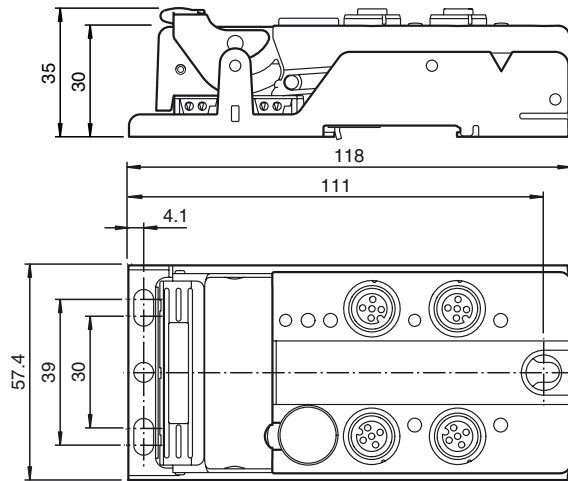
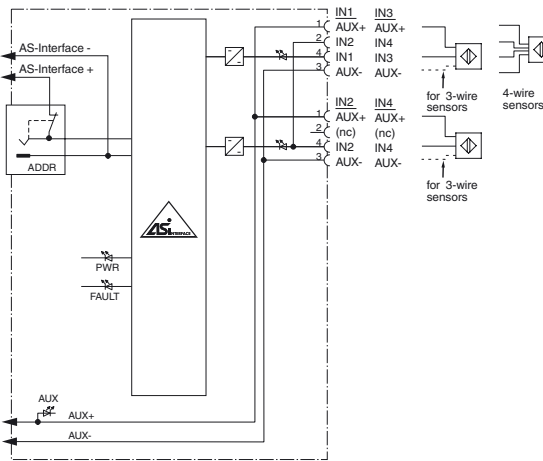




**Dimensions**



**Electrical connection**



**Model number**

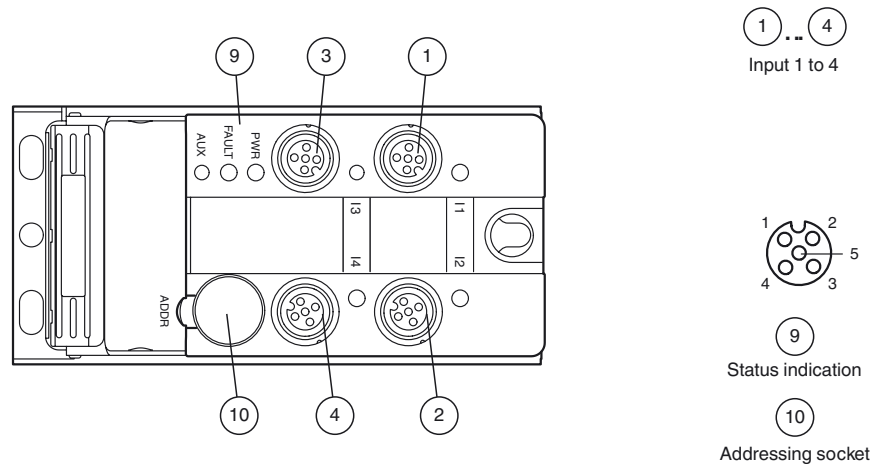
VBA-4E-G12-ZAL

G12 flat module  
4 inputs (PNP)

**Features**

- A/B slave with extended addressing possibility for up to 62 slaves
- One-piece housing with stainless steel base
- Installation without tools
- Metal threaded inserts with SPEED-CON technology
- Flat cable connection with cable piercing technique, variable flat cable guide
- Inputs for 2-, 3-, and 4-wire sensors
- Communication monitoring
- DIN rail mounting
- AS-Interface certificate

**Indicating / Operating means**



**Technical data**

**General specifications**

Slave type	A/B slave
AS-Interface specification	V3.0
Required master specification	≥ V2.1
UL File Number	E223772

**Functional safety related parameters**

MTTF <sub>d</sub>	330 a
Mission Time (T <sub>M</sub> )	20 a

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Diagnostic Coverage (DC)	0 %	
<b>Indicators/operating means</b>		
LED FAULT	error display; LED red red: communication error or address is 0 red flashing: overload of sensor supply	
LED PWR	AS-Interface voltage; green LED green: voltage OK flashing green: address 0	
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	
<b>Electrical specifications</b>		
Auxiliary voltage	$U_{AUX}$	24 V DC $\pm$ 15 % PELV
Rated operating voltage	$U_e$	26.5 ... 31.6 V from AS-Interface
Rated operating current	$I_e$	$\leq$ 40 mA
Protection class	III	
Surge protection	$U_{AUX}$ , $U_{in}$ : Over voltage category III, safe isolated power supplies (PELV) derived from mains up to 300 V AC line-to-neutral	
<b>Input</b>		
Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC option 2 inputs for 4-wire sensors (PNP), DC	
Supply	from external auxiliary voltage $U_{AUX}$	
Current loading capacity	$\leq$ 600 mA overload and short-circuit resistant	
Input current	$\leq$ 8 mA (limited internally)	
Switching point	according to DIN EN 61131-2 (Type 2)	
0 (unattenuated)	$\leq$ 2 mA	
1 (attenuated)	$\geq$ 6 mA	
Signal delay	$<$ 1 ms (input/AS-Interface)	
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU	EN 62026-2:2013	
<b>Standard conformity</b>		
Degree of protection	EN 60529:2000	
Fieldbus standard	EN 62026-2:2013	
Input	EN 61131-2	
Emitted interference	EN 61000-6-4:2007	
AS-Interface	EN 62026-2:2013	
Noise immunity	EN 61000-6-2:2005 EN 62026-2:2013	
<b>Programming instructions</b>		
Profile	S-0.A.2	
IO code	0	
ID code	A	
ID1 code	7	
ID2 code	2	
<b>Data bits</b> (function via AS-Interface)	<b>input</b>	<b>output</b>
D0	IN1	-
D1	IN2	-
D2	IN3	-
D3	IN4	-
<b>Parameter bits</b> (programmable via AS-i)	<b>function</b>	
P0	not used	
P1	Input filter P1 = 0 input filter on, pulse suppression $\leq$ 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	
<b>Ambient conditions</b>		
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	$\leq$ 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	0.75 mm 10 ... 57 Hz , 5 g 57 ... 150 Hz, 20 cycles	
Pollution degree	3	
<b>Mechanical specifications</b>		
Degree of protection	IP67	
Connection	cable piercing method flat cable yellow inputs: M12 round connector	
<b>Material</b>		
Housing	PBT	
Mass	200 g	
Tightening torque, cable gland	0.4 Nm	

## Function

The VBA-4E-G12-ZAJ is an AS-Interface trigger module with 4 inputs. 2- and 3-wire sensors as well as mechanical contacts can be connected to the plus switching electronic inputs.

The solid housing permits fast mounting without tools as well as easy removal without tools. The stainless steel shell and the cast housing ensure durability and a high protection category.

The connection to the AS-Interface cable is achieved via penetration technology in the integrated flat cable. The insert for the flat cables can be turned in two orientations.

All connections to inputs are implemented via metal inserts for high stability. The connection to the sensors is achieved via a M12 x 1 circular connector with SPEEDCON quick locking option.

The inputs and the connected sensors are supplied via an external power source (AUX). To indicate the current switching state there is an LED for each channel fitted to the top of the module.

An LED to indicate the AS-Interface voltage and that the module has an address of 0 is available, another indicates errors in the AS-Interface communication as well as periphery faults.

This module can be mounted in any position using three screws or can be snapped onto the DIN rail using the stainless steel holder.

## Accessories

### VBP-HH1-V3.0-KIT

AS-Interface Handheld with accessory

### VAZ-V1-B3

Blind plug for M12 sockets

### VBP-HH1-V3.0

AS-Interface Handheld

### VAZ-PK-1,5M-V1-G

Adapter cable module/hand-held programming device

### VAZ-CLIP-G12

lock for G12 module

Mounting

Mounting plate

**Notes**

For 4-wire sensors, it is only possible to use plug-in slot IN1 or IN3 for inputs 1+2 or 3+4 (jumped internally).

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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