Spec. 3.0

Model number

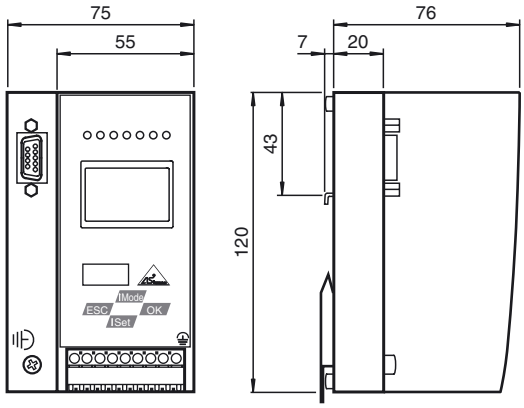
VBG-PB-K20-DMD

PROFIBUS Gateway, double master for 2 AS-Interface networks

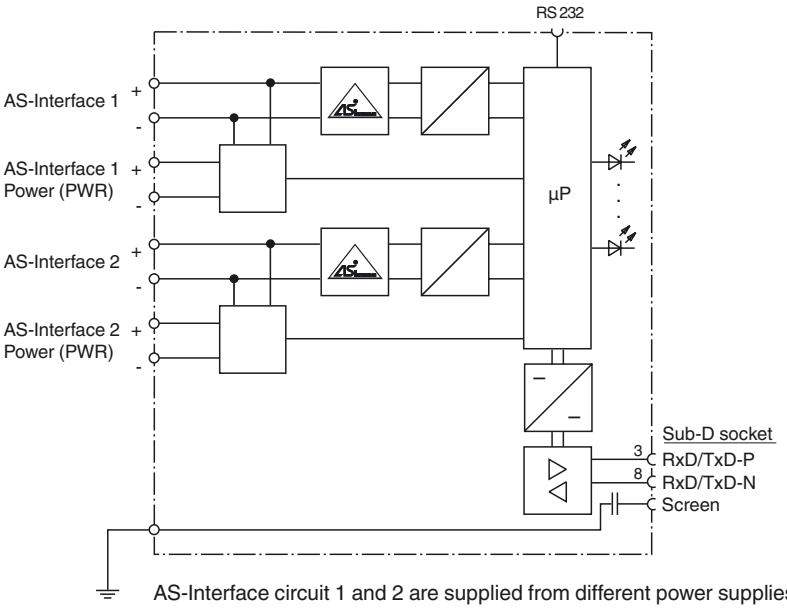
Features

- Connection to PROFIBUS DP
- 2 AS-Interface networks
- PROFIBUS DP V1 support
- Easy commissioning and fault diagnosis via LEDs and graphic display
- Dublicate addressing detection
- Earth fault detection
- AS-Interface noise detection
- RS 232 diagnosis interface

Dimensions

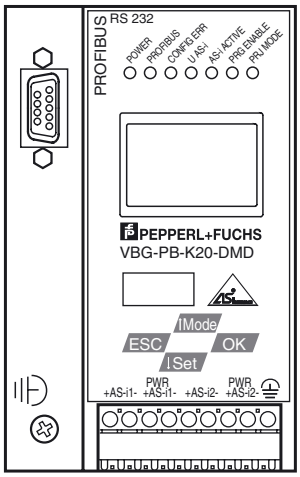


Electrical connection



AS-Interface circuit 1 and 2 are supplied from different power supplies. The gateway is supplied from circuit 1. 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

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
UL File Number		E223772
Functional safety related parameters		
$MTTF_d$		80 a at 30 °C
Indicators/operating means		
Display		Illuminated graphical LC display for addressing and error messages
LED PROFIBUS		PROFIBUS master detected; 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	≤ 180 mA from AS-Interface
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		RS 232, serial Diagnostic Interface
Transfer rate		19,2 kBit/s
Connection		
PROFIBUS		Sub-D interface
AS-Interface		spring terminals, removable
Ambient conditions		
Ambient temperature		0 ... 55 °C (32 ... 131 °F)
Storage temperature		-15 ... 75 °C (5 ... 167 °F)
Mechanical specifications		
Protection degree		IP20
Mass		420 g
Construction type		Low profile housing , Stainless steel
Compliance with standards and directives		
Standard conformity		
Electromagnetic compatibility		EN 61326:2003
AS-Interface		EN 50295:1999
Protection degree		EN 60529:2000

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-DMD is a PROFIBUS Gateway with 2 AS-Interface masters in accordance with AS-Interface Specification 3.0 in IP20. The design is especially suitable for use in the switch cabinet.
The VBG-PB-K20-DMD is a modular PROFIBUS slave. This means that the user can use the PROFIBUS configuration tool to specify what data will be transferred via the PROFIBUS. This makes it possible to adjust the amount of data to be transferred via PROFIBUS.
In addition, this gateway supports acyclical communication of the PROFIBUSDP V1. These acyclical services can be used to access a mailbox in the gateway that provides access to all the data made available by the AS-Interface/PROFIBUS Gateway.
A push button can be used to accept the target configuration and to adjust the PROFIBUS address and baud rate. There are 7 LEDs on the front panel, showing the current status of the AS-Interface line.
In the case of the AS-Interface Gateway with graphical display, the AS-Interface circuit can be placed in service and the test of the connected periphery can be kept entirely separate from the commissioning of the PROFIBUS and the programming. On-site operation with the aid of the graphical display and 4 push buttons makes it possible to show all functions on the display that are covered by the AS-i Control Tools software for other AS-Interface masters. An additional RS 232-socket offers the option of reading data via gateway, network and function as part of advanced local diagnostics directly from the gateway.

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

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.

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Accessories

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

VAZ-PB-SIM
PROFIBUS master simulator

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

VAZ-PB-DB9-W
PROFIBUS Sub-D Connector with switchable terminal resistance

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