







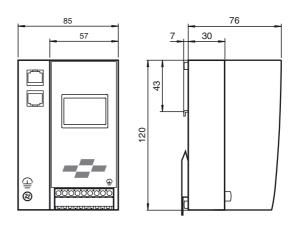
# VBG-PN-K20-D-EV24

PROFINET Gateway with integrated switch

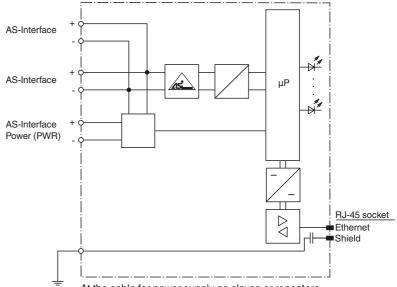
## **Features**

- · Connection to PROFINET IO
- Conformance Class B
- Easy commissioning by graphic display
- AS-Interface monitor or extended AS-Interface diagnostic read via display
- · Dublicate addressing detection
- · Earth fault detection
- AS-Interface noise detection
- All AS-Interface functions possible via Ethernet
- Ethernet diagnostic interface
- AS-Interface POWER24

## **Dimensions**



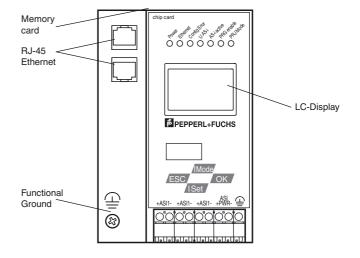
## **Electrical connection**



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**



#### **Technical data** General specifications AS-Interface specification V3.0 Duplicate address detection from AS-Interface slaves Earth fault detection 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 105 a at 30 °C MTTF Indicators/operating means Display Illuminated graphical LC display for addressing and error mes-LED ETHERNET PROFINET communication active; LED green No PROFINET communication; LED red 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 $U_{i}$ 24 V DC ( 20 ... 31.6 V ) Rated operating voltage Ue safe isolated power supplies (PELV) 24 V power supply, max. segment length: 50 m Supply via AS-Interface power supply, max. segment length: Rated operating current approx. 250 mA Power supply max. 4 A per AS-Interface circuit Interface 1 Interface type PROFINET I / O device (IRT) Physical Media Redundancy Protocol (MRP) Protocol Transfer rate 100 MBit/s Interface 2 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 Shock resistance EN 61131-2:2004 Standards EN 61000-6-2:2005. EN 61000-6-4:2007 **Ambient conditions** Ambient temperature 0 ... 55 °C (32 ... 131 °F) Storage temperature -25 ... 85 °C (-13 ... 185 °F) **Mechanical specifications** Degree of protection **IP20** 500 g Mass Low profile housing, Stainless steel Construction type Approvals and certificates **UL** approval An isolated source with a secondary open circuit voltage of $\leq$ 30 V<sub>DC</sub> 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

## **Function**

The VBG-PN-K20-D-EV24 is a PROFINET 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

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

An integrated Switch and 2 RJ-45 sockets allow the design of a line topology without the use of an external Switch.

This device comes with a unique MAC ID. The device supports the assignment of an IP address statically over the keys and dynamically via DHCP (Dynamic Host Configuration Protocol).

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

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safety rating or aspects of the device.

**Notes**