



ECOLAB

Model number

VBA-4E-G11-ZAJ-V1

G11 module
4 inputs

Features

- Inputs for 2-, 3-, and 4-wire sensors
- Supply of sensors from AS-Interface
- Function display for bus and inputs
- Communication monitoring
- Degree of protection IP68 / IP69K
- AS-Interface POWER24

Function

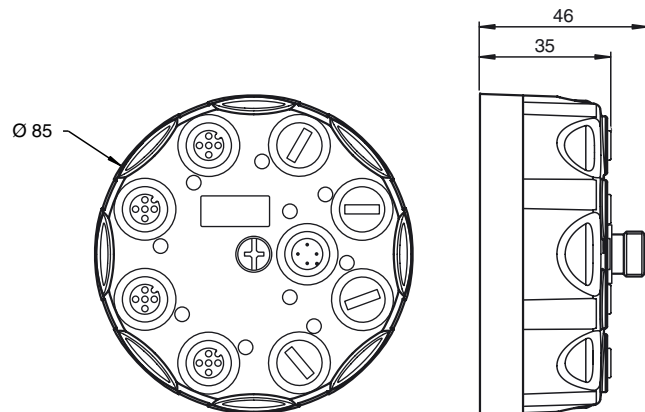
The VBA-4E-G11-ZAJ-V1 is an AS-Interface I/O module with 4 inputs. 2, 3 and 4 wire sensors can also be connected as mechanical contacts to the 4 sourcing electronic inputs. The housing with a central screw enables fast mounting on the base plate.

The connection to the AS-Interface cable and to the sensors/actuators is via M12x1 plug-in connections on the top side of the device.

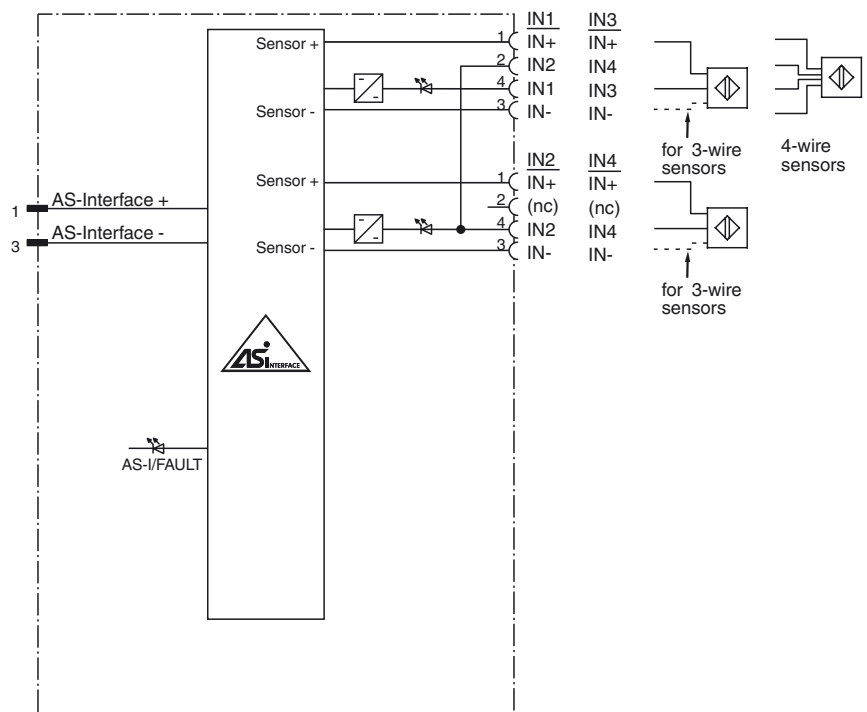
The inputs and the connected sensors are powered by the internal supply of the module (from the AS-Interface).

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

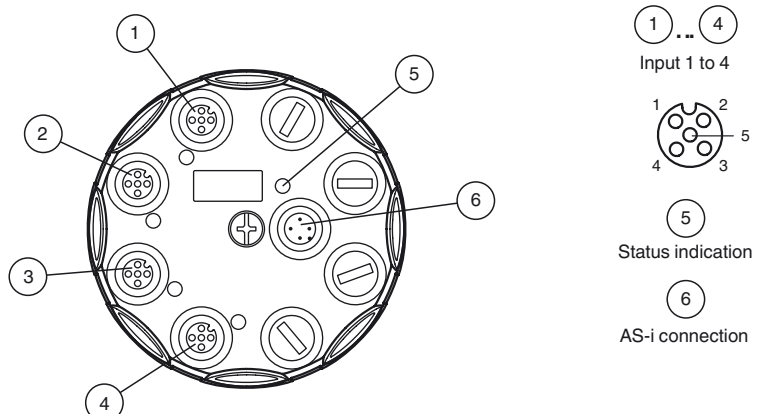
Dimensions



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	Status display; multi-colour LED Green: normal operation Red: communication fault Flashing yellow/red: address 0 Flashing green/red: sensor supply overload
LED IN	switching state (input); 4 LED yellow

Electrical specifications

Rated operating voltage	U _e	18,0 ... 31.6 V from AS-Interface
Rated operating current	I _e	≤ 40 mA (without sensors) / max. 240 mA
Protection class		III
Surge protection	U _e :	Over voltage category III, safe isolated power supplies (PELV)

Input

Number/Type	4 inputs for 2- or 3-wire sensors (PNP), DC option 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	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 (default settings)
P2	not used
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

Degree of protection	IP68 / IP69K
Connection	AS-Interface: M12 round connector Inputs: M12 round connector

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

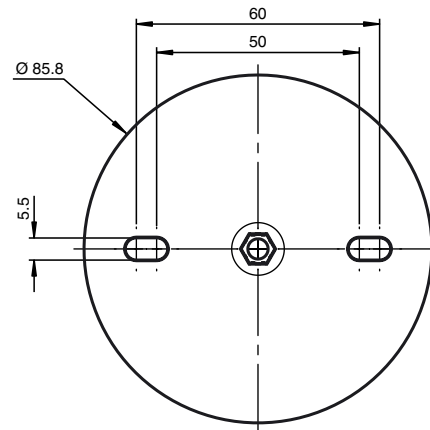
Material	
Housing	PBT PC
Mounting screw	Stainless steel 1.4305 / AISI 303
Mass	200 g
Tightening torque, housing screws	1.8 Nm
Tightening torque, cable gland	0.4 Nm
Mounting	Mounting plate

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.