

AS-Interface printed circuit board module

VBA-4E4A-CB10-ZEJ/E0J-FL

- 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

Printed circuit board module4 inputs/4 outputs

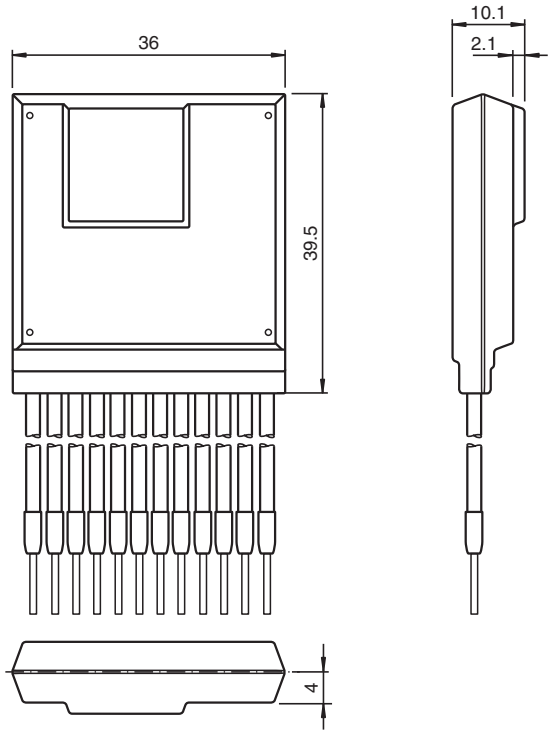
Function

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



Technical Data

General specifications

Release date: 2020-03-31 Date of issue: 2020-03-31 Filename: 324473_eng.pdf

Technical Data

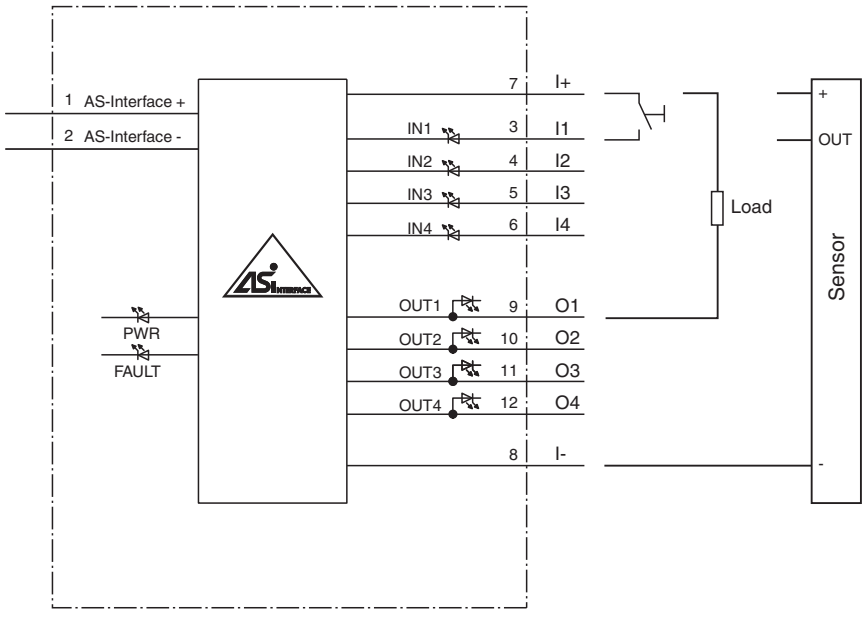
Slave type		A/B slave
AS-Interface specification		V3.0
Required master specification		≥ V3.0
UL File Number		E223772
MTBF		267 a
Indicators/operating means		
LED FAULT		error display; LED red red: communication error or address is 0 red flashing: overload of outputs
LED PWR		AS-Interface voltage; green 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 or 3-wire sensors (PNP), DC
Supply		from AS-Interface
Voltage		12 ... 31 V
Current loading capacity		≤ 100 mA Total including output current, overload and short-circuit proof
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
Voltage		12 ... 31 V
Current		≤ 100 mA per output, ≤ 100 mA in total, including input supply
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
Data bits (function via AS-Interface)		**input output**
D0		IN1 OUT1
D1		IN2 OUT2
D2		IN3 OUT3

Release date: 2020-03-31 Date of issue: 2020-03-31 Filename: 324473_eng.pdf

Technical Data

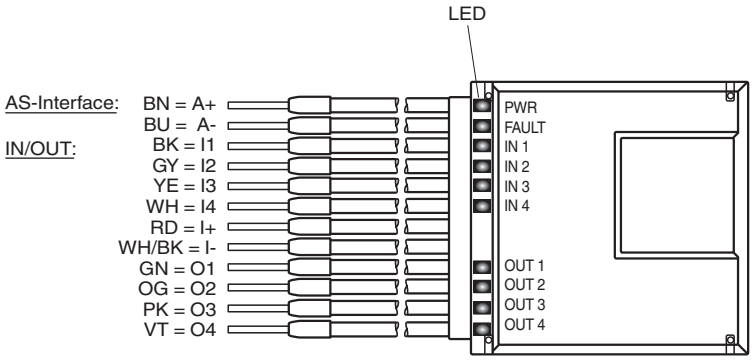
D3	IN4 OUT4
Parameter bits (programmable via AS-i)	**function**
P0	not used
P1	Input filter P1 = 0 input filter on, pulse suppression ≤ 2 ms P1 = 1 input filter off (default settings)
P2	Synchronous mode P2 = 0 synchronous mode on P2 = 1 synchronous mode off (default settings)
P3	not used
Approvals and certificates	
UL approval	Protection class IP20 is not included in the UL approval. The protection class is tested by Pepperl+Fuchs.
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	≤ 5000 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.

Connection



Release date: 2020-03-31 Date of issue: 2020-03-31 Filename: 324473_eng.pdf

Assembly



Release date: 2020-03-31 Date of issue: 2020-03-31 Filename: 324473_eng.pdf

Connection

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.

Release date: 2020-03-31 Date of issue: 2020-03-31 Filename: 324473_eng.pdf