

EASYbus - Converter

EBW 64



General:

The EBW64 is a bidirectional interface converter for the connection of up to 64 **EASYbus** sensor modules to the serial interface of a PC.

Specification:

| | |
|-----------------------------|---|
| Supply: | 220-240V AC, 50/60Hz |
| Power consumption: | approx. 15W |
| Ambient temperature: | 0 to +50°C |
| Storage temperature: | -20..60°C |
| Ambient humidity: | 10..70% r.h. (not condensing) |
| Dimensions: | 100 x 75 x 110 (W x H x D) |
| State display: | 3 LED's: ON Power Slave: flashes during communication Short: signals that short circuit was detected on bus |
| Protection class: | IP20 |
| Mounting: | wall mounting or hat rail DIN EN 50022 |
| EMC: | The EBW64 corresponds to the essential protection ratings established in the Regulations of the Council for the Approximation of Legislation for the member countries regarding electromagnetic compatibility (89/336/EWG). |

EASYbus

| | |
|-------------------------------|--|
| Connection: | screw type terminals, terminals EB+ and EB- |
| Connection cable: | we suggest 2-wire twisted pair |
| Bus load: | max. 64 EASYbus standard loads |
| Cable length: | max. 1000m |
| Baudrate: | 4800 baud |
| Short-circuit control: | by detection of a short-circuit the bus power will switch off for 2 minutes. |

RS232 Interface:

| | |
|--------------------|---|
| Connection: | 9-pin SUB-D connector (for connection to PC with 1:1 RS232-cable) or screw type terminals |
|--------------------|---|

Disposal instruction:

The device must not be disposed in the unsorted municipal waste! Send the device directly to us (sufficiently stamped), if it should be disposed. We will dispose the device appropriate and environmentally sound.



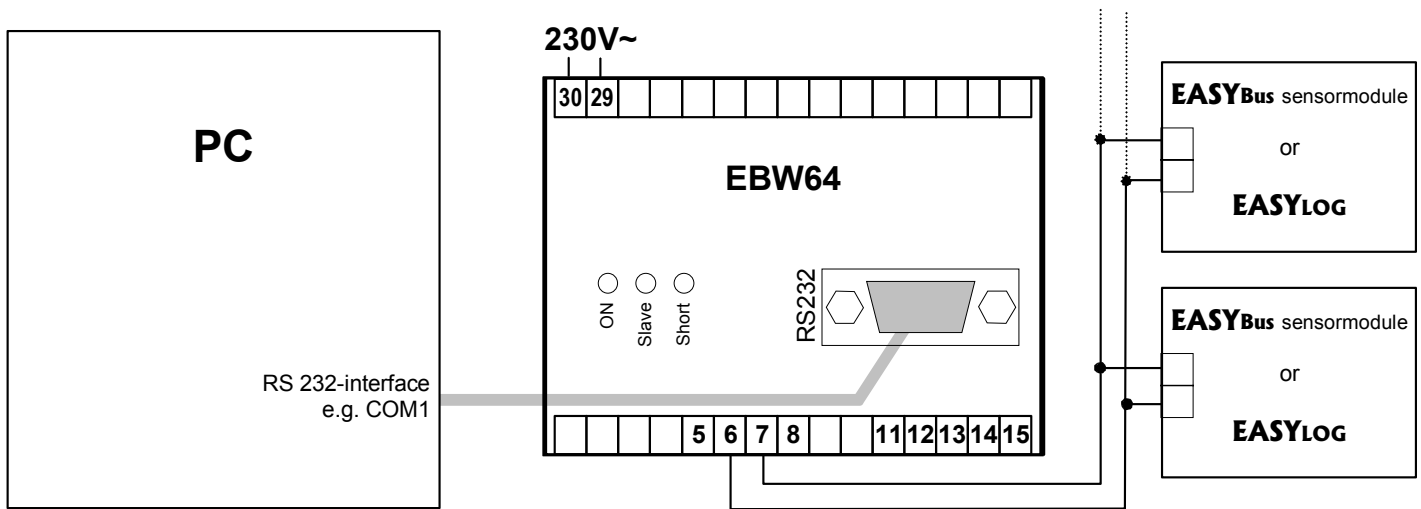
GREISINGER electronic GmbH

D - 93128 Regenstauf, Hans-Sachs-Straße 26

Tel.: 0049 9402 / 9383-0
Fax: 0049 9402 / 9383-33

Connection Diagram:

Connection of up to 64 **EASYbus** standard loads via one EBW64 to the serial interface of Your PC is possible. The **EASYbus** sensor modules will be powered by the EBW64, polarity has not to be surveyed.



Connections:

EASYbus:

EB+, EB- (2 pairs each), no polarity for **EASYbus** installations.

RS232:

Connection via screw type terminals or 9 pole D-Sub connector.

| D-Sub connector | terminal | function | |
|-----------------|----------|----------|--------------------------------|
| Pin 1 | | | not connected |
| Pin 2 | 12 | TxD | data transmit |
| Pin 3 | 13 | RxD | data receive |
| Pin 4 | | | connected to Pin 6 |
| Pin 5 | 11 | GND | ground potential |
| Pin 6 | | | connected to Pin 4 |
| Pin 7 | 15 | CTS | hand shake, connected to Pin 8 |
| Pin 8 | 14 | RTS | hand shake, connected to Pin 7 |
| Pin 9 | | | not connected |

Installation and Commissioning:

Connect the **EASYbus** sensor modules (please not the connection information!) regarding to the connection diagram to converter EBW64 using 2 wire twisted pair cable.

Connect EBW64 with mains adaptor to 220 - 240 V AC.

Then connect converter to the RS232 interface of Your computer..

Careless handling of the EBW64 can cause damage! The connected equipment may also be damaged. In this case the warranty is no further valid!

The manufacturer is not liable for any damage caused by the connection of a EBW64.

Shout-circuit shut-down:

Note: In case of a short circuit or overload on the **EASYbus** the bus voltage will be switched off. After approx. 2 min. the bus voltage will be automatically reconnected.

Connection information:

The interface-converter can supply the specified numbers of **EASYbus** standard loads (max. 64 pieces) .



Please note that some *EASYbus*-modules have a higher bus load as the standard load!
Please notice the corresponding specification in the module manual.

Bus loads of some **EASYbus** modules:

| | | |
|---------------------------|-----|-------------------------------|
| EASYlog -family: | 2 | EASYbus standard loads |
| EBN : | 2 | EASYbus standard loads |
| EBHT, EBT, EBH : | 1.5 | EASYbus standard loads |
| GIA20EB, GIR2002 : | 1 | EASYbus standard load |

When connecting the modules keep in mind that the sum of all bus loads of the modules must not exceed the maximal allowed number.

Worked sample:

1) Connection of 20 **EASYlog**, 12 EBHT and 10 GIA20EB:

$$20 * 2 + 12 * 1.5 + 10 * 1 = 40 + 18 + 10 = 58 \text{ standard loads (42 devices)} \Rightarrow \text{connection is possible}$$

2) Connection of 30 **EASYlog**, 5 EBN:

$$30 * 2 + 5 * 2 = 60 + 10 = 70 \text{ standard loads (35 devices)} \Rightarrow \text{EBW64 are overloaded!}$$

3) Connection of 64 GIA20EB or GIR2002:

$$64 * 1 = 64 \text{ standard loads (64 devices)} \Rightarrow \text{connection is possible}$$



Safety Requirements::

This device has been designed and tested in accordance with the safety regulations for electronic devices. However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advises given in this manual will be adhered to when using the device.

1. Trouble-free operation and reliability of the device can only be guaranteed if the device is not subjected to any other climatic conditions than those stated under "Specification".
2. Make it a rule to always disconnect voltage source and device before opening it up. The entire device and its connection have to be fingerproof after installation.
3. Standard regulations for operation and safety for electrical light and heavy current equipment have to be observed, with particular attention having to be paid to national regulations (e.g. VDE0100).
4. If device is to be connected to other devices (e.g. via serial interface) the circuitry has to be designed most carefully. Internal connection in third party devices (e.g. connection GND and earth) may result in not-permissible voltages impairing or destroying the device or another device connected.
5. If there is a risk whatsoever involved in running it, the device has to be switched off immediately and to be marked accordingly to avoid re-starting.

Operator safety may be a risk if:

- there is visible damage to the device
- the device is not working as specified
- the device has been stored under unsuitable

In case of doubt, please return device to manufacturer for repair or maintenance.

6. **Attention:** Do NOT use this product as safety or emergency stopping device, or in any other application where failure of the product could result in personal injury or material damage.
Failure to comply with these instructions could result in death or serious injury and material damage.

