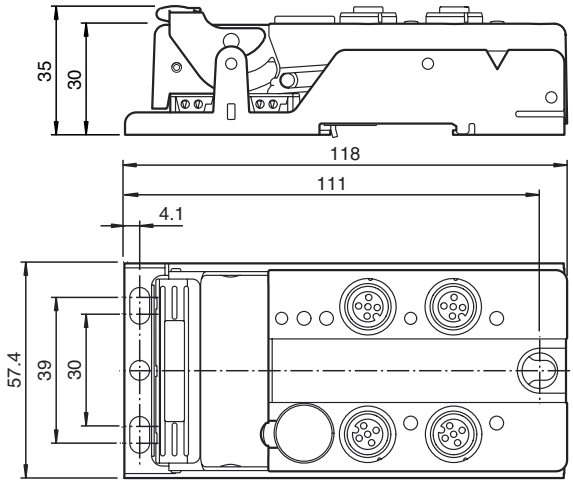
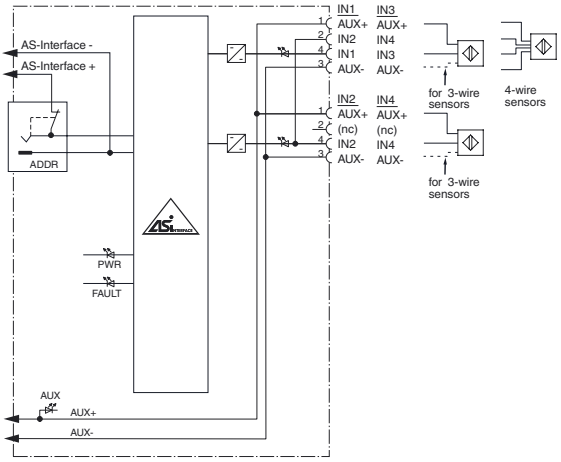
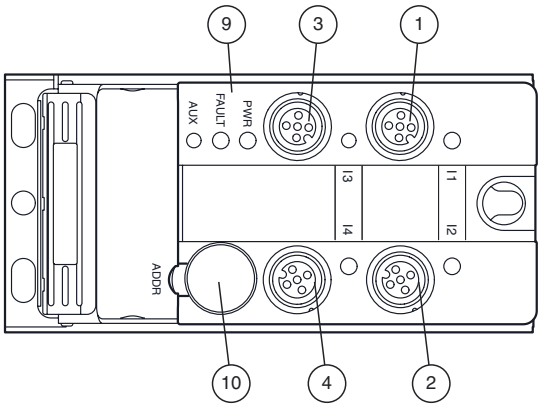
Dimensions



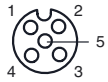
Electrical connection



Indicating / Operating means



(1) .. (4) Input 1 to 4



(9) Status indication

(10) Addressing socket

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

Technical data

General specifications	
Slave type	A/B slave
AS-Interface specification	V3.0
Required master specification	≥ V2.1
UL File Number	E87056
Functional safety related parameters	
$MTTF_d$	330 a
Mission Time (T_M)	20 a

Release date: 2013-12-12 13:58 Date of issue: 2015-02-05 200505_eng.xml

Diagnostic Coverage (DC)		0 %
Indicators/operating means		
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
Electrical specifications		
Auxiliary voltage	U_{AUX}	24 V DC ± 15 % PELV
Rated operating voltage	U_e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I_e	≤ 40 mA
Protection class		III
Input		
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		≤ 600 mA overload and short-circuit resistant
Input current		≤ 8 mA (limited internally)
Switching point		according to DIN EN 61131-2 (Type 2)
0 (unattenuated)		≤ 2 mA
1 (attenuated)		≥ 6 mA
Signal delay		< 1 ms (input/AS-Interface)
Programming instructions		
Profile		S-0.A.2
IO code		0
ID code		A
ID1 code		7
ID2 code		2
Data bits (function via AS-Interface)		**input** / **output**
D0		IN1 / -
D1		IN2 / -
D2		IN3 / -
D3		IN4 / -
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 (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 ... 70 °C (-13 ... 158 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
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
Mechanical specifications		
Degree of protection		IP67
Connection		cable piercing method flat cable yellow inputs: M12 round connector
Material		
Housing		PBT
Mass		200 g
Mounting		Mounting base
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 50295:1999
Standard conformity		
Noise immunity		EN 61000-6-2:2005, EN 50295:1999
Emitted interference		EN 61000-6-4:2007
Input		EN 61131-2
Degree of protection		EN 60529
Fieldbus standard		EN 50295, IEC 62026-2

Notes

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

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

Release date: 2013-12-12 13:58 Date of issue: 2015-02-05 200505_eng.xml

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: 2013-12-12 13:58 Date of issue: 2015-02-05 200505_eng.xml