Operating Manual

EBUW 232 A

EASY BUS - protocol converter and alarm supervisory device

1 General

The EBUW232A includes two functions in one device - protocol conversion and alarm supervision.

1.) The EBUW is a protocol converter which rebuilds splitted RS232 protocols (e.g. splitting done by a MODEM) and makes the protocol conforming to the **EASY BUS** timing requirements again.

2.) The EBUW232A automatically scans one EASYBUS module each 500 ms and checks it for alarm conditions. If an alarm is present the alarm output of the EBUW will be activated. Additionally there is the possibility to connect a switching module EBB4out.

2 Installation Instructions

The EBUW232A has just to be inserted between the **EASY BUS** converter and the requesting device (MODEM, PC, ...) by means of the adapter cable.

EBW.../EB2000 ⇔ adapter cable (multiple cable outlet at EBUW-end) ⇔ EBUW232A ⇔ PC/Modem

If just used as protocol converter, no additional power supply is necessary, the device taps from the RS232 voltages of the requesting device. If used for alarm supervision an external power supply should be connected to the cable marked with 'Versorgung' i.e. supply because the supply from the RS232 interface may not be sufficient. Note: Using devices with weak RS232 signals (e.g. some laptops) an external power supply may be even necessary when used as simple protocol converter.

The alarm output is available through the cable "Alarmausgang" i.e. "alarm output" of the adapter cable.

3 Specification

Connection:	9 pin Sub-D-plug resp.. Sub-D-socket
Socket assignment:	standard RS232
Plug assignment:	Pin 2 - 8: standard RS232, Pin 1: external supply, Pin 9: alarm output
Supply voltage:	taps from the RS232 voltages of the requesting device or from external supply
external supply:	6 - 12 V DC, max. 10 mA
supply via interface:	via the interface lines DTR (Pin 4) and RTS (Pin 7) for operation the lines must have a voltage level >5V.
Switching Output:	NPN-open collector, (Ron ≤ 30 Ohm; Roff ≥ 10 kOhm)
max. switching power:	24 V, 50 mA
Working temperature:	0 ... 50°C
Relative humidity:	0 ... 80% RH (non condensing)
Storage temperature:	-20 ... 70°C
Dimensions:	63 * 34 * 17 mm (B * H * T)
Weight:	approx. 26 g
EMC:	The device 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)

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4 Configuration of the EBUW232A

The configuration of the EBUW232A is done by the software MODKonfig (Version ≥V1.9).

Click on the choice "prepare EASYBUS for remote operation or EBUW232A operation"

- select the interface in the new window and click the button "check EASYBUS"
- The system will be checked for all connected modules. If a correct EASYBUS is detected, the EBUW 232A will be shown with a referring "EBW" symbol.
- Doubleclick on EBUW 232A: the referring configuration dialog will be opened. Choose the desired behaviour and leave with ok-button.

Important Notice: If a EBB4out (see below) is employed, it must be connected already during this check. If the assembly will be changed (adding or removing modules) the configuration must be performed again.

Function of alarm output:

The EBUW232A scans one of the connected modules each 500ms and checks it for alarm conditions. When all sensor modules are scanned, the alarm output will be set accordingly.
If a sensor module does not respond to the EBUW232A, 2 more attempts will be tried. If it is still not responding, this is also a valid alarm condition.
The behavior of the alarm output can be configured by means of the MODKonfig software (see above).

Behaviour of alarm output when “conducting in case of alarm“ (standard setting upon delivery):

Output opened:	no alarm - no module has an alarm condition or error.
Output conducting:	alarm - at least 1 module has a min-alarm, max-alarm, system error or communication error.

Behaviour of alarm output when “not conducting in case of alarm“

Output conducting:	no alarm - no module has an alarm condition or error.
Output opened:	alarm - at least 1 module has a min-alarm, max-alarm, system error or communication error.

Usage in combination with switching module EBB4out:

The EBUW232A scans one of the connected modules each 500ms and checks it for alarm conditions. When it turns to the switching module, the state of the alarms will be sent to the module, the referring outputs of the switching module will be set. (Note: Earliest after the first complete scan the complete alarm state of all modules can be sent to the EBB4Out)
If a sensor module does not respond to the EBUW232A, 2 more attempts will be tried. If it is still not responding, the alarm conditions communication error and collective alarm will be set.

4 different alarms are indicated at the 4 relay of the EBB4out:

Relay 1:	collective alarm	the relay releases when at least 1 module has min-alarm, max-alarm, system- or communication error.
Relay 2:	min.-alarm:	the relay releases when at least 1 module has a min-alarm.
Relay 3:	max.-alarm	the relay releases when at least 1 module has a max-alarm.
Relay 4:	communication error	the relay releases when at least 1 module has a communication error.

Note: When operating the EBB4out in combination with GSOFT40K, the GSOFT40K resets all modules during the ‘logger connect‘. This results in a release of all relay with immediate reactivation of all relay. The right state will be indicated again after the following complete scan.

5 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. Prior to opening it, disconnect device and supply voltage source. Make sure that all parts of the device are protected against direct touching when mounting the device and setting its connections.
3. Please always adhere to the standard safety regulations for electric devices, power systems and light-current installations, and make sure that your national safety regulations (e.g. VDE 0100) are observed.
4. If device is to be connected to other devices (e.g. PC) the circuitry has to be designed most carefully. Internal connection in third party devices may result in not-permissible voltages.
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 at risk if:

   - there is visible damage to the device
   - the device is not working as specified
   - the device has been stored under unsuitable conditions for a longer time.

   In case of doubt, please return device to manufacturer for repair or maintenance.
6. **Warning:** Do not use these product as safety or emergency stop 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.