 V
Usage category		DC-1 "general use" (ohmic and weak inductive loads in accordance with IEC 60947)
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013
Standard conformity		
Degree of protection		EN 60529:2000
Fieldbus standard		EN 62026-2:2013
Emitted interference		EN 61000-6-4:2007
AS-Interface		EN 62026-2:2013
Noise immunity		EN 61000-6-2:2005, EN 61326-1:2006, EN 62026-2:2013
Programming instructions		
Profile		S-7.A.7
IO code		7
ID code		A
ID1 code		7
ID2 code		7

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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	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 ... 70 °C (-13 ... 158 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)
Relative humidity	85 % , noncondensing
Climatic conditions	For indoor use only
Altitude	≤ 2000 m above MSL
Shock and impact resistance	30 g, 11 ms in 6 spatial directions, 3 shocks 10 g, 16 ms in 6 spatial directions, 1000 shocks
Vibration resistance	0.35 mm 10 ... 57 Hz , 5 g, 57 Hz ... 150 Hz, 10 cycles
Pollution degree	2
Mechanical specifications	
Degree of protection	IP20 according to EN 60529
Connection	200 mm, PVC cable 0.5 mm^2
Material	
Housing	Polyamide hot-melt adhesive
Mass	33 g
Note	This device is maintenance-free. If the device is used in a manner not specified by the manufaturer, the protection provided by the device may be impaired.
Approvals and certificates	
UL approval	Protection class IP20 is not included in the UL approval. The protection class is tested by Pepperl+Fuchs.

Notes

Do not connect inputs and outputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

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