

AS-Interface Gateway/Safety Monitor VBG-ENX-K30-DMD-S16

- Gateway and safety monitor in one housing
- Gateway compliant with AS-Interface specification 3.0
- AS-Interface safety monitor with extended range of functions
 - Certified up to SIL 3 according to IEC 61508 and EN 62061 and up to $\rm PL_{e}$ according to EN 13849

 - 2 safe output relays and 2 safe electronic outputs
 - Integrated switch allows line topology
 - DLR technology supports ring topology

EtherNet/IP + Modbus TCP Gateway with integrated safety monitor, double master for 2 AS-Interface networks

Function

The VBG-ENX-K30-DMD-S16 is an Ethernet/IP+Modbus TCP gateway with an integrierted safety monitor and a double master according to AS-Interface specification 3.0 with a degree of protection IP20.

The device is a gateway with full functionality combined with a safety monitor. The gateway connects an AS-Interface system to a higher-level Ethernet or Modbus protocol. It acts as a master for the AS-Interface segment and as a slave for Ethernet / Modbus. 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 via Ethernet / Modbus using a command interface.

The gateway has four inputs and four outputs. The four inputs are used either for extended EDM device monitoring or as start inputs. Two sets of two outputs act as relay outputs and switch output circuits 1 and 2 and, as semiconductor outputs, output circuits 3 and 4. The K30 model is particularly suitable for installation in a control cabinet.

Configuration of the device can be performed using switches. Seven LED located on the front panel indicate the current status of the AS-Interface segment. One LED shows the power supply via AUX. A further eight LEDs indicate the status of the inputs and outputs. 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.

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

An integrated Switch and 2 RJ-45 sockets allow the design of a line topology without the use of an external Switch. The device level ring protocol DLR increases the reliability of a ring topology at the device level, thus optimizing the machine running times. An integrated webserver allows to administrate the device and The AS-interface network without additional hard and/or software via a browser interface.

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 occures. Also communication with the superior field bus is not disturbed by the failure of a power supply.

Connection

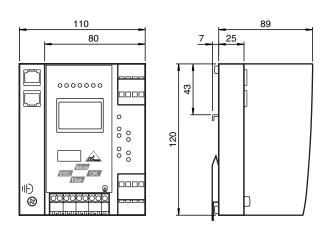
In an AS-Interface network only one device can be operated earth fault detection. If there are many devices in an AS-Interface network, this can lead to the earth fault monitoring response threshold becoming less sensitive.

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

AS-Interface Gateway/Safety Monitor

VBG-ENX-K30-DMD-S16

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
Switch-on delay		< 10 s
Response delay		< 40 ms
UL File Number		E223772 only from low voltage, limited energy source (SELV or PELV) or listed Class 2 source
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
Performance level (PL)		PLe
MTTF _d		200 a
B _{10d}		2 E+7
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
LED AUX		ext. auxiliary voltage U _{AUX} ; LED green
LED EDM/Start		External device monitoring circuit inputs closed, 4x yellow LEDs
LED output circuit		Output circuit closed; 4 x green LEDs
Button		4
Electrical specifications		
Insulation voltage	Ui	≥ 500 V
Rated operating voltage	U _e	26.5 31.6 V from AS-Interface; Output K3 and K4 24 V $_{\mbox{\scriptsize DC}}$
Rated operating current	l _e	\leq 300 mA off AS interface network 1 \leq 300 mA off AS interface network 2 \leq 370 mA in total
Interface 1		
Interface type		2 x RJ-45

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Germany: +49 621 776 1111 fa-info@de.pepperl-fuchs.com Singapore: +65 6779 9091 fa-info@sg.pepperl-fuchs.com

AS-Interface Gateway/Safety Monitor

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Construction type Low profile housing , Stainless steel	Mass	800 g
	Construction type	Low profile housing , Stainless steel

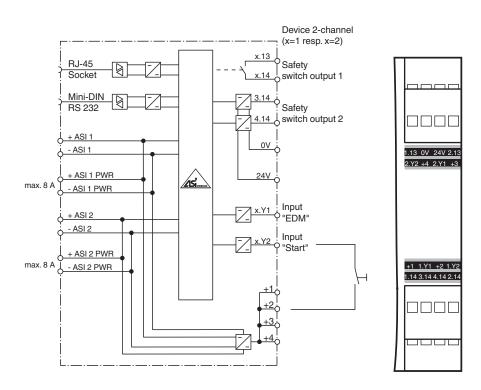
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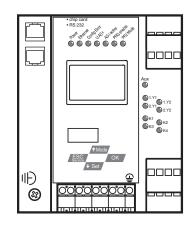
 www.pepperl-fuchs.com
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 fa-info@us.pepperl-fuchs.com

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Connection



Indication



Accessories					
100	USB-0,8M-PVC ABG- SUBD9	Interface converter USB/RS 232			
	VAZ-SW-SIMON+	Software for configuration of K30 Master Monitors/K31 and KE4 Safety Monitors			
s.00	VAZ-SIMON+-R2-1,8M- PS/2	Interface cable for connecting the K30/K31 Safety Monitor to a PC			

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

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