



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

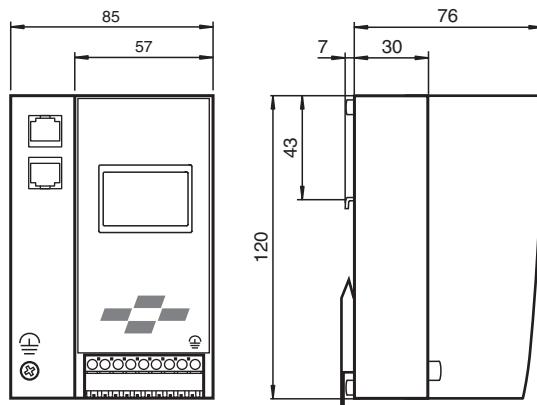
PROFINET Gateway, double master for 2 AS-Interface networks with integrated switch



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

Technical Data

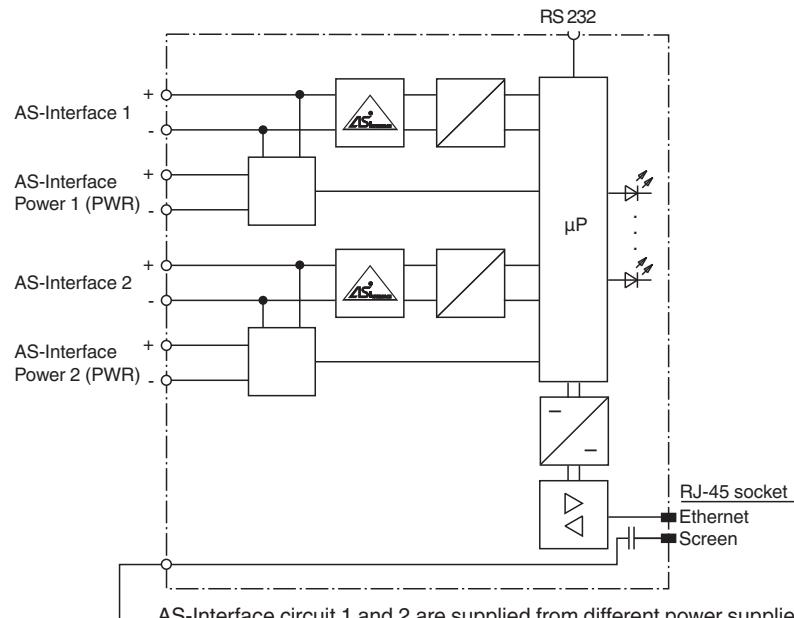
Diagnostics function	Extended function via display	
UL File Number	E223772 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source	
Functional safety related parameters		
MTTF _d	100 a at 30 °C	
Indicators/operating means		
Display	Illuminated graphical LC display for addressing 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 _i	≥ 500 V
Rated operating voltage	U _e	from AS-Interface
Rated operating current	I _e	≤ 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 _{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.	
Ambient conditions		
Ambient temperature	0 ... 55 °C (32 ... 131 °F)	
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)	

Technical Data

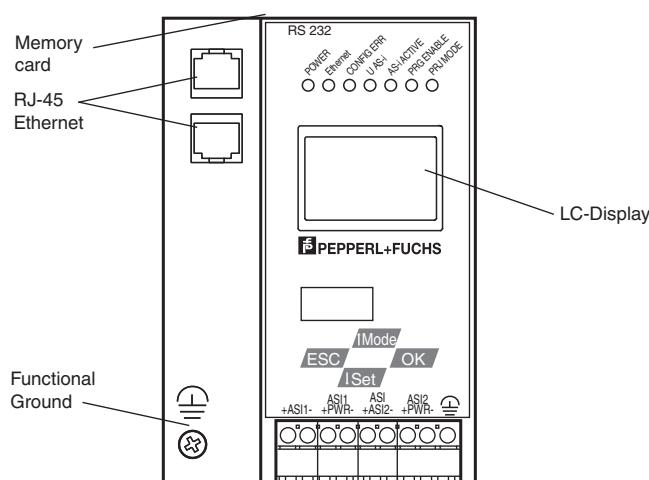
Mechanical specifications

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

Connection



Assembly



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

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.