



ECOLAB

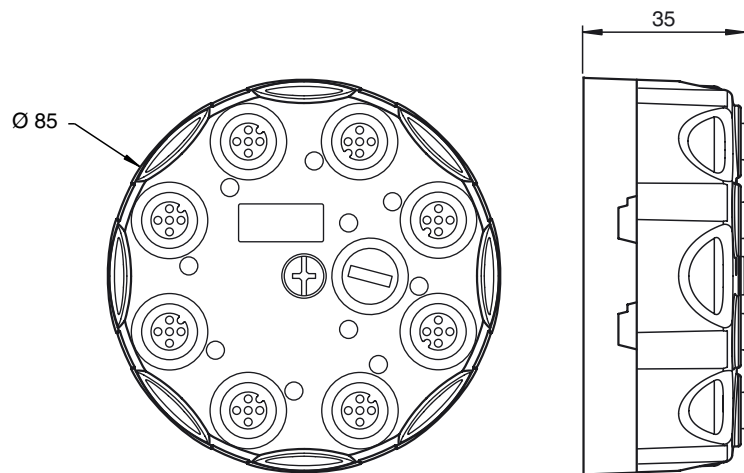
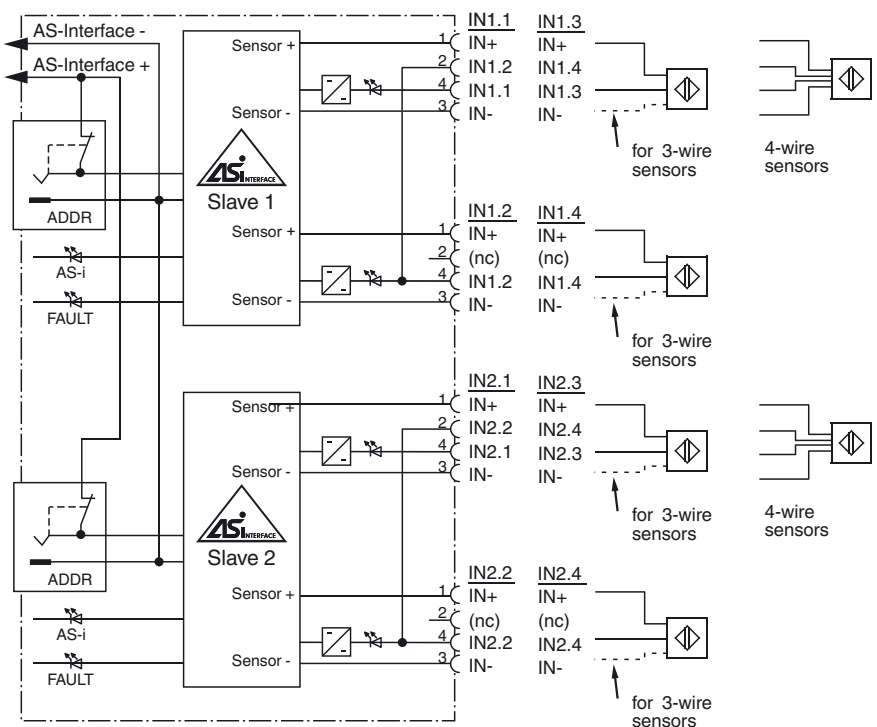
Model number**VBA-4E4E-G11-ZAJ-F**

G11 module

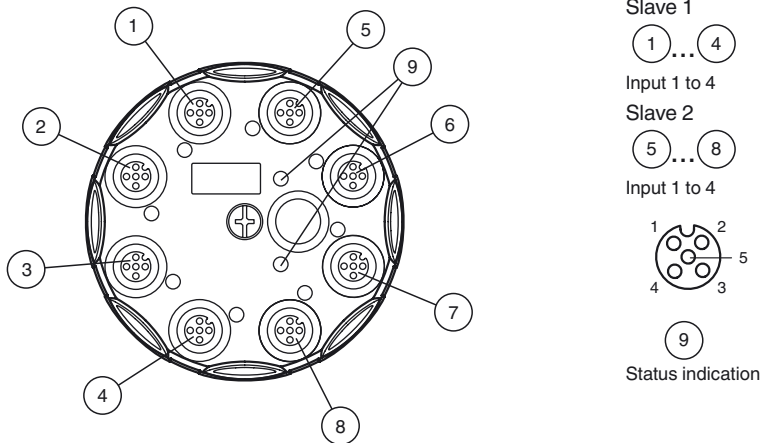
2 x 4 inputs

Features

- Inputs for 2-, 3-, and 4-wire sensors
- Supply of sensors from AS-Interface
- Function display for bus and inputs
- Degree of protection IP68 / IP69K
- Communication monitoring
- Cable piercing method with gold plated contact pins
- AS-Interface POWER24

Dimensions**Electrical connection**

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 _d	120 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

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

Electrical specifications

Rated operating voltage	U _e	18,0 ... 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)

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	12 ... 31 V
Current loading capacity	≤ 200 mA, overload and short-circuit protected
Input current	≤ 9 mA (limited internally)
Switching point	according to DIN EN 61131-2 (Type 2)
0 (unattenuated)	≤ 3 mA
1 (attenuated)	≥ 5 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 61131-2:2007
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-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

Function

The VBA-4E4E-G12-ZAJ is an AS-Interface switch-on module with 8 inputs. The switch-on 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 housing with a central screw enables fast mounting on the base plate.

The connection to the sensors is via an M12x1 plug-in connection on the top side of the device. The AS-Interface flat cable is connected via the insulation piercing technology on the underside of the module.

The inputs and the connected sensors are powered by the internal supply of the module (from the AS-Interface).

The current switching state of each input is indicated via an IN LED. The AS-i/FAULT LEDs indicate the status of the AS-Interface (normal operation, communication error, peripheral fault, address 0). The switch-on module has a double addressing jack and is compatible with AS-Interface POWER24.

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-FK-S-BK-SEAL

AS-Interface flat cable seal

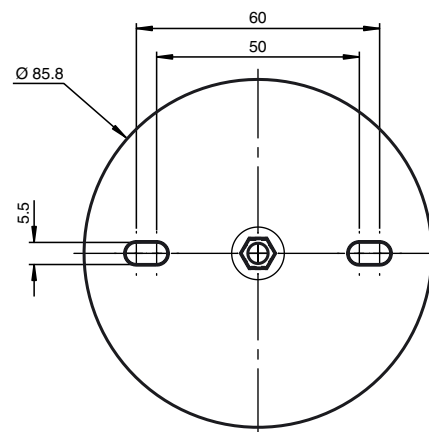
D1	IN1.2	IN2.2
D2	IN1.3	IN2.3
D3	IN1.4	IN2.4
Parameter bits (programmable via AS-i)		function
P0	not used	
P1	Input filter P1 = 0 input filter on, pulse suppression ≤ 2 ms P1 = 1 input filter off (default settings)	
P2	Synchronous mode P2 = 0 synchronous mode on P2 = 1 synchronous mode off (default settings)	
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, 6 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 ... 2000 Hz, 10 cycles	
Pollution degree	3	
Mechanical specifications		
Degree of protection	IP68 / IP69K	
Connection	AS-Interface: AS-Interface flat cable Inputs: M12 round connector	
Material		
Housing	PBT PC	
Mounting screw	Stainless steel 1.4305 / AISI 303	
Mass	200 g	
Tightening torque, housing screws	1.8 Nm	
Tightening torque, cable gland	0.4 Nm	
Mounting	Mounting plate	

Notes

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.

Mounting instructions

Screw the device onto a level mounting surface using two M5 attachment screws. The attachment screws are not included.



Screw a blind plug onto spare connections to ensure the protection category.