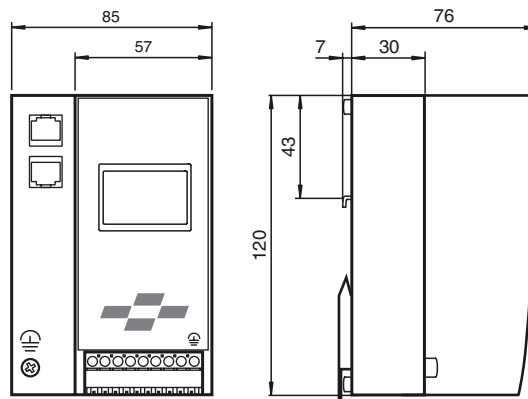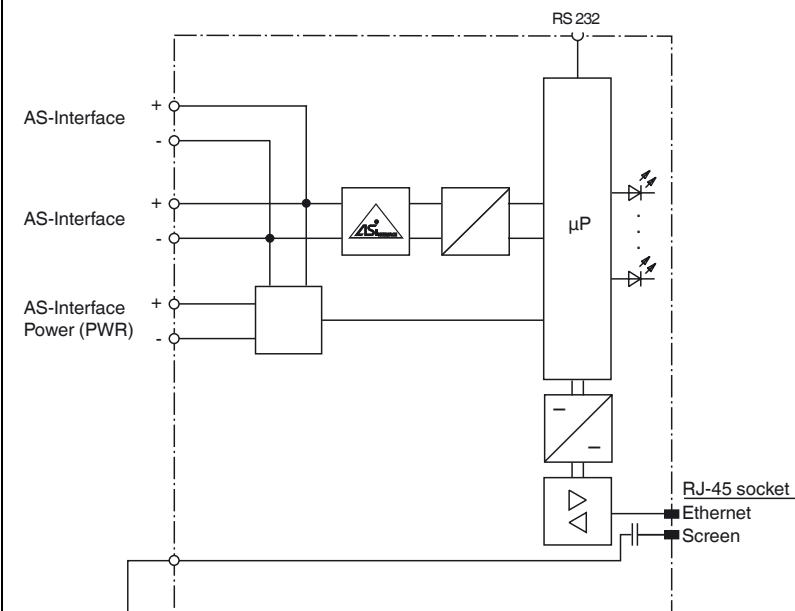## Model number

VBG-PN-K20-D-BV

PROFINET Gateway

Features

- Gateway compliant with AS-Interface specification 3.0
- Connection to PROFINET IO
- Earth fault detection
- Fault diagnosis via LEDs and grafic display
- Compact stainless steel housing
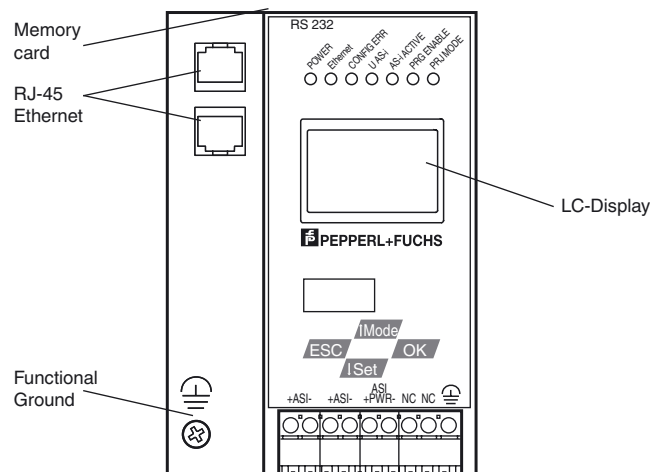
Dimensions

Electrical connection

At the cable for power supply no slaves or repeaters may be attached.
At the cable for AS-Interface circuit no power supplies or further masters may be attached.

Indicating / Operating means

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

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Technical data

General specifications

AS-Interface specification		V3.0
PLC-Functionality		activateable
Earth fault detection	EFD	integrated
EMC monitoring		integrated
Diagnostics function		Extended function via display
UL File Number		E223772

Functional safety related parameters

$MTTF_d$	105 a at 30 °C

Indicators/operating means

Display	Illuminated graphical LC display for addressing and error messages
LED ETHERNET	ethernet active; LED green
LED AS-i ACTIVE	AS-Interface operation normal; LED green
LED CONFIG ERR	configuration error; LED red
LED PRG ENABLE	autom. programming; LED green
LED POWER	voltage ON; LED green
LED PRJ MODE	projecting mode active; LED yellow
LED U AS-i	AS-Interface voltage; LED green
Switch SET	Selection and setting of a slave address
OK button	Mode selection traditional-graphical/confirmation
Button MODE	Mode selection PRJ-operation/save configuration/cursor
ESC button	Mode selection traditional-graphical/cancel

Electrical specifications

Insulation voltage	U_i	≥ 500 V
Rated operating voltage	U_e	from AS-Interface
Rated operating current	I_e	≤ 200 mA from AS-Interface

Interface 1

Interface type	PROFINET I / O device (IRT)
Physical	2 x RJ-45
Protocol	Media Redundancy Protocol (MRP)
Transfer rate	10 MBit/s / 100 MBit/s , Automatic baud rate detection

Interface 2

Interface type	Chip card slot

Connection

PROFINET	RJ-45
AS-Interface	removable spring clamp terminals

Ambient conditions

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

Mechanical specifications

Degree of protection	IP20
Mass	approx. 460 g
Construction type	Low profile housing , Stainless steel

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 61000-6-2:2005, EN 61000-6-4:2007
Standard conformity	
Electromagnetic compatibility	EN 61000-6-2:2005, EN 61000-6-4:2007
AS-Interface	EN 50295:1999
Degree of protection	EN 60529:2000
Shock and impact resistance	EN 61131-2:2004
Standards	EN 61000-6-2:2005, EN 61000-6-4:2007

Notes

In an AS-Interface network only one device can be operated earth fault detection. If there are many devices in an AS-Interface network, this can lead to the earth fault monitoring response threshold becoming less sensitive.

Function

The VBG-PN-K20-D-BV is a PROFINET gateway according to AS-Interface specification 3.0.

The design of the K20 in stainless steel with IP20 is particularly suited for use in switching cabinets for snap on mounting on the 35 mm mounting rail.

The gateway in accordance with the AS-Interface specification V 3.0 is used to connect AS-Interface systems to a higher-level net. It acts as a master for the AS-Interface segment and as a slave for the higher-level net. During cyclic data exchange, the digital data of an AS-Interface segment is transferred. Analog values as well as the complete command set of the new AS-Interface specification are transferred using a command interface.

The address allocation and acceptance of the target configuration can be achieved via the keys. 7 LEDs fitted to the front panel indicate the actual state of the AS-Interface branch.

With the graphical display, the commissioning of the AS-Interface circuits and testing of the connected peripherals can take place completely separately from the commissioning of the higher-level network and the programming. With the 4 switches, all functions can be controlled and visualized on the display.

An RJ-45 Ethernet port provides a way of exporting data relating to the gateway, network and operation directly from the gateway for extended local diagnosis purposes.

The device has a card slot for a memory card for the storage of configuration data.

An integrated Switch and 2 RJ-45 sockets allow the design of a line topology without the use of an external Switch.

PLC Functionality

Optionally the gateway is also available with PLC functionality. Therefor you can order a code key VAZ-CTR additionally.

Accessories

VAZ-SW-ACT32
Full version of the AS-I Control Tools including connection cable

USB-0,8M-PVC ABG-SUBD9
Interface converter USB/RS 232

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