



## AS-Interface gateway VBG-PN-K20-D

- 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

### PROFINET Gateway with integrated switch



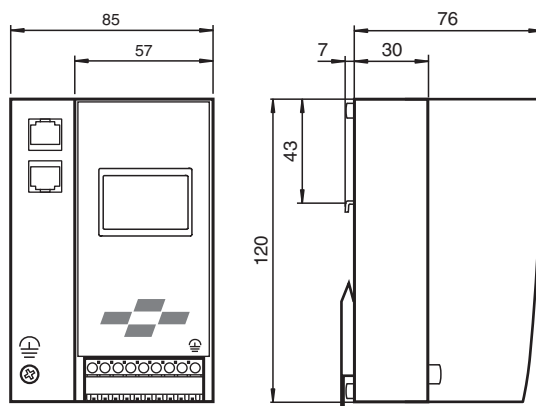
### Function

The VBG-PN-K20-D is a PROFINET Gateway in accordance with AS-Interface Specification 3.0, to IP20, and is used for the connection of AS-Interface systems to the higher level PROFINET controller. Its construction 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).

### Dimensions



### Technical Data

#### General specifications

AS-Interface specification	V3.0
Duplicate address detection	from AS-Interface slaves
Earth fault detection	EFD integrated
EMC monitoring	integrated

## Technical Data

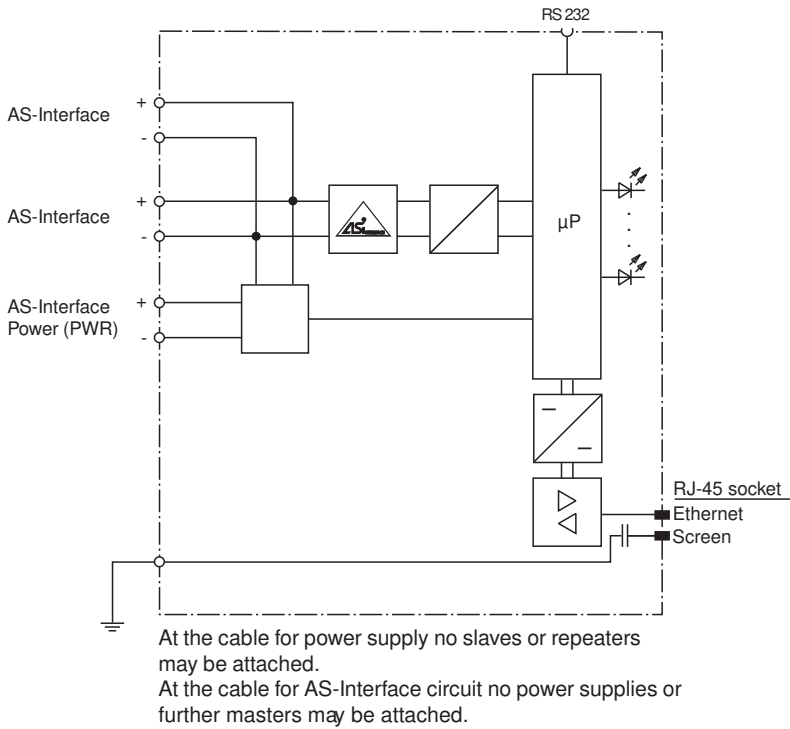
Diagnostics function		Extended function via display	
UL File Number		E223772 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source	
Functional safety related parameters			
MTTF <sub>d</sub>		105 a at 30 °C	
Indicators/operating means			
Display		Illuminated graphical LC 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>	≤ 300 mA from AS-Interface
Interface 1			
Interface type		PROFINET IO 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	
Shock resistance		EN 61131-2:2004	
Standards		EN 61000-6-2:2005, EN 61000-6-4:2007	
Approvals and certificates			
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.	
Ambient conditions			
Ambient temperature		0 ... 55 °C (32 ... 131 °F)	
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)	
Mechanical specifications			

Release date: 2022-12-15 Date of issue: 2022-12-15 Filename: 216181\_eng.pdf

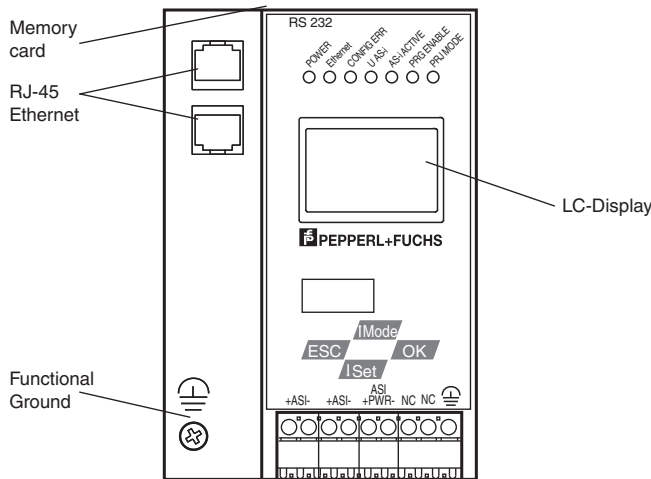
Technical Data

Degree of protection	IP20
Mass	500 g
Construction type	Low profile housing , Stainless steel



Connection



Assembly



Accessories

	<b>VAZ-SW-ACT32</b>	Full version of the AS-I Control Tools including connection cable
	<b>USB-0,8M-PVC ABG-SUBD9</b>	Interface converter USB/RS 232

## Connection

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.

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

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