

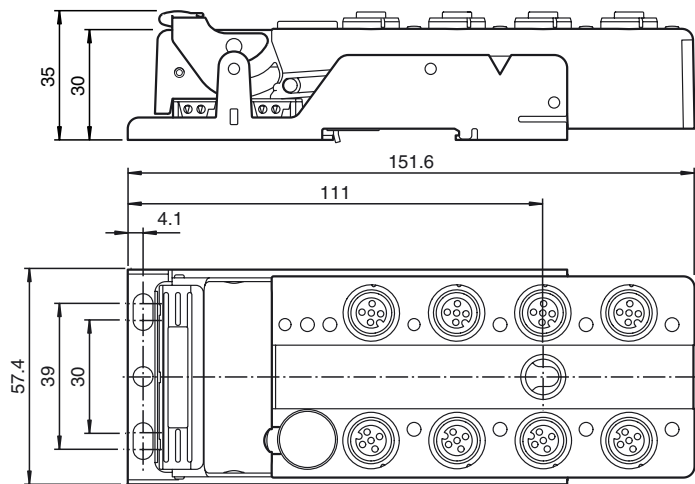
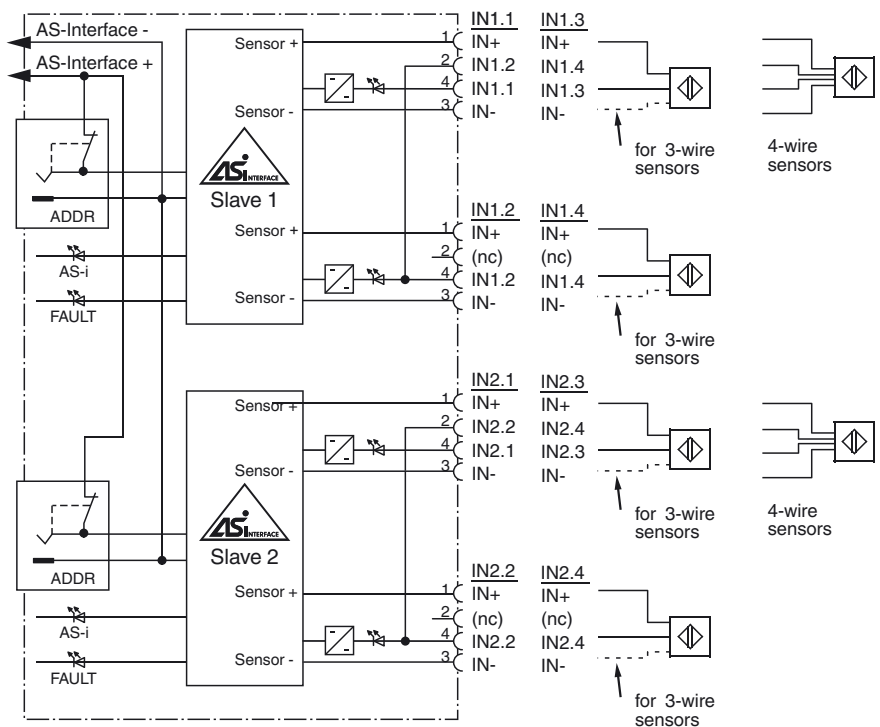
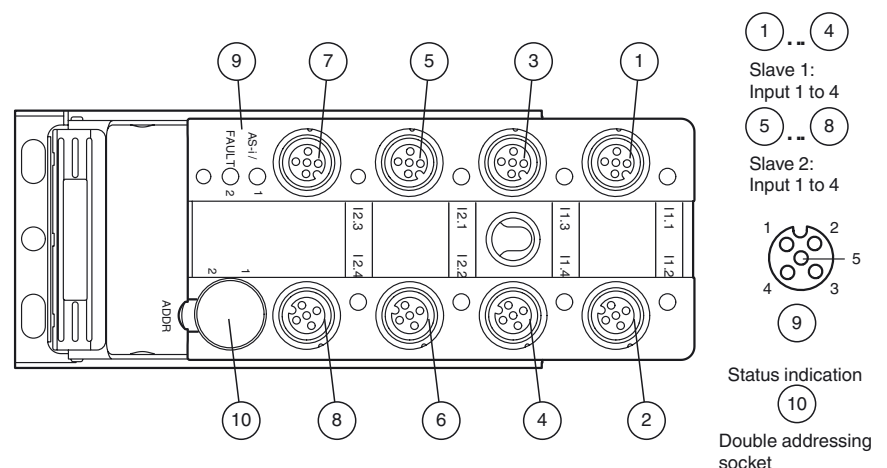


62

Spec 2.1

Model number**VBA-4E4E-G12-ZAJ**G12 flat module
2 x 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
- Communication monitoring, configurable
- Inputs for 2-, 3-, and 4-wire sensors
- DIN rail mounting
- AS-Interface certificate
- Automatic addressing with latest masters in the event of replacement

Dimensions**Electrical connection****Indicating / Operating means**

Technical data

General specifications

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

Functional safety related parameters

MTTF _d	60 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

LED PWR/FAULT	2 Dual LEDs green/red green: AS-Interface voltage red: Communication error yellow/red flashing: Address 0 green/red flashing: Sensor supply overload
LED IN	switching state (input); 8 LED yellow

Electrical specifications

Rated operating voltage	U _e	26.5 ... 31.6 V from AS-Interface
Rated operating current	I _e	≤ 80 mA (without sensors) / max. 280 mA
Protection class		III
Surge protection	U _e :	Over voltage category III, safe isolated power supplies (PELV) derived from mains up to 300 V AC line-to-neutral

Input

Number/Type	2x 4 inputs for 2- or 3-wire sensors (PNP), DC alternative 2x 2 inputs for 4-wire sensors (PNP), DC
Supply	from AS-Interface
Voltage	21 ... 31 V
Current loading capacity	≤ 200 mA, overload and short-circuit protected
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)

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 62026-2:2013 EN 61000-6-2:2005, EN 61000-6-4:2007

Standard conformity

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

Programming instructions

Profile	S-0.A.2
IO code	0
ID code	A
ID1 code	Slave 1 Slave 2 1 2
ID2 code	2

Data bits (function via AS-Interface)

	Input slave 1	Input slave 2
D0	IN1.1	IN2.1
D1	IN1.2	IN2.2
D2	IN1.3	IN2.3
D3	IN1.4	IN2.4

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	0.75 mm 10 ... 57 Hz, 5 g 57 ... 150 Hz, 20 cycles
Pollution degree	3

Mechanical specifications

Function

The VBA-4E4E-G12-ZAJ is an AS-Interface input module with 8 inputs. The input module is equipped with 2 separate AS-Interface chips and uses 2 A/B addresses. In the delivered state, both slave addresses use the address 0. The second slave is deactivated until the first slave is addressed. Duplicate addressing is avoided in this way. 2 and 3-wire sensors can also be connected as mechanical contacts to the PNP electronic inputs.

The one-piece enclosure makes fast mounting possible completely without the use of tools as well as easy removal also without the use of tools. The stainless steel half shell and cast enclosure ensure maximum durability and a high degree of protection.

Connection to the AS-Interface line is achieved through insulation-piercing technology into the laid flat cable. Accordingly, the flat cable can be turned in two directions for the application.

Metal inserts ensure that all connections to the inputs are made with a high degree of stability. The connections to the sensors are made via an M12 x 1 round plug connector with the option with SPEEDCON technology.

The supply to the inputs and the connected sensors is fed from the internal supply of the module (from AS-Interface).

An LED, which is attached to the top of the module, is available to display the current switching state of every input.

A dual LED to indicate the particular AS-Interface voltage and the display, which has the module address 0, is available, and another dual LED indicates errors in the relevant AS-Interface communication and peripheral errors. The input module has a dual addressing jack.

This module can be mounted in any position with three screws or snapped onto a standard DIN rail with the stainless steel bracket.

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

Degree of protection	IP67
Connection	cable piercing method flat cable yellow inputs: M12 round connector
Material	
Housing	PBT
Mass	230 g
Tightening torque, cable gland	0.4 Nm
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.