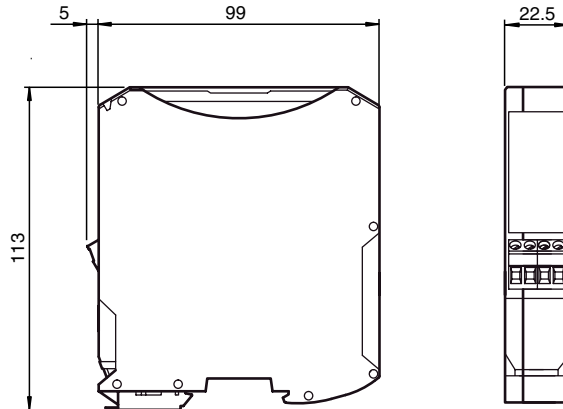
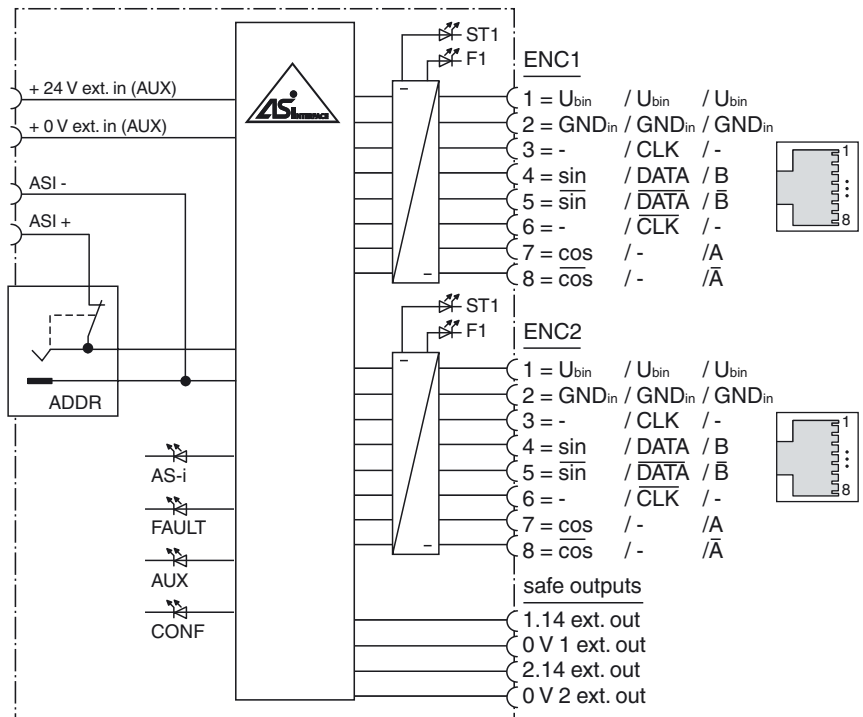




Dimensions



Electrical connection



Model number

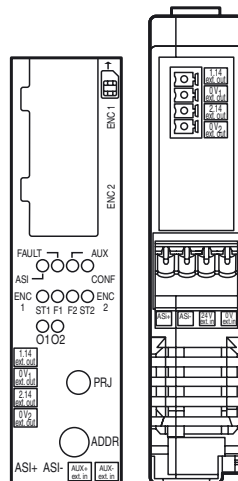
VBA-2E2A-KE4-ENC/SSI-S

KE4 control cabinet module for rotary encoders
2 safe inputs und 2 safe outputs

Features

- SSI, Sin/Cos, TTL interface
- Safe speed monitoring depending on the position
- Safe position detection
- Integrated safety logic
- Memory card for configuration data
- Up to SIL3 (EN 62061) and PLe (EN13849-1)

Indicating / Operating means



- ENC 1 = rotary encoder 1
- ENC 2 = rotary encoder 2
- Chip Card = chip card
- PRJ = configuration button
- ADDR = addressing socket
- 1.14 ext. out, 0V 1 ext. out = secure electronic output 1
- 1.14 ext. out, 0V 2 ext. out = secure electronic output 2
- ASI+, ASI- = ASi connection
- 24V ext. in, 0V ext. in = AUX auxiliary voltage

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Technical data**General specifications**

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

Functional safety related parameters

Safety Integrity Level (SIL)	SIL 3
Performance level (PL)	PL e
Mission Time (T _M)	20 a
PFH _d	5.08 E-9

Indicators/operating means

LED F1, F2	rotational movement/halt
LED FAULT	error display; LED red red: communication error
LED ST1, LED ST2	Status of rotary encoders, 2 yellow LEDs
LED AS-i	AS-Interface voltage; LED green
LED AUX	ext. auxiliary voltage U _{AUX} ; LED green
LED CONF	Dual color-LED, yellow/red, configuration mode
LED O1, O2	Status of outputs

Electrical specifications

Auxiliary voltage (input)	U _{EXT}	18 ... 30 V _{DC}
Insulation voltage	U _i	500 V AS-Interface/U _{AUX} :
Rated operating voltage	U _e	18,0 ... 31.6 V from AS-Interface
Rated operating current	I _e	≤ 150 mA from AS-Interface; ≤ 1400 mA from AUX

Interface 1

Interface type	Chip card slot
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Input

Number/Type	2 inputs for incremental/absolut rotary encoders / 2x RJ45
Voltage	max. 30 V DC , external
Signal delay	Depending on frequency, see instruction manual issue "system response time"
Signal frequency	Parameterization range 1 Hz ... 250 kHz

Output

Number/Type	2 safe electronic outputs
Supply	from external auxiliary voltage U _{AUX}
Voltage	24 V
Current loading capacity	max contact load: 700 mA DC-13 at 24 V

Directive conformity

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

Standard conformity

Degree of protection	EN 60529:2000
Electrical safety	EN 62061:2005 (up to SIL3) EN ISO 13849-1:2008 up to PL e
Input	EN 61131-2:2007
AS-Interface	EN 62026-2:2013

Programming instructions

Profile	Safe input slaves: S-7.B.E. , ID1=F Diagnosis slaves: S-7.A.5., ID1=7 (factory default setting)
IO code	7
ID code	B
ID1 code	E

Ambient conditions

Ambient temperature	0 ... 55 °C (32 ... 131 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications

Degree of protection	IP20
Connection	removable terminals rated connection capacity: rigid/flexible (with and without wire-end ferrules): 0.25 mm ² ... 2.5 mm ² for multiple-wire connection with two wires of equal cross-section: flexible with twin wire-end ferrules: 0.5 mm ² ... 1.5 mm ²
Material	
Housing	PA 66-FR
Mounting	DIN mounting rail

Function

AS-Interface safety module VBA-2E-KE4-ENC/SSI-S is a safe switch cabinet module with two safe inputs and two safe electronic outputs. The inputs can be used to connect devices such as incremental rotary encoders or absolute rotary encoders using SSI, sin/cos, or TTL interfaces. The main functions of the safety module are: position monitoring, monitoring the speed range and deceleration ramp, safely switching off drives, and providing a safety logic for applications involving up to two axes (STO, SS1, SS2, SLS, SLP, SDI, SCA, etc.).

The housing is only 22.5 mm wide and takes up little space in the switch cabinet. A snap-on function mounts the module onto the 35 mm mounting strip in line with EN 50022. An addressing socket is integrated in the module. The AS-Interface and the external power supply (AUX auxiliary voltage) are each connected via a two-way terminal block. This configuration allows the power supply to be easily separated when commissioning or servicing. The AUX auxiliary voltage is used to supply power to the outputs. The rotary encoders are supplied with power independently of the safety module. Yellow LEDs display the current status of the inputs. Communication faults are indicated by red LEDs. A green LED displays the operating voltage and the 0 address.

A chip card stores the configuration data and makes it easy to change the module in case of damage.

Accessories**VBP-HH1-V3.0-KIT**

AS-Interface Handheld with accessory

VAZ-PK-1,5M-V1-G

Adapter cable module/hand-held programming device

VAZ-SW-SUITE

Combined software for configuration, diagnostics, and programming, for masters and safety monitors (type KE4, K20, K30, K31)

VAZ-2T-KE4-ENC-2V45

KE4 switch cabinet module for rotary encoder

Adapter for 2 rotary encoder to rotation speed monitor and control panel

VBP-HH1-V3.0

AS-Interface Handheld

Matching system components

RVS58S-*****Z

RVS58S-282K1R6ZN-01024