



### Model number

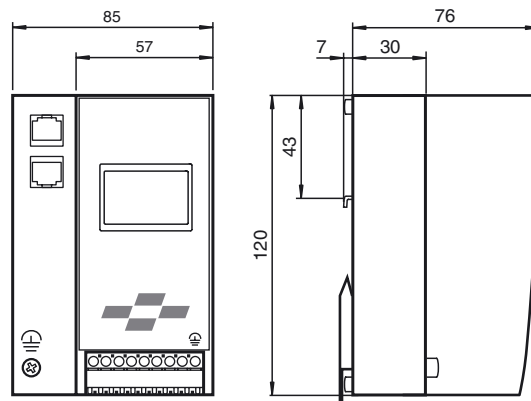
#### VBG-PN-K20-DMD

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

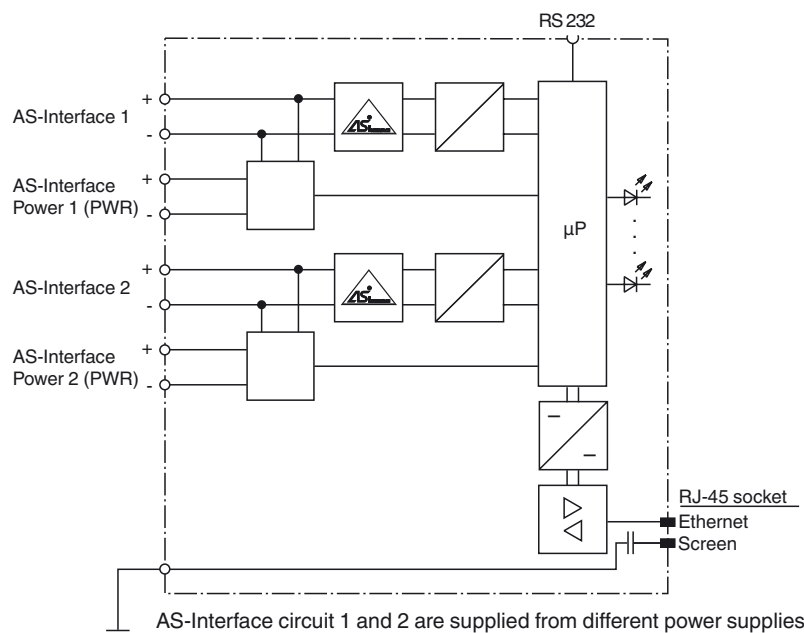
### Features

- Gateway compliant with AS-Interface specification 3.0
- Connection to PROFINET IO
- Fault diagnosis via LEDs and graphic display
- Easy commissioning by graphic display
- AS-Interface monitor or extended AS-Interface diagnostic read via display
- Duplicate addressing detection
- Earth fault detection
- AS-Interface noise detection
- All AS-Interface functions possible via Ethernet
- Commissioning, locally on the gateway or via AS-i Control Tools software
- Ethernet diagnostic interface
- 2 AS-Interface networks

### Dimensions

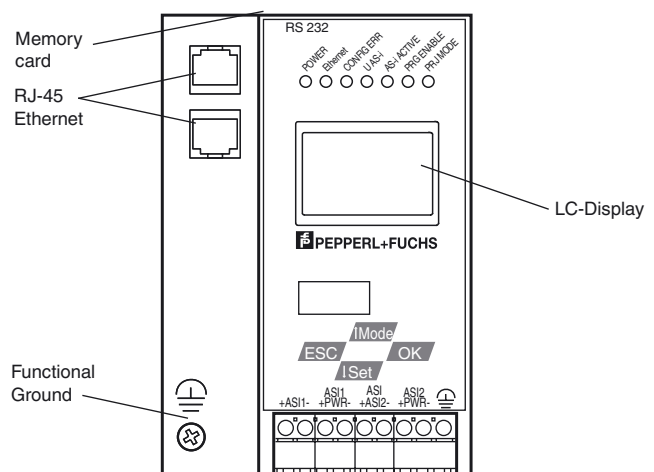


### Electrical connection



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

**Functional safety related parameters**

MTTF <sub>d</sub>	100 a at 30 °C
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**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
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 <sub>i</sub>	≥ 500 V
Rated operating voltage	U <sub>e</sub>	from AS-Interface
Rated operating current	I <sub>e</sub>	≤ 200 mA from AS-Interface circuit 1 ≤ 200 mA from AS-Interface circuit 2 ≤ 270 mA in total

**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
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**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
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
Mass	500 g
Construction type	Low profile housing, Stainless steel

**Approvals and certificates**

EAC conformity	TR CU 020/2011
UL approval	An isolated source with a secondary open circuit voltage of ≤ 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 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-D is a PROFINET Gateway with two AS-Interface masters in accordance with AS-Interface Specification 3.0. The gateway is used for the connection of AS-Interface systems to the higher level PROFINET controller. The variant in an IP20 stainless steel housing is particularly suitable for use in the control cabinet. The master is supplied from the AS-Interface cable.

On the AS-Interface gateway with graphics display, the commissioning of the AS-Interface circuit and also the test of the connected peripherals can be completely separated from the commissioning of the PROFINET and the programming. All the options available on the AS-Interface can be addressed via Ethernet. Local operation using the graphics displays and the 4 buttons enable all the functions to be represented on the display, which are covered by the other AS-Interface masters via the AS-i Control Tools software. An additional RS 232 socket provides the option of reading out data via gateway, network and function, direct from the gateway in the context of an extended local diagnosis. 7 LEDs, which are mounted on the front, indicate the current status of the AS-Interface network.

Every PROFINET gateway is supplied with a unique MAC-ID and supports the assignment of an IP address statically (via keypad) and dynamically (DHCP, Dynamic Host Configuration Protocol).

**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