

Model number

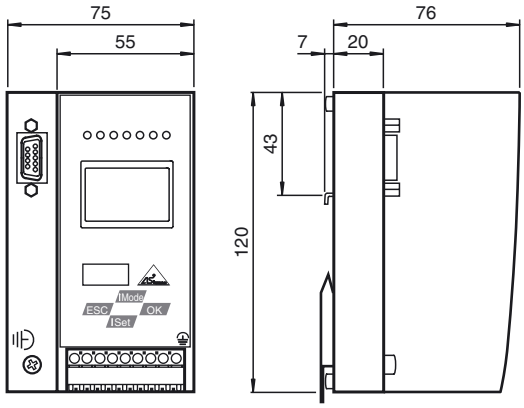
VBG-PB-K20-D-EV24

PROFIBUS gateway

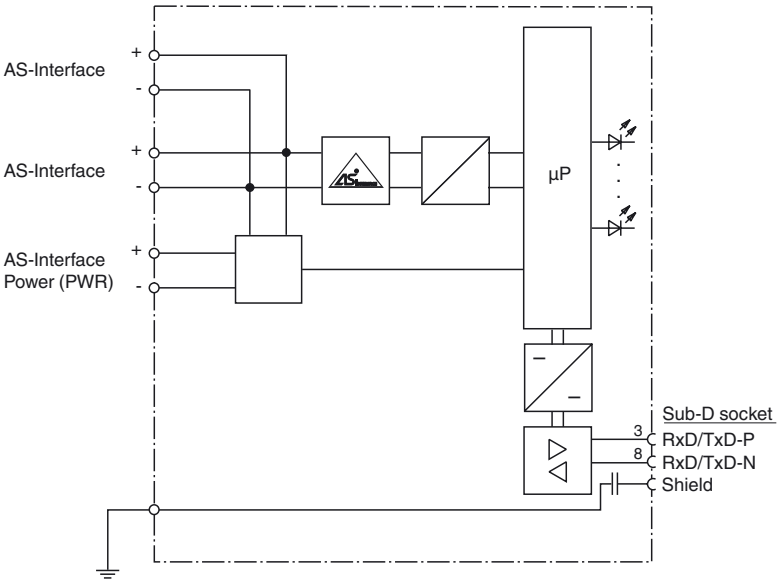
Features

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

Dimensions

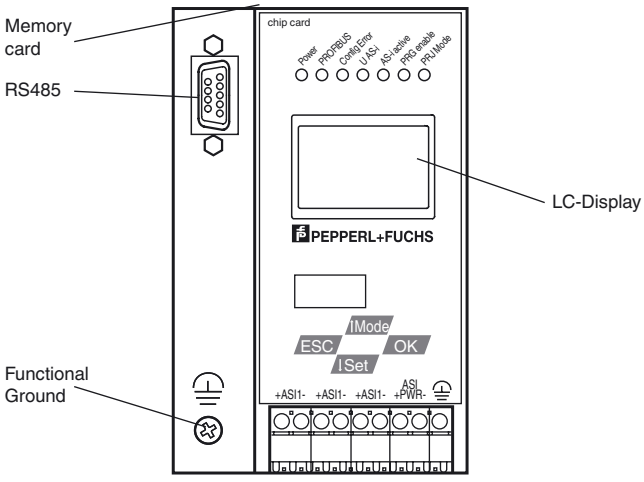


Electrical connection



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



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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
Data decoupling		integrated
UL File Number		E223772 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source
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 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
Connection		
PROFIBUS		Sub-D interface
AS-Interface		spring terminals, removable
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 62026-2:2013 EN 61000-6-2:2005, EN 61000-6-4:2007
Standard conformity		
Electromagnetic compatibility		EN 61326:2003
Degree of protection		EN 60529:2000
AS-Interface		EN 62026-2:2013
Shock resistance		EN 61131-2:2004
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
Approvals and certificates		
UL approval		An isolated source with a secondary open circuit voltage of ≤ 30 V_{DC} with a 3 A maximum over current protection. Over current protection is not required when a Class 2 source is employed. UL mark does not provide UL certification for any functional safety rating or aspects of the device.

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.

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

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