



ECOLAB

Model number

VBA-2A-G10-E2L-1M-2V1-W

G10 ultra compact module
2 outputs

Features

- Ultra-compact enclosure
- Gold-plated and machined contacts
- One piece housing
- Degree of protection IP68 / IP69K
- Direct connection via cable outlet

Function

The AS-Interface G10 ultra-compact output-module is suitable for the remote connection of actuators within very limited space. The one-piece enclosure has the protection degree IP68/IP69K.

The AS-Interface flat cable is contacted via pointy, gold-plated contact pins. The exact location of the pins on the lead is ensured by the swivel mechanism. Sensors and actuators are connected to the module via M12 sockets.

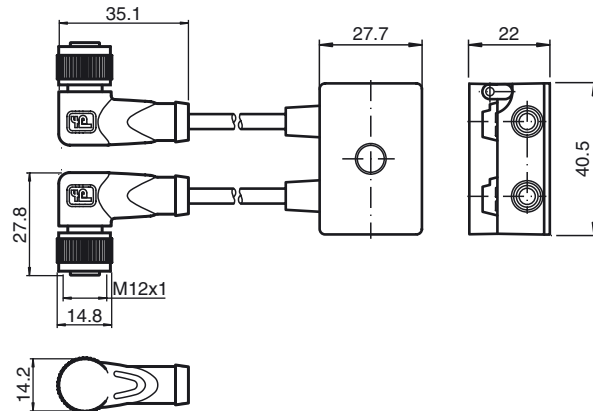
Multiple LEDs indicate the current status of the AS-Interface strand and the outputs and are used for diagnosis. The outputs of the ultra-compact module are powered from U_{AUX}.

Accessories

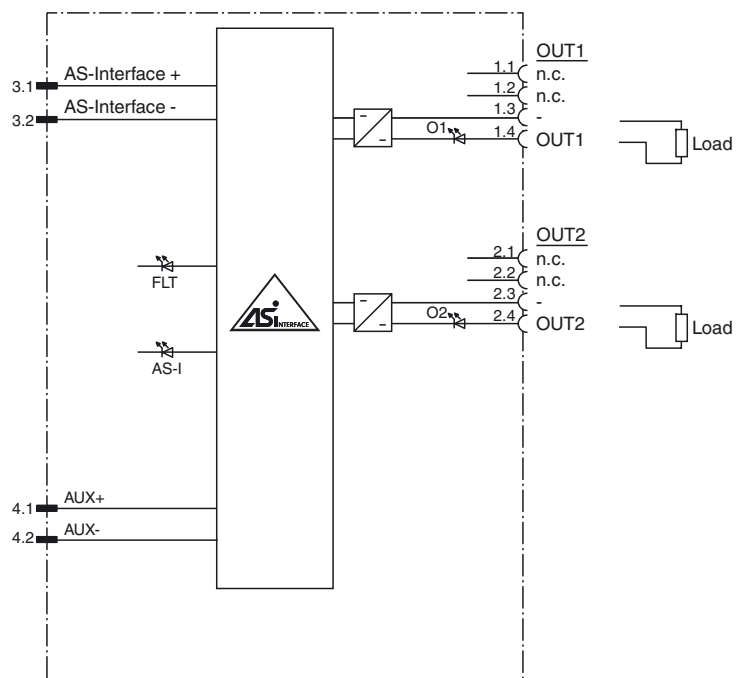
VAZ-PK-FK-0,2M-V1-W

Adapter cable G10 module/hand-held programming device

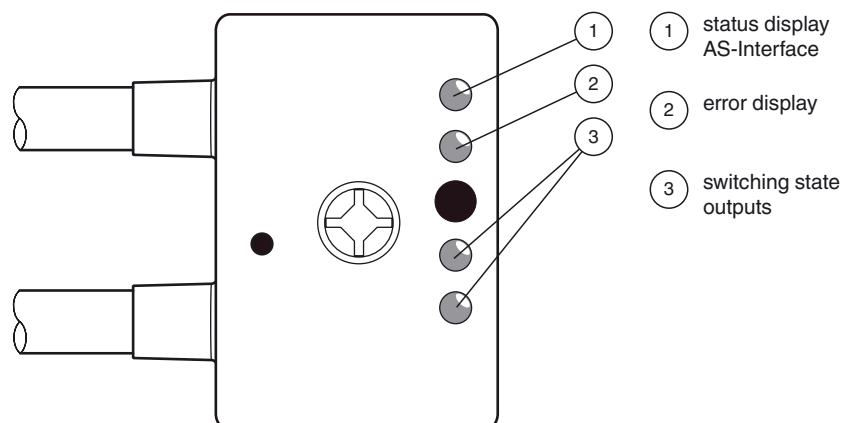
Dimensions



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 "For use in NFPA 79 Applications only"

Functional safety related parameters

MTTF _d	516 a
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Indicators/operating means

LED FAULT	error display; LED red red: communication error or address is 0 red flashing: overload of sensor power supply or overload of outputs or external auxiliary voltage U _{AUX} missing
LED AS-i	AS-Interface voltage; LED green
LED OUT	Switching state (output); 2 LED yellow

Electrical specifications

Auxiliary voltage	U _{AUX}	20 ... 30 V DC PELV
Rated operating voltage	U _e	18.5 ... 31.6 V from AS-Interface
Rated operating current	I _e	≤ 40 mA / max. 60 mA
Protection class		III
Surge protection		U _{AUX} , U _{in} : Over voltage category III, safe isolated power supplies (PELV)

Output

Number/Type	2 electronic outputs, PNP, overload and short-circuit proof
Supply	from external auxiliary voltage U _{AUX}
Current	2 A per output, T _B ≤ 40°C: 4 A total, 40°C < T _B ≤ 70°C: 3 A total, overload and short-circuit protected
Voltage	≥ (U _{AUX} - 0.5 V)

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 62026-2:2013

Standard conformity

Degree of protection	EN 60529:2000
Fieldbus standard	EN 62026-2:2013
Electrical safety	IEC 61140:2004
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-8.A.E
IO code	8
ID code	A
ID1 code	7
ID2 code	E

Data bits (function via AS-Interface)	input	output
D0	-	OUT1
D1	-	OUT2
D2	-	-
D3	-	-

Parameter bits (programmable via AS-i) function

P0	communication monitoring P0 = 1 (default settings), monitoring = ON, i.e. if communication fails, the outputs are de-energised P0 = 0, monitoring = OFF, if communication fails, the outputs maintain their condition
P1	not used
P2	Lead breakage outputs P2 = 0 lead breakage on P2 = 1 lead breakage off (default settings)
P3	not used

Ambient conditions

Ambient temperature	-40 ... 70 °C (-40 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 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 IP67 / IP68 / IP69K with flat cable VAZ-FK-S*
Connection	AS-Interface/U _{AUX} : AS-Interface flat cable Outputs & matching connector: M12 round connector, 4-pin, A-coded, according to IEC 61076-2-101:2012
Material	
Contacts	CuSn / Au
Housing	PBT PC
Body	black PUR
Cable	PUR

Mounting screw		Stainless steel 1.4305 / AISI 303
Cable		
Sheath diameter		Ø4,3 mm
Color		black
Cores		3 x 0.34 mm ²
Length	L	1 m
Mass		100 g
Tightening torque, fastening screws		1.65 Nm
Tightening torque, cable gland		0.4 Nm
Approvals and certificates		
UL approval		cULus Listed, Type 1 enclosure
Maximum permissible ambient temperature		≤ 65 °C (≤ 149 °F)

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

You may screw the device onto a level mounting surface using two M4 attachment screws. The attachment screws are not included.

