Model number
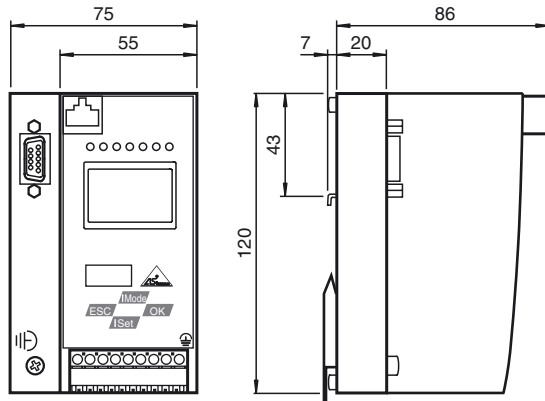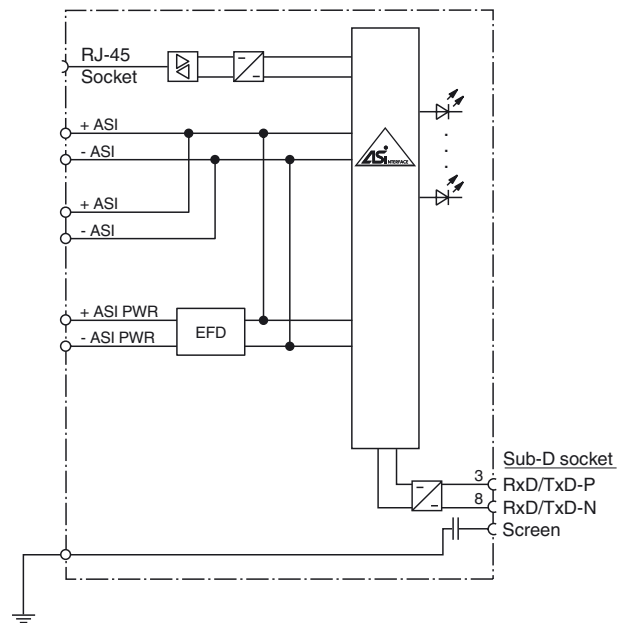
VBG-PB-K20-D-EV1

PROFIBUS gateway

Features

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

Dimensions

Electrical connection

Indicating / Operating means

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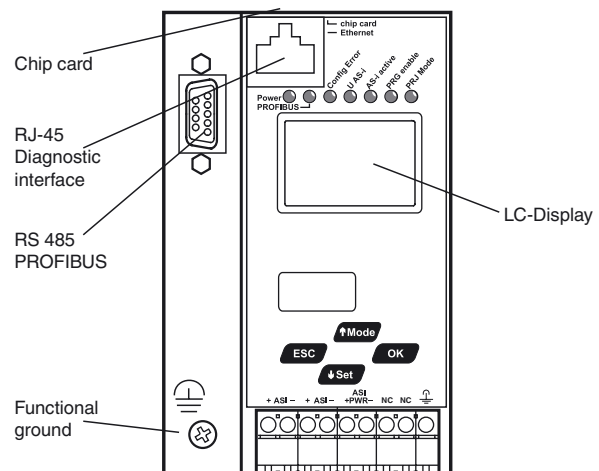
Technical data

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

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
Button	4
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	approx. 200 mA from AS-Interface

Interface 1

Interface type	RS-485
Protocol	PROFIBUS in accordance with IEC 61158/IEC 61784-1
Transfer rate	9.6 kBit/s / 12 MBit/s , Automatic baud rate detection

Interface 2

Interface type	RJ-45 Ethernet Programming and diagnostics interface

Interface 3

Interface type	Chip card slot

Connection

PROFIBUS	Sub-D interface
Ethernet	RJ-45
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 61000-6-2:2005, EN 61000-6-4:2007
Degree of protection	EN 60529:2000
Fieldbus standard	PROFIBUS in accordance with IEC 61158/IEC 61784-1
AS-Interface	EN 62026-2:2013

Ambient conditions

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

Mechanical specifications

Degree of protection	IP20
Material	
Housing	Stainless steel
Mass	460 g
Construction type	Low profile housing

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-EV1 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.

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.

The port provides a way of exporting data relating to the gateway, network and operation directly from the gateway for extended local diagnosis purposes.

Via the RJ-45 Ethernet diagnostic interface, up to 31 devices can establish a secure cross-communication.

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

SPS Functionality

Optionally the gateway is also available with PLC functionality. Therefor you can order a code key VAZ-CTR3 additionally. The programming language is ANSI-C. A compiler is available as plug-in for ECLIPSE environment.

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