Dimensions
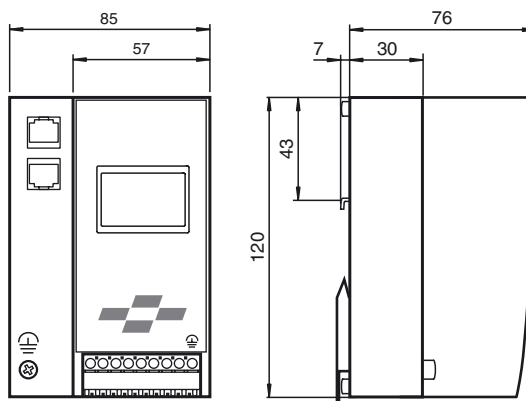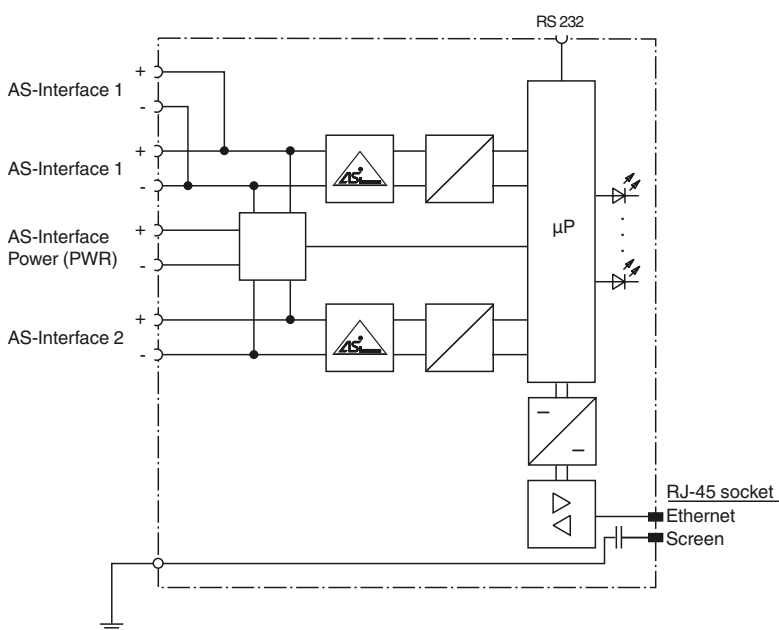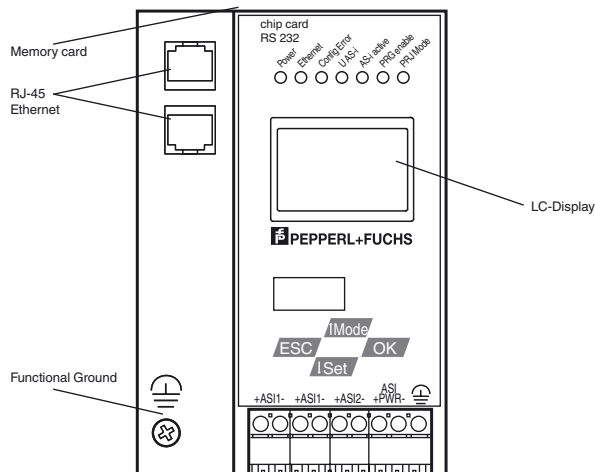

Model number

VBG-PN-K20-DMD-EV

PROFINET Gateway with data decoupling, double master for 2 AS-Interface networks with integrated switch

Features

- Connection to PROFINET IO
- Dublicate addressing detection
- Earth fault detection
- AS-Interface noise detection
- Ethernet diagnostic interface
- 2 AS-Interface networks
- Integrated data decoupling
- Integrated webserver
- Integrated switch allows line topology

Electrical connection

Indicating / Operating means

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

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1

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 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source

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
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	≤ 250 mA PELV

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	RS 232, serial Diagnostic Interface
Transfer rate	19,2 kBit/s

Interface 3

Interface type	Chip card slot

Connection

PROFINET	RJ-45
AS-Interface	removable spring clamp terminals

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
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	500 g
Construction type	Low profile housing , Stainless steel

Approvals and certificates

UL approval	An isolated source with a secondary open circuit voltage of $\leq$ 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-PN-K20-DMD-EV is a PROFINET gateway with a double master 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.

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.

The integrated data decoupling allows to operate 2 AS-Interface circuits with just a standard power supply.

The redundant power supply guarantees that the double master remains in function and is diagnosticable, when a failure of a power supply unit in one of the two AS-interfaces circles occures. Also communication with the superior field bus is not disturbed by the failure of a power supply.

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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