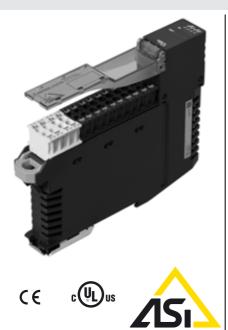
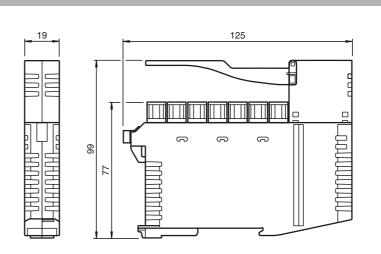
# AS-Interface analog module





# **Electrical connection**

Dimensions

### Model number

## VBA-4E-KE5-IL

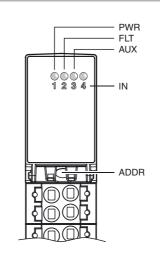
Switch cabinet module 4 analog Inputs

## **Features**

- Housing with push-in connection ٠ technology and mechanically coded terminal blocks
- Housing width 19 mm, installation in • the switch cabinet on DIN mounting rail
- Sensors supplied from the external auxiliary voltage
- Function display for bus, external auxiliary voltage and inputs

AS-Interface 8888 PWR AS-Interface 21 าร่ FLT 19 ll1 GND 1 1006 2 MO GND 3 4 L+ 4 inputs I1 ... I4 (current) 1001 1001 GND 112 6 Connection example: 5 ADDR L+ 7 8 GND 2-wire 3-wire зСН 9 10 2CH 1003 IN 1+ õQG GND 11 12 1CH 12 1001  $\triangleleft$ βШ S II3 13 14 GND uР ό GND L+ 15 16 GND ll4 17 1006 18 GND ŏ₫₽ 20 GND 1CH L+ 19 Input AUX 1005 AUX+ 21 22 AUX+ .⇔2CH configuration -0 GND AUX- 23 24 AUX-1001 1001 I AUX + ASI+ 25 26 ASI+ ASI- 27 28 ASI-AUX -

# Indicating / Operating means



Release date: 2019-08-23 12:41 Date of issue: 2019-08-23 288594\_eng.xml

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

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# VBA-4E-KE5-IL

	AS-Interface	analog	j module
Tec	hnical data		
	ral specifications		Standard slave
Slave type AS-Interface specification			V3.0
Required master specification			≥ V2.1
UL File Number			E223772
MT	BF		173 a
	ators/operating means		
LED	) FAULT		Fault indication: red Red: communication Red flashing: periph
LED	) PWR		AS-Interface voltage Green: voltage OK Flashing green: add
LED	DAUX		ext. auxiliary voltage green: voltage OK red: reverse voltage
LEC	DIN		status of input signal off: not active on: signal within mea flashing: signal outsi
Elect	rical specifications		
Aux	iliary voltage (output)	U <sub>AUX</sub>	20 30 V DC PELV
	ed operating voltage	Ue	26.5 31.6 V from A
	ed operating current	۱ <sub>e</sub>	≤ 70 mA
	tection class		   < 650 mA
	rent consumption ge protection		$I_{AUX} \le 650 \text{ mA}$ $U_{AUX}, U_e$ : overvoltag
Our	geprotection		(PELV)
Input	:		
Nur	nber/Type		4 analog inputs Current: 0 mA 20
Sup Cur	pply rent loading capacity		From auxiliary voltag ≤ 600 mA From auxi
Inpu	ut resistance		cuit resistant current input: $\leq$ 70 $\Omega$
			·
	uracy		0.1 % of input signal
	olution		15 Bit
	perature influence		0.0025 %/K of input
Outp	nperature influence		1 μA/K or 0,3 mV/K
	tive conformity		
	ctromagnetic compatibility		
	irective 2014/30/EU		EN 62026-2:2013
Stand	dard conformity		
	gree of protection		EN 60529:2000
	dbus standard		EN 62026-2:2013
	itted interference		EN 61000-6-4:2007
	Interface se immunity		EN 62026-2:2013 EN 61000-6-2:2005,
	ramming instructions		21001000002.2000,
Pro	•		S-7.3.E
10 0	code		7
ID c	ode		3
ID1	code		F
	code		E
Dat	a bits (function via AS-Inte	rtace)	The transfer of the d 7.3.
Par	ameter bits (programmab	le via AS-i)	function
P	0		50/60 Hz filter P0=1, enabled P0=0, disabled
P			not used
P	2		Indication of the peri P2=1, peripheral fau P2=0, peripheral fau
P			P3=1, wire break de P3=0, wire break de
	ent conditions		
	bient temperature		-25 70 °C (-13 1
	rage temperature ative humidity		-25 85 °C (-13 1 85 % , noncondensi
	natic conditions		For indoor use only
	ude		$\leq$ 2000 m above MS
She	ock and impact resistance		15 a 11 ms in 6 snat

		Fu
		Th
	Standard slave V3.0	4E
	≥ V2.1	4 a 19
	E223772	SW
	173 a	sn
	Fault indication: red LED	an Th
	Red: communication error or address is 0	Th pu
	Red flashing: peripheral fault AS-Interface voltage; green LED	AL
	Green: voltage OK	lat
	Flashing green: address 0 or peripheral error ext. auxiliary voltage U <sub>ALIX</sub> ; dual LED green/red	bri blo
	green: voltage OK	lin
	red: reverse voltage status of input signal; LED yellow	Th
	off: not active	Th
	on: signal within measurement range flashing: signal outside of measurement range	se tag
		Th
UX	20 30 V DC PELV	tus
2	26.5 31.6 V from AS-Interface $\leq$ 70 mA	co If
	III	the
	$I_{AUX} \le 650 \text{ mA}$	Th
	$U_{AUX}$ , $U_e$ : overvoltage category II, safe isolated power supplies (PELV)	nc by
		0.
	4 analog inputs Current: 0 mA 20 mA/4 mA 20 mA	40
	From auxiliary voltage U <sub>AUX</sub>	Gr riz
	$\leq$ 600 mA From auxiliary voltage $U_{AUX}$ ; overload and short-cir-	112
	cuit resistant current input: $\leq$ 70 $\Omega$	No
		0
	0.1 % of input signal range at 25 °C (298 K)	ab me
	15 Bit 0.0025 %/K of input signal range	cu
		to
	1 μA/K or 0,3 mV/K	lf ex
		us
	EN 62026-2:2013	Th
		de 10
	EN 60529:2000	ma
	EN 62026-2:2013 EN 61000-6-4:2007	Th
	EN 62026-2:2013	Do
	EN 61000-6-2:2005, EN 61326-1:2006, EN 62026-2:2013	ler
	8.72E	
	S-7.3.E 7	A
	3	V
	F	AS
	The transfer of the data value is based on AS-Interface Profile	V
• •	7.3.	AS
S-i)	function 50/60 Hz filter	V
	P0=1, enabled P0=0, disabled	A
	not used Indication of the peripheral fault by exceeding measuring range	gr
	P2=1, peripheral fault is reported P2=0, peripheral fault is not reported	V/ Ju
	P3=1, wire break detection active P3=0, wire break detection disabled	sp
	-25 70 °C (-13 158 °F)	
	-25 85 °C (-13 185 °F)	
	85%, noncondensing	
	For indoor use only ≤ 2000 m above MSL	
	15 g, 11 ms in 6 spatial directions, 3 shocks 10 g, 16 ms in 6 spa-	
	tial directions, 1000 shocks	
	0.35 mm 10 57 Hz , 5 g 57 150 Hz, 20 cycles	

# Function

he AS-Interface connecting module VBA-E-KE5-IL is a switch cabinet module with analog current inputs. The housing is only 9 mm wide and takes up little space in the witch cabinet. The module is mounted by napping it onto the 35 mm DIN rail in complince with EN 50022.

he connection is made via removable 4-pin ush-in terminal blocks. For AS-i+, AS-i-, UX+, and AUX-, two connections are avaible in each case; these connections are ridged in the terminal block. If the terminal lock is disconnected from the module, the nk between these connections is retained. he terminal blocks are mechanically coded. he power to the inputs and the connected ensors is supplied via the external U<sub>AUX</sub> volae source.

he relevant IN LED displays the current stais of the inputs. If input signals are valid, the orresponding IN LED lights up permanently. signals are outside the measuring range, e corresponding IN LED flashes.

he analog values are transmitted asynchroously with a data width of 16 bits as defined y AS-Interface profile 7.3. The value range is ... 20,000 without wire break detection and 000 ... 20,000 with wire break detection.

rid failures can be filtered using a parametezable filter at 50 Hz or 60 Hz.

### otes:

verloading of the internal input supply, bsence of the external UAUX voltage source, easuring overrange, and a wire break at the urrent input are reported as peripheral faults the AS-Interface master.

the wire break detection is disabled, the xtended current measuring range can be sed.

he number of analog input channels is etermined via a jumper between GND and CH, 2CH, or 3CH. Without the jumper, autoatic detection is active for all four channels. his allows the inputs to be assigned freely. o not connect the 1CH, 2CH, 3CH, and ND connections to external potentials. The ength of the jumpers must not exceed 5 cm.

### ccessories

BP-HH1-V3.0-KIT S-Interface Handheld with accessory

BP-HH1-V3.0 S-Interface Handheld

AZ-PK-1,5M-V1-G dapter cable module/hand-held proramming device

AZ-BRIDGE-BU/BN60MM/0,75-100 umper for switch cabinet modules with pring terminals or screw terminals

Refer to "General Notes Relating to Pepperl+Fuchs Product Information" Pepperl+Fuchs Group USA: +1 330 486 0001

Shock and impact resistance

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Vibration resistance

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Pollution degree	2
Mechanical specifications	
Degree of protection	IP20
Connection	Removable push-in terminals rated connection capacity: rigid: 0.20 mm <sup>2</sup> 1.5 mm <sup>2</sup> flexible (without wire end ferrule): 0.20 mm <sup>2</sup> 2.5 mm <sup>2</sup> flexible (with wire end ferrule): 0.25 mm <sup>2</sup> 1.5 mm <sup>2</sup>
Material	
Housing	PA 66-FR
Mass	110 g
Mounting	DIN mounting rail
Note	Max. length of jumpers = 5 cm

# Notes

Do not connect inputs, which are supplied via the module from AS-interface or via auxiliary power, with power supply and signal circuits with external potentials.

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

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