Model number

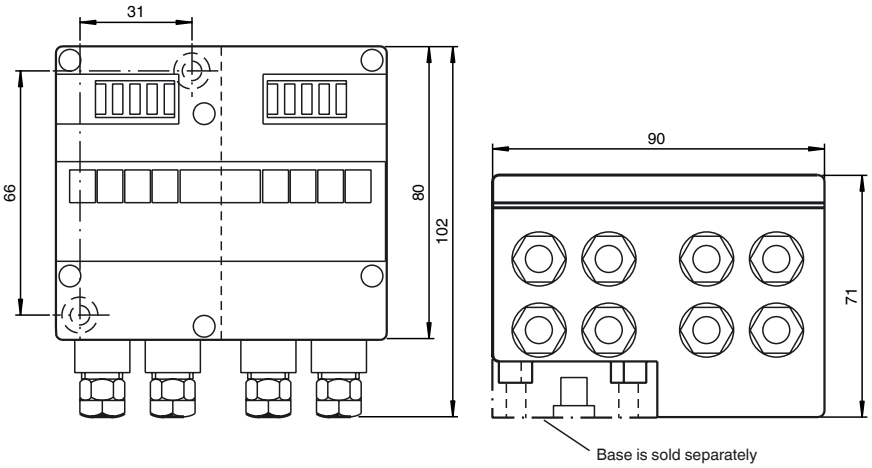
VBA-4E3A-G4-ZE/E2

G4 module IP65
4 inputs (PNP) and 3 electronic outputs

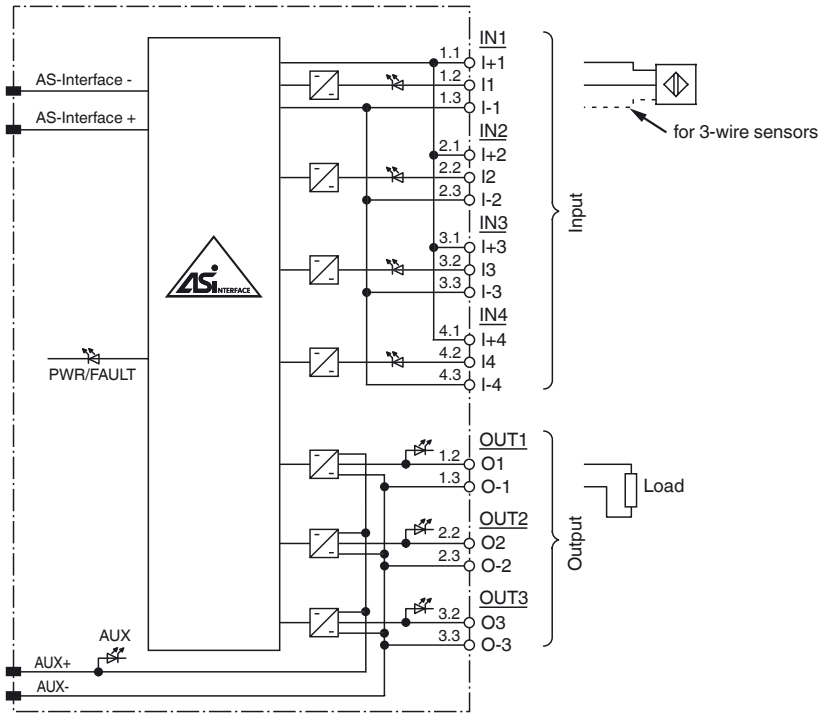
Features

- Degree of protection IP65
- A/B slave with extended addressing possibility for up to 62 slaves
- Flat or round cable connection (via standardized EEMS base, not included with delivery)
- Cable piercing method for flat cable
- Inputs for 2- and 3-wire sensors
- Power supply of outputs from the external auxiliary voltage
- Power supply of inputs from the module
- Function display for bus, ext. auxiliary voltage, inputs and outputs
- LED indicator for overload on sensor supply

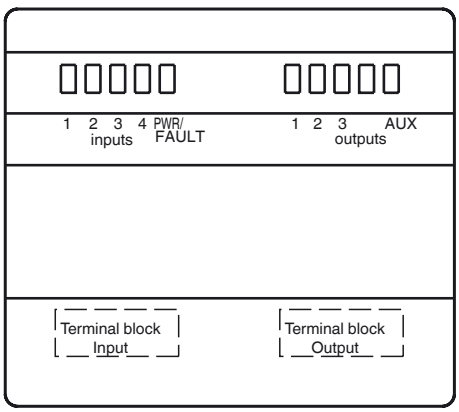
Dimensions



Electrical connection



Indicating / Operating means



Release date: 2015-10-21 13:10 Date of issue: 2015-10-21 088725_eng.xml

Technical data

General specifications		
Slave type		A/B slave
AS-Interface specification		V3.0
Required master specification		≥ V2.1
UL File Number		E223772
Indicators/operating means		
LED PWR/FAULT		dual LED green/red green: AS-Interface voltage red: communication error or address 0 green/red flashing: overload sensor supply or outputs
LED AUX		ext. auxiliary voltage U_{AUX} ; LED green
LED IN		switching state (input); 4 LED yellow
LED OUT		Switching state (output); 3 LED yellow
Electrical specifications		
Auxiliary voltage (output)	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 (without sensors) / max. 240 mA
Protection class		III
Surge protection		U_{AUX}, U_{in}: Over voltage category III, safe isolated power supplies (PELV)
Input		
Number/Type		4 inputs for 2- or 3-wire sensors (PNP), DC
Supply		from AS-Interface
Voltage		21 ... 31 V
Current loading capacity		≤ 180 mA (T_B ≤ 40 °C), ≤ 140 mA (T_B ≤ 60 °C), 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
Output		
Number/Type		3 electronic outputs, PNP, overload and short-circuit proof
Supply		from external auxiliary voltage U_{AUX}
Current		4 A total OUT 1, OUT 2: 2 A per output OUT 3: 1.5 A
Voltage		≥ (U_{AUX} - 0.5 V)
Programming instructions		
Profile		S-7.A.0
IO code		7
ID code		A
ID1 code		7
ID2 code		0

Data bits (function via AS-Interface)	**input**	**output**
D0	IN1	OUT1
D1	IN2	OUT2
D2	IN3	OUT3
D3	IN4	-

Parameter bits (programmable via AS-i)	**function**
P0	not used
P1	not used
P2	not used
P3	not used

Ambient conditions		
Ambient temperature		-25 ... 60 °C (-13 ... 140 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Relative humidity		85 % , noncondensing
Climatic conditions		For indoor use only
Altitude		≤ 2000 m above MSL
Pollution Degree		3
Mechanical specifications		
Degree of protection		IP65
Connection		cable piercing method or terminal compartment yellow flat cable/black flat cable or standard round cable inputs/outputs:M12 x 1.5 cable glands and cage tension spring terminals
Material		
Housing		PA 6 GF30
Mass		350 g
Tightening torque, housing screws		0.8 Nm
Mounting		DIN rail or screw mounting
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 50295:1999

Function

The VBA-4E3A-G4-ZE/E2 is an AS-Interface coupling module with four inputs and three outputs. Mechanical contacts and 2- and 3-wire sensors can be connected to the inputs. The sensors are supplied via the module. The outputs are electronic outputs, which can be loaded to 24 V DC and 2 A or 1.5 A per output (total load < 4 A).
The G4 module is especially suitable for rough conditions. Sensors and actuators attach to cable glands and cage tension spring terminals thus making the installation especially user-friendly. For pre-addressing the module it can be plugged directly onto the adapter of the hand-held programming device VBP-HH1.
The current switching state of each channel is indicated by an LED, located on the module's top side. In the case of communication errors on the bus, the outputs are de-energised via an integrated watchdog.
Both flat and round cables can be used for the AS-Interface transmission line and the external 24 V DC power supply. Use the U-G1FF base for the AS-Interface flat cable. The AS-Interface standardised EEMS interface, uses the cable piercing method to connect both the yellow and black flat cables.
Use the U-G1PP base for the round cable. The AS-Interface-cable as well as the external power supply may be connected within this base.

Note:
The device incorporates communication monitoring, which switches off power to the outputs if no communication has taken place on the AS-Interface line for longer than 40 ms.
An overloading of the internal input supply or of the outputs is signalled to the AS-Interface master via the "Peripheral fault" function. Communication via the AS-Interface remains intact.

Accessories

VBP-HH1-V3.0-KIT
AS-Interface Handheld with accessory

VBP-HH1-V3.0
AS-Interface Handheld

VAZ-G4-B1
Blind plug M12

Matching system components

U-G1FF
AS-Interface module mounting base for connection to flat cable (AS-Interface and external auxiliary power)

U-G1PP
AS-Interface module mounting base for connection to round cable (AS-Interface and external auxiliary power)

Release date: 2015-10-21 13:10 Date of issue: 2015-10-21 088725_eng.xml

Standard conformity	
Noise immunity	EN 61000-6-2:2005
Emitted interference	EN 61000-6-4:2007
Input	EN 61131-2:2007
Degree of protection	EN 60529:2000
Fieldbus standard	EN 50295:1999, IEC 62026-2:2006

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.

Release date: 2015-10-21 13:10 Date of issue: 2015-10-21 088725_eng.xml