

User's Manual

MODEM 3000 GSM

For Remote Operation Of The EASYBUS Via 900MHz Mobile Telephone Net
With SMS Alarm Functionality

General

The MODEM 3000 GSM is an industrial MODEM for the remote operation of EASYBUS systems via 900MHz mobile telephone nets (e.g. D1 & D2 net in germany). It is ‚tailor made‘ for the EASYBUS requirements to guarantee easy and fail safe operation.

Scope Of Supply

- MODEM 3000 HS and ext. mains adapter
- Serial connecting cable 9 pole
- EBUW 232 (protocol converter)
- GSK 9S-9S-NM (nullmodem cable)
- User's manual

Display Elements

For the display of the modes of operation the MODEM has two LEDs:

- green LED

State	Meaning
Off	No power supply
Flashing (ca 1Hz)	Initialisation phase (up to 1 min)
Blinking	Alarm (SMS - message) is currently sent (alarm phase)
On	Normal operation

- red LED

State	Meaning
Off	MODEM is switched off / no power supply
Blinking	MODEM is operating, no net found or not logged in into net
On	MODEM is logged in into net

If the MODEM is correctly installed (including SIM – card) after period of time of up to 1 minute after switching it on both LEDs should be ‚on‘ permanently, then the MODEM is fully ready for use.

The configuration of the MODEM with software MODKonfig is already possible, when the green LED ligths up permanently, even with no SIM card installed.

Connection and Operation

1. Connect antenna (not included in scope of supply!)

2. Installation of SIM card

For the operation of the MODEM the data transfer of the used SIM card has to be enabled. Please ask Your provider for more information. Only 3 V cards can be used. The slide of the SIM card is placed in the front of the MODEM. By pressing the retracted yellow push button below the SIM card slide it will be unlocked and can be taken out.

The SIM card has to be inserted with contacts pointing up into the slide. Afterwards insert the slide again, with the contacts pointing to the right until the end is on the same level as the front plate.

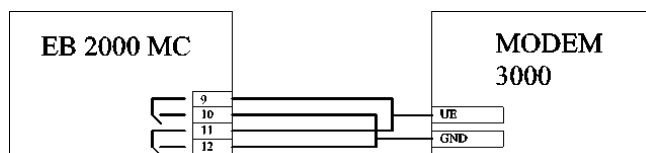
3. Connection of supply

Connect the mains adaptor (not included in scope of supply) to the MODEM.

4. If needed: Connect the alarm input

If the connection INPUT is for example shorted via an alarm contact to GND, an alarm message in form of a SMS is sent. Connect the INPUT referingly.

Example application: EASYBus connected to MODEM via EB2000 MC



Configuration of EB2000 MC: inverting alarm outputs
(p.r.t. EB2000 manual chapter ‚Configuration‘)

5. Adjust MODEM - settings with MODKonfig software

Install the MODKonfig software to the PC first (included on the GSOFT40k CD V7.0 or higher).

Connect the serial interface cable with an unused serial interface (COM1, COM2...) of the PC.

Start MODKonfig and choose ‚Prepare MODEM for remote operation‘ - the MODEM settings window appears.

Wait until the green LED stops blinking.

Select the serial interface at which the MODEM ist connected an choose ‚connect MODEM‘.

After a short time (the software detects the MODEM) the label MODEM 3000 GSM appears and the referring settings can be made.

Important: To be able to ,call' the MODEM from another place by the software GSOFT40k and a second MODEM the 'automatic off hook function' has to be enabled. Suggested setting: after 1 ring.

Alarm settings for the SMS alarm function:

If the SCN Service – Center – Number is not entered the stored number of the SIM card is used (recommended). If another number should be used, enter it with the country pre dial code (e.g. germany: 0049XXXXYYYY).

The PIN must be entered! **Attention! Be sure not to enter the wrong PIN!**

When the settings are finished choose 'send configuration to MODEM', after a few seconds the settings are permanently stored in the MODEM.

6. Preparing of the EASYBUS components

The EASYBUS – addresses of the connected dataloggers have to be assigned in increasing order, beginning from 1 (1,2,3,4...). When using an EB2000-MC level converter this is done automatically within the system initialisation. When using other level converters the software MODKonfig can assign the addresses automatically: Start MODKonfig and choose ,Prepare EASYBUS for remote operation'. Connect the level converter with the readily connected EASYBUS and select the referring serial interface in the software. Then click ,check EASYBUS' – all the rest is done automatically, follow the messages of the software,if there are any, the EASYBUS will be ready after short while.

7. Connect MODEM to the EASYBUS

Connect the MODEM via the nullmodem–cable (in scope of supply, do not use the ,ordinary' serial interface cable!) with the EBUW232. Connect the EASYBUS-level converter via the connection cable to the EBUW232.

- EBW1, EBW64, EBW240: standard interface cable (in scope of supply of the EBW...) or directly to the EBUW232
- EB2000 MC: GRS 01/9 (accessory)

MODEM 3000 GSM → nullmodem cable → EBUW 232 → (connection cable →) level converter

The battery driven EBW2 is handled as follows: If it should be switched on just in case of a active telephone connection, the special nullmodem cable GRS02/9 has to be used (special accessory). If the standard nullmodem cable is used, the EBW2 is always switched on, the battery supply has to be designed to suit the relatively high power consumption then.

Specification

Modem GSM 900 Phase II

2Watt/Class4

Alarm function If alarm input UE is connected to ground the SMS message which was configured with the MODKonfig software will be sent to the referring mobile number.

Requirements for antenna

Frequency, TX	890-915 MHz
Frequency, RX	935-960 MHz
Impedance	50 Ohm
VSWR	TX: max. 1.7:1 installed RX: max. 1.9:1 installed
Gain	>1.5dB referred to lambda/2-dipole
3dB width of the radiation lobe	vertical 80° horizontal 360°
Max. power	1W(cw), 2W Peak At ambient temperature 55°C

Requirements for SIM card

SIM card with enabled data transfer of 9600 baud.

Attention! If data transfer is not enabled for the SIM card, no data transferring connection can be established!

Only use 3V SIM cards.

Automatic net-logout daily at 0:00 o'clock for 5 minutes.

Supply 10..60V DC, max. 3W, mains adaptor 230V AC (not in scope of supply)

RS232-Interface DSub-9 Socket,

ATTENTION: For the connection to the EASYBUS level converter a nullmodem cable has to be used (in scope of supply), type **GSK 9S-9S-NM**

Protection Class IP40 / Screw type terminals IP20

Mounting Hat rail DIN EN 50022

Housing 55*110*75 mm (l*h*d)

Ambient temperature 0..55°C

Ambient humidity 0..95%, not condensing

Approvals

- EU – laws: 89/336/EC (EMC)
73/23/EC (low voltage)
91/263/EC (telecommunications equipment)
- Others: EMV: ETS 300 342 T
Security: EN 60950
GSM - Net: TBR 19, TBR 20
Full Type Approval / GSM Phase II
CE