



AS-Interface safety module VBA-2E-KE4-ENC-S

- SIL3 (EN 62061)
- Addressing jack
- Memory card for configuration data

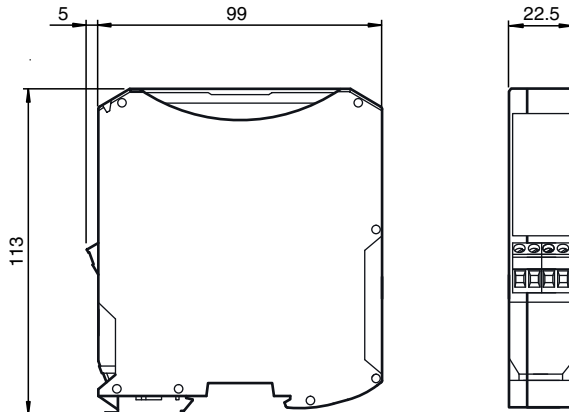
KE4 control cabinet module 2 inputs for incremental rotary encoders



Function

The AS-Interface rotational speed monitor VBA-2E-KE4-ENC-S is a safe control cabinet module with 2 inputs. The inputs comprise 2 safe inputs for incremental encoders. The rotational speed monitor monitors the standstill, rotational speed and direction of rotation on a maximum of two axes and sends a safe signal via the AS-Interface network when a value falls below the set threshold. The housing, which is only 22.5 mm wide, requires little space in the switch cabinet. The module is installed by simply snapping it onto the 35 mm standard mounting rail to EN 50022. An addressing socket is integrated in the module. The AS-Interface and external power supply are each connected by means of a 2-station terminal block. This permits the simple removal of the supply during commissioning or servicing. The supply to the rotary encoders is fed either internally via the module from the AS-Interface or via an external supply. The current status of the inputs is indicated via yellow LEDs. Communication faults are indicated via red LEDs. The display of the operating voltage and the address 0 is provided by a green LED. The configuration data is saved on a chip card, making it easier to replace the module in the event 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

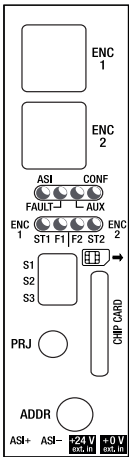
Safety Integrity Level (SIL)	SIL 3
Performance level (PL)	PL e

Technical Data

Mission Time (T_M)		20 a
PFH _d		2.77 E-9
Indicators/operating means		
LED FAULT		error display; LED red red: communication error
LED AS-i		AS-Interface voltage; LED green
LED AUX		ext. auxiliary voltage U_{AUX} ; LED green
LED CONF		Off = Normal mode, yellow LED
LED STATE		Status of rotary encoder, 2 yellow LEDs
LED FREQUENCY		Low frequency or halt, 2 LED yellow
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; ≤ 200 mA from AUX
Interface 1		
Interface type		Chip card slot
Input		
Number/Type		2 inputs for incremental rotary encoders AMP mini-IO connector
Voltage		$U_b = 5$ V DC
Signal delay		100 ms at 1015 Hz < f_{limit} 140 ms at 45 Hz < f_{limit} < 1015 Hz 700 ms at f_{limit} < 45 Hz
Signal frequency		Parameterization range 25 Hz ... 200 kHz
Current		≤ 100 mA
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013
Standard conformity		
Degree of protection		EN 60529:2000
Electrical safety		EN 954-1:1996 (up to Kategorie 4), EN 62061:2005 (up to SIL3) EN ISO 13849-1:2006 to PL e
Input		EN 61131-2:2007
AS-Interface		EN 62026-2:2013
Programming instructions		
Profile		Safe input slaves: S-0.B.E Diagnosis slaves: S-7.A.5.
IO code		0
ID code		B
ID1 code		F
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

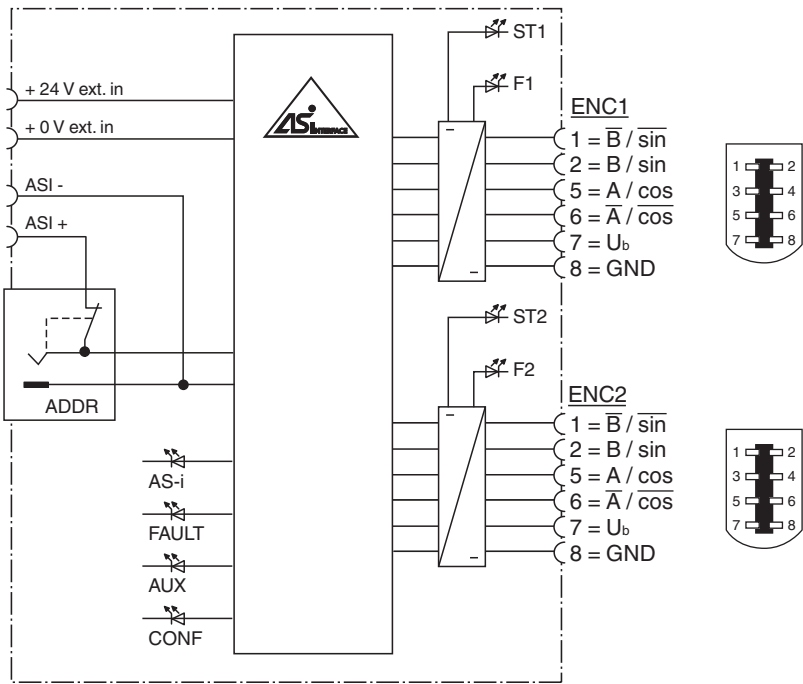
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Assembly



- ENC 1 = Encoder 1
- ENC 2 = Encoder 2
- S1, S2, S3 = Function switch 1 - 3
- CHIP CARD = Chip card
- PRJ = Configuration button
- ADDR = Addressing jack

Connection



Matching System Components

	RV58S-*****Z	
	Safe Speed Monitor	

Accessories

	VAZ-PK-1,5M-V1-G	Adapter cable module/hand-held programming device
	VAZ-ENC-1,5M-PVC	Connection cable for connecting encoders to a speed monitor

Accessories

	VAZ-SW-SIMON+	Software for configuration of K30 Master Monitors/K31 and KE4 Safety Monitors
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