



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

- Connection to Ethernet Modbus TCP/IP
- 2 AS-Interface networks
- Easy commissioning and fault diagnosis via LEDs and graphic display
- Duplicate addressing detection
- Integrated data decoupling
- Integrated switch allows line topology
- Integrated webserver
- Earth fault detection
- AS-Interface noise detection
- Ethernet diagnostic interface
- DLR technology supports ring topology

EtherNet/IP + MODBUS/TCP com unit with data decoupling, double master for 2 AS-Interface networks



Function

The VBG-ENX-K20-DMD-EV is a EtherNet/IP 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.

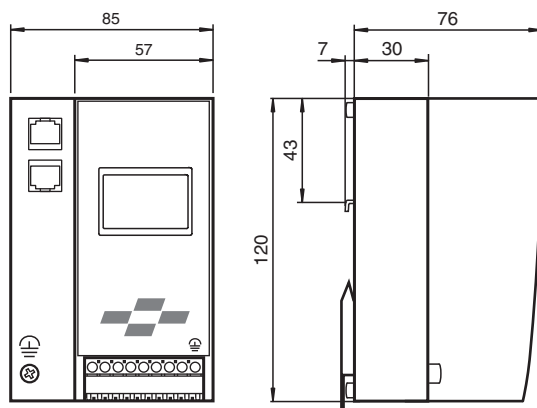
The device level ring protocol DLR increases the reliability of a ring topology at the device level, thus optimizing the machine running times.

The redundant power supply guarantees that the double master remains in function and is diagnosticable, when a failure of a power supply unit in one of the two AS-interfaces circles 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. Therefore you can order a code key VAZ-CTR additionally.

Dimensions



Technical Data

General specifications

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 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source

Indicators/operating means

Display		Illuminated graphical LC display for addressing and error messages
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 SER ACTIVE		ethernet active; LED green
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 30 V DC
Rated operating current	I_e	≤ 250 mA PELV
Power supply		max. 4 A per AS-Interface circuit

Interface 1

Interface type		2 x RJ-45
Protocol		EtherNet/IP + MODBUS TCP/IP acc. to IEEE 802.3 supports device level ring protocol DLR
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
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Connection

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

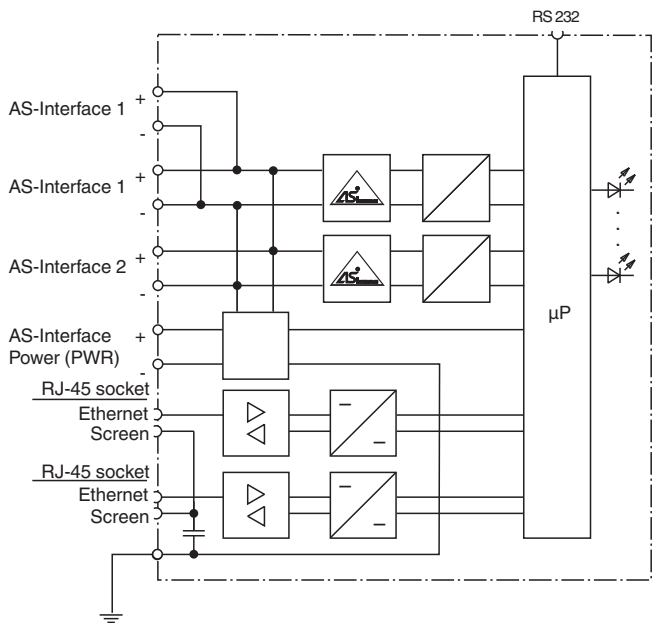
Electromagnetic compatibility		EN 61000-6-2:2005, EN 61000-6-4:2007
Degree of protection		EN 60529:2000
AS-Interface		EN 62026-2:2013
Shock resistance		EN 61131-2:2004

Approvals and certificates

Technical Data

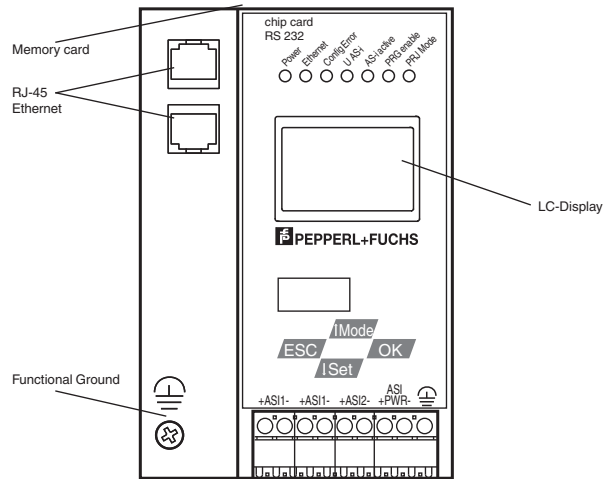
UL approval		An isolated source with a secondary open circuit voltage of $\leq 30\text{ V}_{\text{DC}}$ with a 3 A maximum over current protection. Over current protection is not required when a Class 2 source is employed. UL mark does not provide UL certification for any functional safety rating or aspects of the device.
Ambient conditions		
Ambient temperature		0 ... 55 °C (32 ... 131 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications		
Degree of protection		IP20
Material		
Housing		Stainless steel
Mass		500 g
Construction type		Low profile housing , Stainless steel

Connection



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