



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

- 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

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



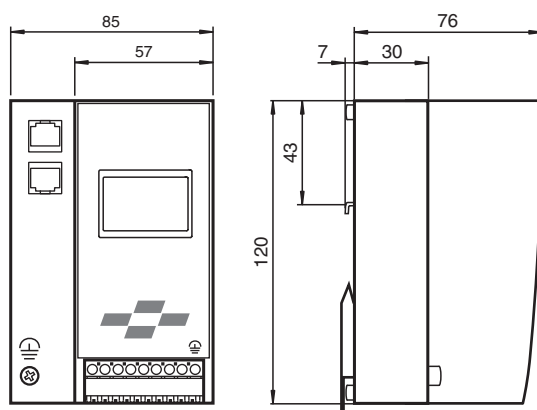
### Function

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 ASInterface 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).

### 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

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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## Technical Data

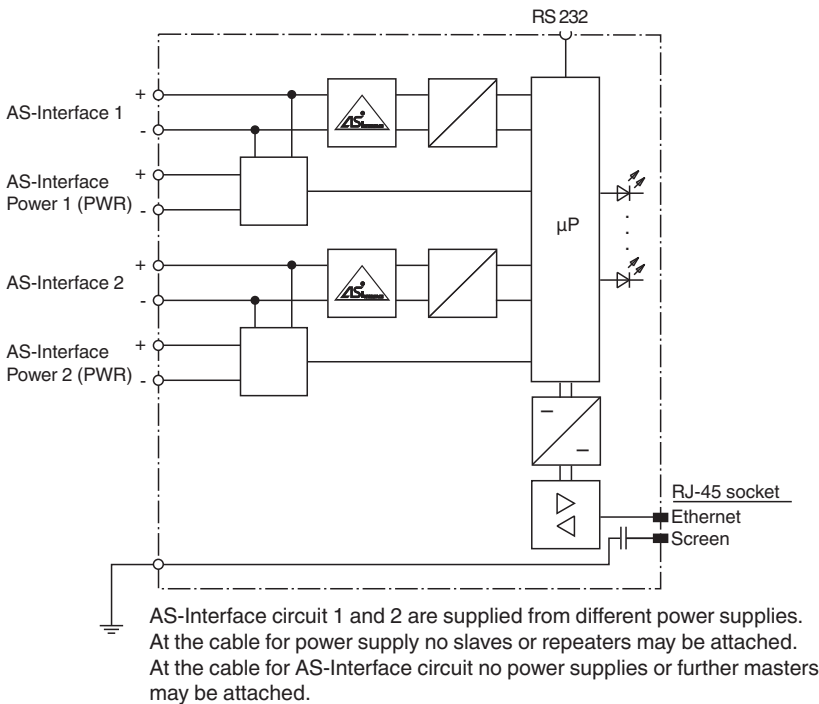
Diagnostics function		Extended function via display	
UL File Number			E223772 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source
Functional safety related parameters			
MTTF <sub>d</sub>			100 a at 30 °C
Indicators/operating means			
Display			Illuminated graphical LC 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>	≤ 200 mA from AS-Interface circuit 1 ≤ 200 mA from AS-Interface segment 2 ≤ 270 mA in total
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)

Release date: 2022-12-15 Date of issue: 2022-12-15 Filename: 219010\_eng.pdf

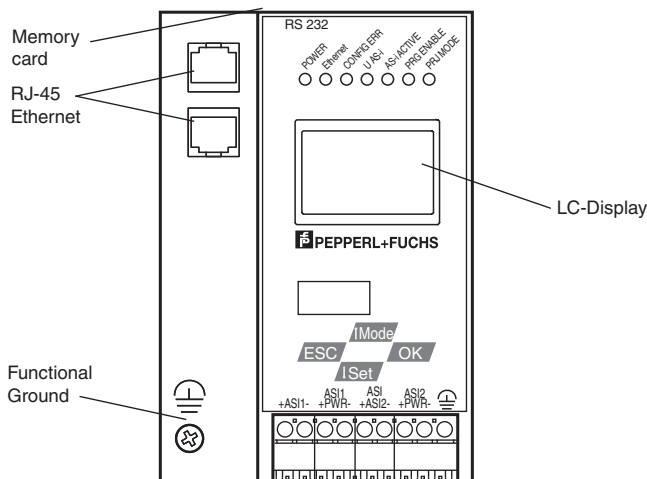
Technical Data

Mechanical specifications	
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

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## 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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fa-info@sg.pepperl-fuchs.com

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