



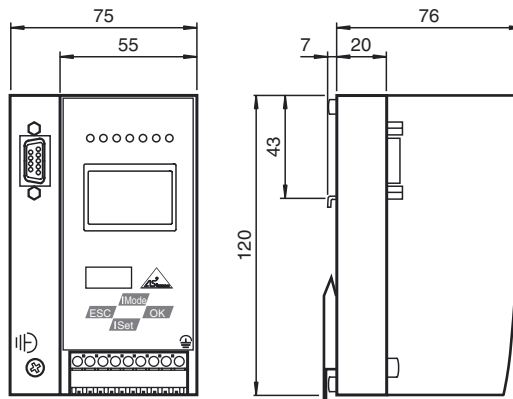
Model number

VBG-PB-K20-D-EV24
PROFIBUS gateway

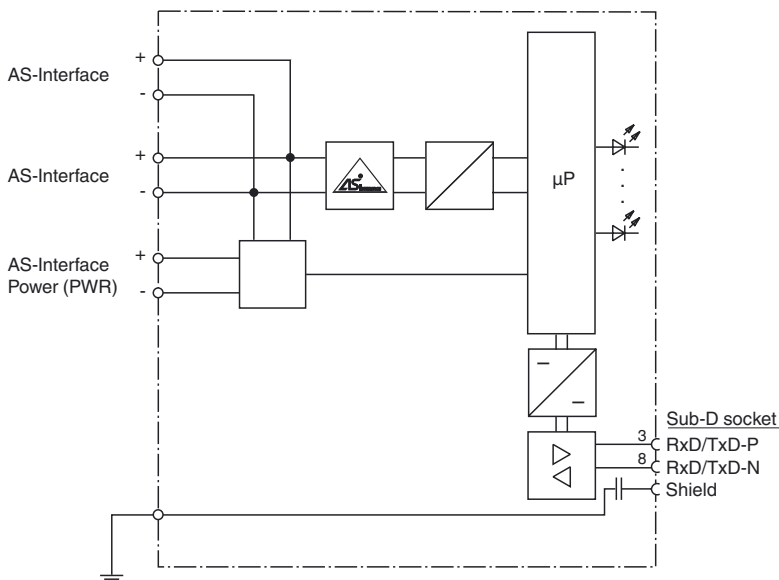
Features

- Connection to PROFIBUS DP
- Easy commissioning and fault diagnosis via LEDs and graphic display
- PROFIBUS DP V1 support
- Duplicate addressing detection
- Earth fault detection
- AS-Interface noise detection
- AS-Interface POWER24

Dimensions

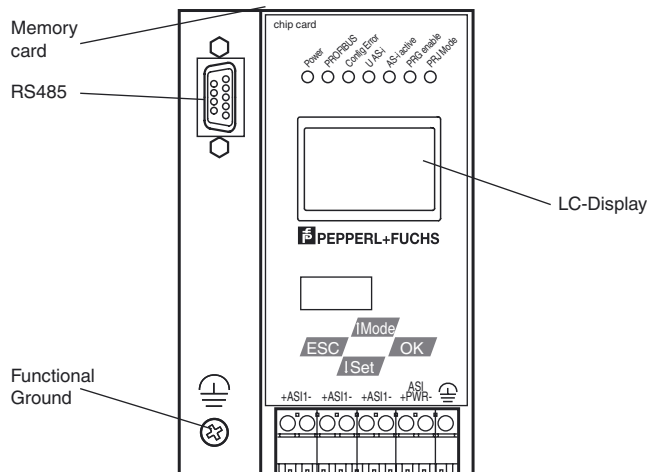


Electrical connection



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



Release date: 2015-03-05 13:45 Date of issue: 2015-03-13 274119_eng.xml

Technical data

General specifications

AS-Interface specification	V3.0
PLC-Functionality	activateable
Duplicate address detection	from AS-Interface slaves
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
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Indicators/operating means

Display	Illuminated graphical LC display for addressing and error messages
LED PROFIBUS	PROFIBUS communication 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	24 V DC (20 ... 31.6 V) safe isolated power supplies (PELV) Note 24 V power supply, max. segment length: 50 m Supply via AS-Interface power supply, max. segment length: 100 m
Rated operating current	I_e	approx. 250 mA
Power supply		max. 4 A per AS-Interface circuit

Interface 1

Interface type	RS-485
Protocol	PROFIBUS DP V1
Transfer rate	9.6 kBit/s / 12 MBit/s , Automatic baud rate detection

Interface 2

Interface type	Chip card slot
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Connection

PROFIBUS	Sub-D interface
AS-Interface	spring terminals, removable

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	500 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 61326:2003
AS-Interface	EN 50295:1999
Degree of protection	EN 60529:2000
Shock and impact resistance	EN 61131-2:2004
Fieldbus standard	PROFIBUS in accordance with IEC 61158/IEC 61784-1

Approvals and certificates

UL approval	Power supply max. 3 A
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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-PB-K20-D-EV24 is a PROFIBUS 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 can be operated with a 24 V power supply according to PELV.

Software

The device is supplied with the configuration data files (GSD) as well as a restricted version of the AS-i Control Tools software. The software performs the addressing, programming and monitoring of the AS-Interface network. The full version of the AS-i Control Tool is available as an accessory and features an expanded diagnostics monitor as well as a larger program memory for AS-Interface Control which makes it possible to detect faulty telegrams of slaves.

A GSD file can be easily created for the PROFIBUS DP using the GSD assistant, whereby the size of the I/O windows can be conveniently adapted to the AS-Interface circuit's load and the AS-Interface configuration can be stored within the GSD file. A text file is also created, which documents the status of AS-Interface data in the gateway's I/O window.

Note:

The VAZ-PB-SIM accessory is required for the AS-i Control Tool.

Accessories

VAZ-SW-ACT32

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

VAZ-PB-SIM

PROFIBUS master simulator

VAZ-PB-DB9-W

PROFIBUS Sub-D Connector with switchable terminal resistance