



AS-Interface safety module VBA-2E2A-KE4-ENC/SSI-S

- 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 PL e (EN13849-1)

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



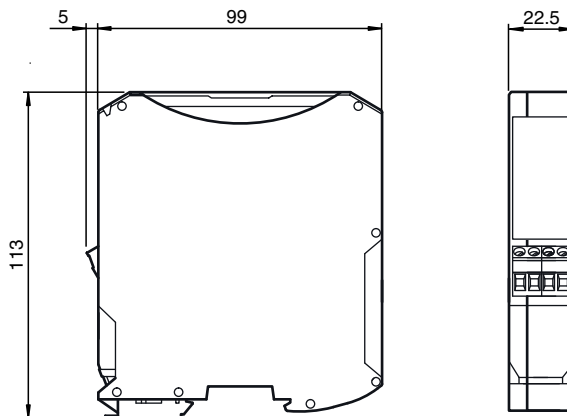
Function

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.

Dimensions



Technical Data

General specifications

Node type	A/B node
AS-Interface specification	V3.0
Required gateway specification	≥ V3.0
UL File Number	E223772

Functional safety related parameters

Safety Integrity Level (SIL)	SIL 3
Performance level (PL)	PL e

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

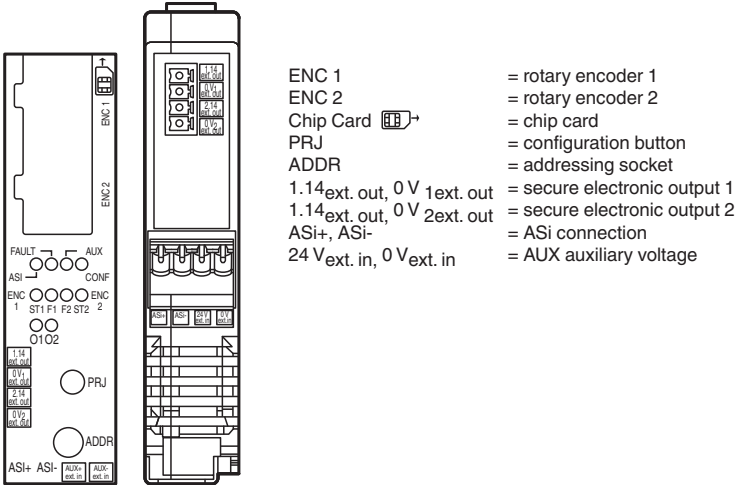
Mission Time (T _M)		20 a
PFH _d		5.08 E-9
Indicators/operating means		
LED F1, F2		rotational movement/halt
LED FAULT		error display; LED red red: communication error
LED ST1, LED ST2		Status of rotary encoders, 2 yellow LEDs
LED AS-i		AS-Interface voltage; LED green
LED AUX		ext. auxiliary voltage 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
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

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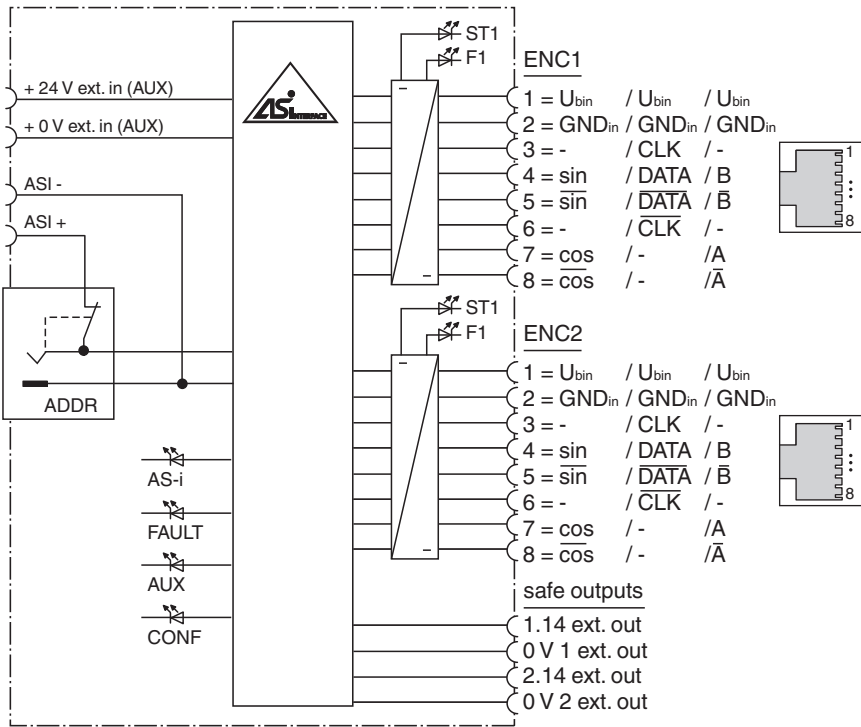
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Assembly



Connection



Matching System Components

	RVS58S-*****Z
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Accessories

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