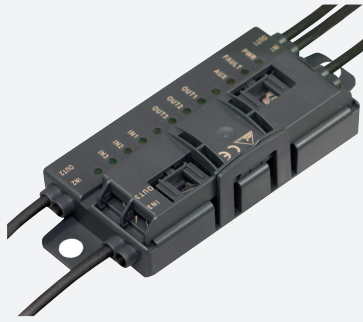


AS-Interface I/O module

VBA-4E3A-G20-ZEL/E2L-P5



- A/B slave with extended addressing possibility for up to 62 slaves
- Inputs for 3-wire sensors
- Power supply of the inputs and outputs from the external auxiliary voltage
- Communication monitoring
- Function display for bus, external auxiliary voltage, in- and outputs
- Cable piercing method with gold plated contact pins
- M12 connection, e.g., suitable for Lenze Smart Motor drives and SEW MOVI-SWITCH

G20 module for digital inputs/outputs, 4 inputs and 3 outputs



Function

The AS-Interface I/O module VBA-4E3A-G20-ZEL/E2L-P* is a field module with 4 inputs for 3-wire sensors and 3 electronic outputs. The outputs are overload and short-circuit protected.

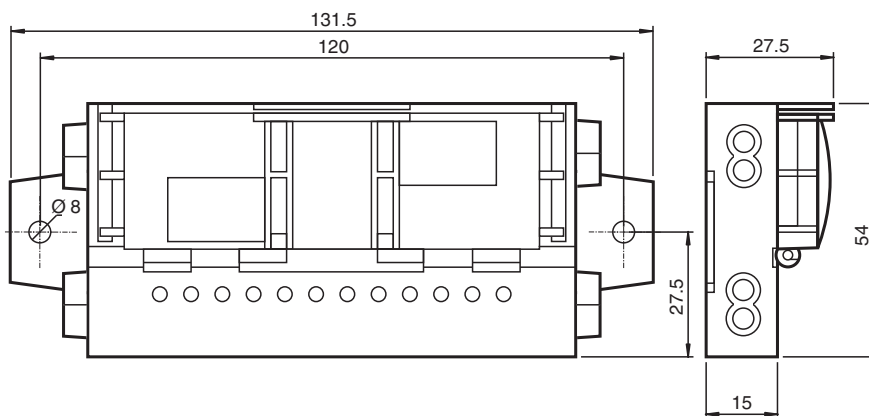
The compact housing can be installed directly in support profiles or conduits. The connection to the AS-Interface network and power supply is made using the AS-Interface flat cable and insulation piercing technology. The pivoted flat cable guide is secured using a snap-fit. No tools are required.. The inputs and outputs are connected via cable outputs with M12 round plug connectors. Power for the inputs and outputs is provided by the external auxiliary voltage UAUX.

The current switching state of the inputs and outputs is indicated by the IN and OUT LEDs. The PWR and FAULT LEDs indicate the status of the AS-Interface (normal operation, communication error, peripheral fault, address 0). The AUX LED indicates the external power supply.

Notes:

The communication monitor of the module deactivates the outputs if the AS-Interface does not communicate with the module for more than 40 ms. A signal indicating an overload of the outputs or the input supply or the absence of the external auxiliary voltage is also transmitted to the AS-Interface master via the 'peripheral fault' function. Communication via the AS-Interface continues.

Dimensions



Technical Data

General specifications

Slave type	A/B slave
AS-Interface specification	V3.0
Required master specification	≥ V2.1
UL File Number	E223772 "For use in NFPA 79 Applications only"
MTBF	110 a

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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PEPPERL+FUCHS

Technical Data

Indicators/operating means

LED FAULT	error display; LED red red: communication error or address is 0 red flashing: overload of sensor power supply or overload of outputs or external auxiliary voltage U_{AUX} missing
LED PWR	AS-Interface voltage; green LED green: voltage OK flashing green: address 0 or overload of sensor power supply or overload of outputs or external auxiliary voltage U_{AUX} missing
LED AUX	ext. auxiliary voltage U_{AUX} ; dual LED green/red green: voltage OK red: reverse voltage
LED IN	switching state (input); 4 LED yellow
LED OUT	Switching state (output); 3 LED yellow

Electrical specifications

Auxiliary voltage (output)	U_{AUX}	20 ... 30 V DC PELV
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 35 mA

Input

Number/Type	4 Inputs for 3-wire sensors (PNP), DC
Supply	from external auxiliary voltage U_{AUX}
Current loading capacity	500 mA , overload and short-circuit protected
Input current	≤ 8 mA (limited internally)
Switching point	according to DIN EN 61131-2 0 (undamped) ≤ 0.5 mA 1 (damped) ≥ 2.0 mA
Signal delay	< 1 ms (input/AS-Interface)

Output

Number/Type	3 electronic outputs, PNP, overload and short-circuit proof
Supply	from external auxiliary voltage U_{AUX}
Voltage	≥ ($U_{AUX} - 0.5$ V)
Current	2 A per output TB ≤ 40 °C: 6 A total TB ≤ 60 °C: OUT1+OUT2 max. 3 A, OUT3 max. 2 A

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
Input	EN 61131-2:2007
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

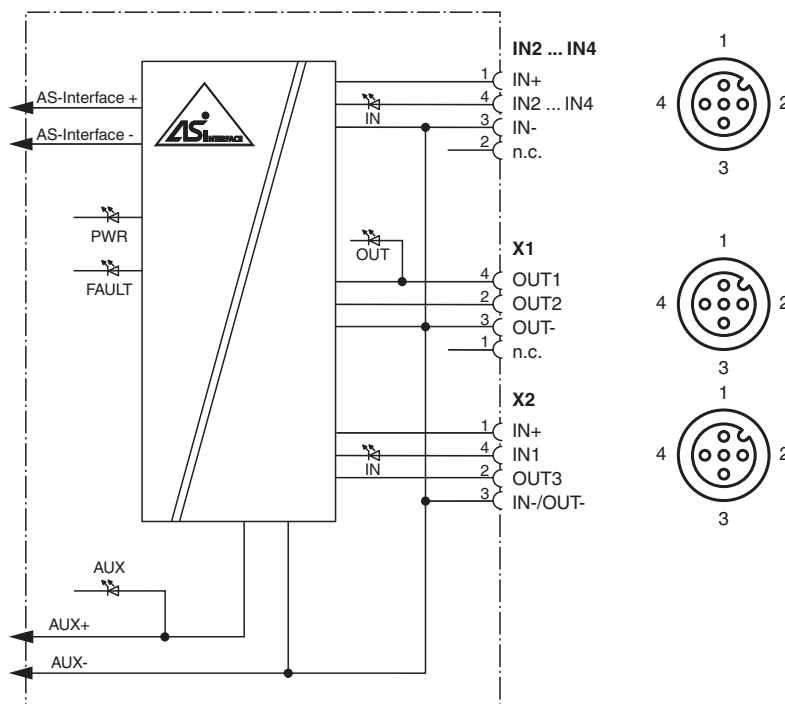
Programming instructions

Profile	S-7.A.E
IO code	7
ID code	A
ID1 code	7
ID2 code	E
Data bits (function via AS-Interface)	input output
D0	IN1 OUT1
D1	IN2 OUT2
D2	IN3 OUT3
D3	IN4 -
Parameter bits (programmable via AS-i)	function

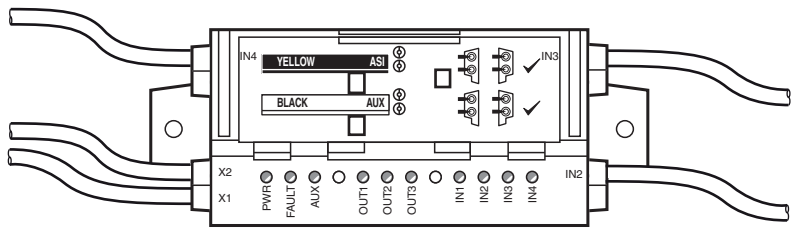
Technical Data

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)
Ambient conditions	
Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications	
Degree of protection	IP54 according to EN 60529
Connection	AS-Interface, AUX: Insulation piercing technology Yellow flat cable/black flat cable Inputs/outputs: M12 round plug connector in accordance with EN 61076-2-101 Inputs: LF type (4-pin, bushing contacts, screw lock, A-coded) Matching connector: LM type or similar Outputs: LF type (4-pin, bushing contacts, screw lock, A-coded) Matching connector: LM type or similar
Mass	260 g
Mounting	2 clips with $\varnothing$ 8 mm drill hole
Cable length	2 m
Note	The flat cable routing is designed for 100 actuation cycles

Connection



Assembly



Accessories

	VBP-HH1-V3.0-KIT	AS-Interface Handheld with accessory
	VAZ-PK/G20-1M-V1-G	Adapter cable G20 module/hand-held programming device
	VAZ-G20-MH	Mounting aid