



AS-Interface gateway VBG-PB-K20-DMD-EV

- Connection to PROFIBUS DP
- 2 AS-Interface networks
- PROFIBUS DP V1 support
- Easy commissioning and fault diagnosis via LEDs and graphic display
- Duplicate addressing detection
- Earth fault detection
- AS-Interface noise detection
- Ethernet diagnostic interface

PROFIBUS Power Hub gateway with data decoupling, double master for 2 AS-Interface networks



Function

The VBG-PB-K20-DMD-EV is a PROFIBUS gateway with a double master 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 mounting rail.

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.

Via the RJ-45 Ethernet diagnostic interface, up to 31 devices can establish a secure cross-communication.

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

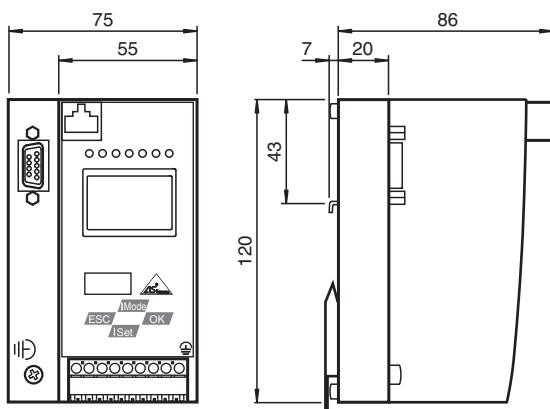
The integrated data decoupling allows to operate 2 AS-Interface circuits with just a standard power supply.

The redundant power supply guarantees that the double master remains in function and is diagnosable, when a failure of a power supply unit in one of the two AS-interfaces occurs. Also communication with the superior field bus is not disturbed by the failure of a power supply.

PLC Functionality

Optionally the gateway is also available with PLC functionality. Therefor you can order a code key VAZ-CTR additionally.

Dimensions



Technical Data

General specifications

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

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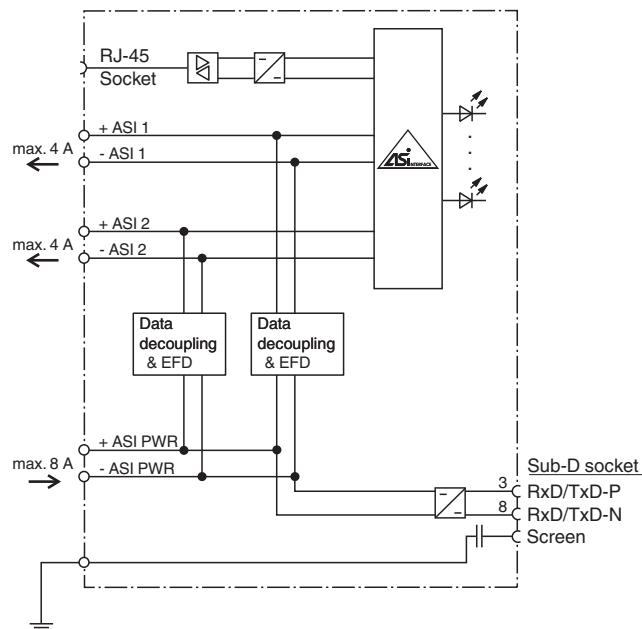
Technical Data

| | | |
|-----------------------------------|--|-----------------------------------|
| AS-Interface specification | V3.0 | |
| PLC-Functionality | activateable | |
| Duplicate address detection | from AS-Interface slaves | |
| Earth fault detection | EFD | integrated |
| EMC monitoring | | integrated |
| Diagnostics function | | Extended function via display |
| Data decoupling | | integrated |
| UL File Number | | E223772 |
| Indicators/operating means | | |
| Display | Illuminated graphical LC display for addressing and error messages | |
| LED PROFIBUS | PROFIBUS master detected; 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 | |
| Button | 4 | |
| 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 | approx. 250 mA PELV |
| Power supply | | max. 4 A per AS-Interface circuit |
| Interface 1 | | |
| Interface type | RS-485 | |
| Protocol | PROFIBUS in accordance with IEC 61158/IEC 61784-1 | |
| Transfer rate | 9.6 kBit/s / 12 MBit/s, Automatic baud rate detection | |
| Interface 2 | | |
| Interface type | RJ-45 Ethernet Programming and diagnostics interface | |
| Interface 3 | | |
| Interface type | Chip card slot | |
| Connection | | |
| PROFIBUS | Sub-D interface | |
| Ethernet | RJ-45 | |
| AS-Interface | spring terminals, removable | |
| 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 | |
| Ambient conditions | | |
| Ambient temperature | 0 ... 55 °C (32 ... 131 °F) | |
| Storage temperature | -25 ... 85 °C (-13 ... 185 °F) | |
| Mechanical specifications | | |
| Degree of protection | IP20 | |

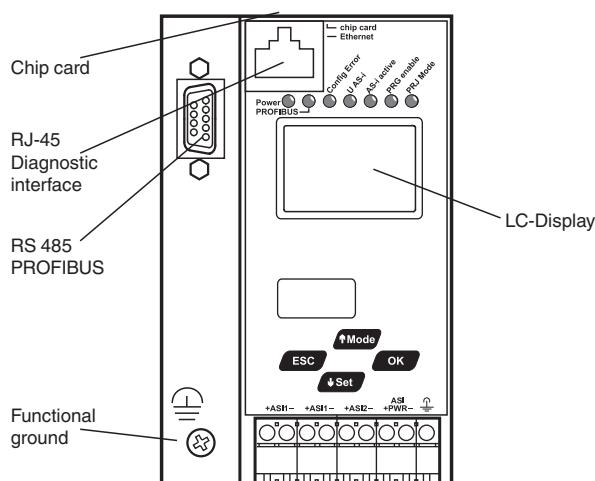
Technical Data

| Material | |
|-------------------|---------------------|
| Housing | Stainless steel |
| Mass | 460 g |
| Construction type | Low profile housing |

Connection



Assembly



Operation

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.

Accessories

| | | |
|---|-------------------------------|---|
|  | VAZ-SW-ACT32 | Full version of the AS-I Control Tools including connection cable |
|  | VAZ-PB-SIM | PROFIBUS master simulator |
|  | USB-0,8M-PVC ABG-SUBD9 | Interface converter USB/RS 232 |
|  | VAZ-PB-DB9-W | PROFIBUS Sub-D Connector with switchable terminal resistance |