Dimensions

Electrical connection
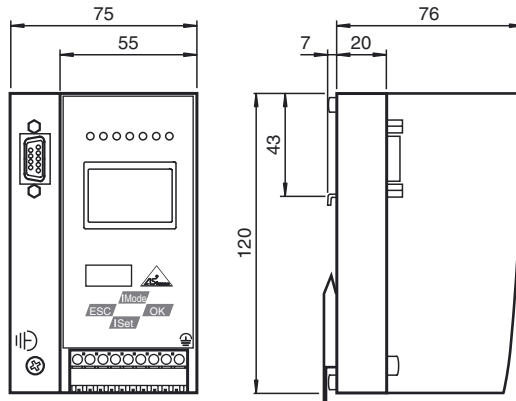

Model number

VBG-PB-K20-DMD-C1

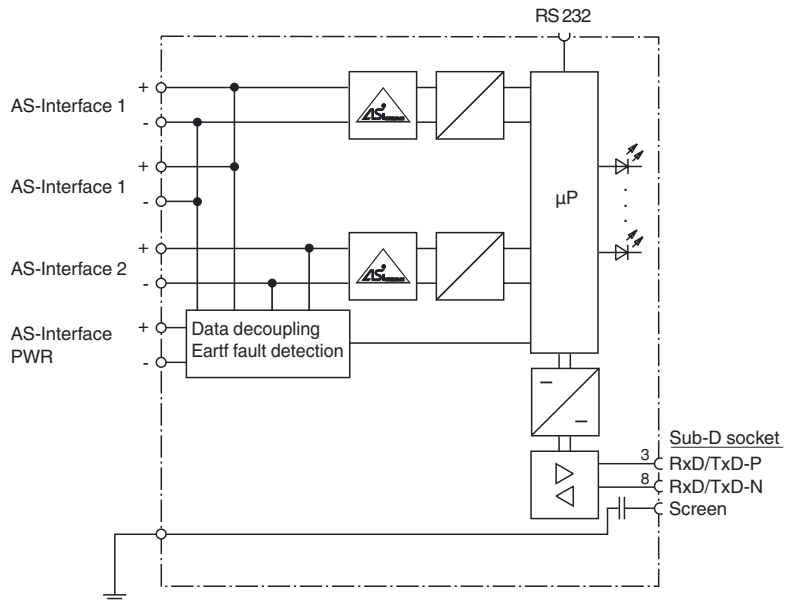PROFIBUS Gateway, double master for 2 AS-Interface networks

Features

- Connection to PROFIBUS DP
- 2 AS-Interface networks
- Integrated data decoupling
- PROFIBUS DP V1 support
- Easy commissioning and fault diagnosis via LEDs and graphic display
- Dublicate addressing detection
- Earth fault detection
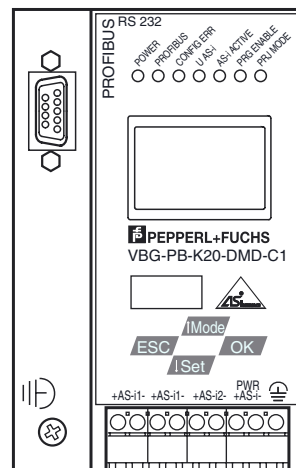- AS-Interface noise detection

Indicating / Operating means

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

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Technical data

General specifications

AS-Interface specification		V3.0
PLC-Functionality		none
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

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
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	$\geq$ 500 V
Rated operating voltage	U_e	from AS-Interface
Rated operating current	I_e	$\leq$ 250 mA from AS-Interface

Interface

Interface type	RS 485
Protocol	PROFIBUS DP V1
Transfer rate	9.6 kBit/s ... 12 MBit/s , Automatic baud rate detection

Connection

PROFIBUS	Sub-D interface
AS-Interface	spring terminals, removable

Ambient conditions

Ambient temperature	0 ... 55 °C (32 ... 131 °F)
Storage temperature	-15 ... 75 °C (5 ... 167 °F)

Mechanical specifications

Protection degree	IP20
Mass	460 g
Construction type	Low profile housing , Stainless steel

Compliance with standards and directives

Standard conformity		
	Electromagnetic compatibility	EN 61326
	AS-Interface	EN 50295
	Protection degree	EN 60529

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-PB-K20-DMD-C1 is a PROFIBUS gateway with 2 AS-Interface masters according to AS-Interface specification 3.0 in IP20. Due to integrated decoupling coils, one switching power supply, for example the K24-STR-24...30VDC-10A, can supply 2 AS-Interface lines at the same time. The design is especially suited for use in control cabinets.

The VBG-PB-K20-DMD-C1 is a modular PROFIBUS slave. This means, it is possible to define the data that are to be transmitted via the PROFIBUS using the PROFIBUS configuration tool. This provides for an adaptation of the data volume to be transmitted via the PROFIBUS.

In addition, this gateway supports the acyclic communication of the PROFIBUS DP V1. Using these acyclic services, it is possible to address a mailbox for the two AS-Interface masters in the gateway, via which all the data the AS-Interface/PROFIBUS gateway provides can be accessed.

A button is used to assign addresses, accept of the nominal configuration and set the Profibus address and baud rate. 7 LEDs on the front indicate the actual state of the AS-Interface line.

For AS-Interface gateways with graphical display, the commissioning of the AS-Interface circuit and the test of the connected peripheral equipment can be completely separated from the commissioning of the Profibus and the programming. The local operation via the graphical display and the 4 buttons make it possible to map all the functions on the display that are covered via the Software AS-i Control Tools in all the other AS-Interface masters. An additional RS 232 socket offers the option of reading in data about the gateway, network and function directly from the gateway within the scope of an enhanced local diagnosis.

PLC Functionality
Optionally, the gateway can also be supplied with PLC functionality.

Software

The device is supplied with the configuration data files (GSD) as well as a restricted version of the AS-i Control Tools software. The software performs the addressing, programming and monitoring of the AS-Interface network. The full version of the AS-i Control Tool is available as an accessory and features an expanded diagnostics monitor as well as a larger program memory for AS-Interface Control which makes it possible to detect faulty telegrams of slaves.

A GSD file can be easily created for the PROFIBUS DP using the GSD assistant, whereby the size of the I/O windows can be conveniently adapted to the AS-Interface circuit's load and the AS-Interface configuration can be stored within the GSD file. A text file is also created, which documents the status of AS-Interface data in the gateway's I/O window.

Note:
The VAZ-PB-SIM accessory is required for the AS-i Control Tool.

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Accessories

VAZ-SW-ACT32
Full version of the AS-I Control Tools including connection cable

VAZ-PB-SIM
PROFIBUS master simulator

K24-STR-24..30VDC-10A
Power supply, 24 to 30 V DC, 10 A

USB-0,8M-PVC ABG-SUBD9
Interface converter USB/RS 232

Release date: 2013-10-02 10:29   Date of issue: 2014-01-13   195386_eng.xml

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