GLT-M002-DDCM

Application

The modem GLT-M002-DDCM connects the the DDC system of the operational plant to the cellular network.

The DDC system, monitored by the cellular network, can send messages and text messages (SMS).

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Important Information Regarding Product Safety

Safety Instructions

This data sheet contains information on installing and commissioning the product "GLT-M002-DDCM". Each person who carries out work on this product must have read and understood this data sheet. If you have any questions that are not resolved by this data sheet, you can obtain further information from the supplier or manufacturer.

If the product is not used in accordance with this data sheet, the protection provided will be impaired.

Applicable regulations must be observed when installing and using the device. Within the EU, these include regulations regarding occupational safety and accident prevention as well as those from the VDE (Association for Electrical, Electronic & Information Technologies). If the device is used in other countries, it is the responsibility of the system installer or operator to comply with local regulations.

Mounting, installation and commissioning work on the devices may only be carried out by qualified technicians. Qualified technicians are persons who are familiar with the described product and who can assess given tasks and recognize possible dangers due to technical training, knowledge and experience as well as knowledge of the appropriate regulations.

Legend

WARNING

Indicates a hazard of medium risk which can result in death or severe bodily injury if it is not avoided.

CAUTION

Indicates a hazard of low risk which can result in minor or medium bodily injury if it is not avoided.

NOTICE

Indicates a hazard of medium risk which can result in material damage or malfunctions if it is not avoided.

NOTE

Indicates additional information that can simplify the work with the product for you.

Notes on Disposal

For disposal, the product is considered waste from electrical and electronic equipment (electronic waste) and must not be disposed of as household waste. Special treatment for specific components may be legally binding or ecologically sensible. The local and currently applicable legislation must be observed.

Item

GLT-M002-DDCM	Modem for controller, DDC3000/DDC4000/HRP/LRP and BMR for sending text messages over the cellular network and as an interface for the cellular network for transferring data to the GLT system.

Technical Data

Nominal voltage	AC 230 V, 50 Hz, 200 mA
Power connection	Power adapter
Outputs	AC 12 V, 700 mA
Dual-band	900/1800 MHz
Connection	Handled automatically by the program
Transmission rate (GSM)	9600 baud Automatic adjustment
Transmission protocol	V.110, V.32
Services/protocols	PPP, BACnet PTP, fax, SMS MO
Factory	Asynchronous data transmission
settings	Data bits 8 bits Parity N Stop bits 1
Ambient temperature	5 °C to 40 °C
Ambient humidity	0 to 80% r.h.; non-condensing
Weight	0.13 kg
Dimensions (WxHxD in mm)	65 x 74 x 33

Accessories (included in delivery)

- AC 240 V / DC 12 V power adapter, item no. GLT-M001-DDCM.001
- Antenna with magnetic base, approx. 2.4 m, item no. GLT2327.003
- Standard rail adapter, item no. GLT2327.004
- Connection cable for DDC system, 9-pin with SUB-D plug, 5 m, item no. DDC2327.001
- Connection cable for BMS, 2 x 9-pin (plug/socket), 1.5 m, item no. 2316.001

NOTE

Communication using a mixed modem configuration (e.g. analog landline modem to cellular modem) is dependent on the service provider and SIM card.

Connection

Front side

1 LED
2 Slot for SIM card
3 Release for SIM card

Reverse side

1 Connection for DDC
2 Connection for power adapter
3 Connection for antenna

Installation

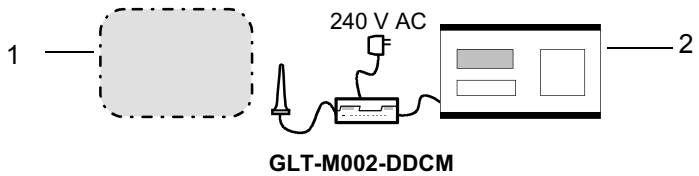
WARNING

Only qualified technicians may perform the electrical installation with the device connections.

Be sure to comply with VDE guidelines and local wiring regulations when installing the switchboard of the GLT-M002-DDCM modem.

Connections must be made according to the circuit diagram.

Connection Diagram



1 Cellular network
2 DDC system: DDC3000/DDC4000 BMR/HRP/LRP

Connection Notes

GLT-M002-DDCM

1 Antenna (item no. GLT2327.003)
2 Power adapter (item no. GLT-M001-DDCM.001)
3 Connection cable for BMS operator's terminal/DDC4000 9-pin (item no. 2316.001)
4 Connection cable for BMS DDC system (item no. DDC2327.001)

Connection table

RS232 connection at the DDC system			Connection cables DDC2327.001
DDC3002/DDC3003 DDC3200/DDC3300	Terminals	58 = TX	RX
		59 = RX	TX
		60 = GND	GND
HRP	Terminals	31 = RX	TX
		32 = TX	RX
		33 = GND	GND
LRP	Terminals	31 = RX	TX
		32 = TX	RX
		33 = GND	GND
BMR	Terminals	39 = TX	RX
		38 = RX	TX
		37 = GND	GND

NOTE

The connection cable 2316.001 is necessary for connecting to a DDC4100/DDC4200/DDC4400 controller.

Commissioning

NOTICE

The commissioning technician/engineer initiates remote data transmission.

Further descriptions regarding the BMS and the DDC system can be found in the project planning documentation.

- The GLT-M002-DDCM must be configured using ModemTool version 2.1 and higher.
- Dialing only in data mode: AT DT N...
- When ordering the SIM card:
  - When used on a DDC3000/HRP/LRP/BMS, the SIM card must not be protected by a PIN.
  - Data services must be enabled; GSM service: “Mobile terminated circuit-switched data (CSD)” with additional data telephone number.
  - For more details on support functions of the GSM modem, see chapter 4.7.1 of the BMR project planning documentation.
  - SIM cards with PIN protection can be used with BMR and DDC4000.
- When dialing the cellular network modem, an analog connection must be forced using the “N” prefix.
- The baud rate must be set to 9600 baud on DDC3000, HRP and LRP controllers.
- The baud rate must be set to 115200 baud on DDC4000 and BMR controllers.
- SIM cards with PIN protection can be used with BMR and DDC4000.

Checking Whether PIN Protection is Enabled for a SIM Card

NOTICE

SIM cards with PIN protection must not be used for DDC3000/HRP/LRP/BMS as the PIN needs to be entered again after a power failure. PIN protection must be deactivated using a suitable cellular phone.

You can configuration or check the modem using AT commands with a terminal program (e.g. Hyper-Terminal or qtalk [command: qtalk -m /dev/ser1]).

Each command must be confirmed with the “Enter” key after input.

Enter:	at + cPIN?	(PIN is queried)
Answer:	+ cPIN: READY	(no PIN is required in this case)
Answer:	+ cPIN: SIM PIN	(a PIN must be entered)
Enter:	at + cPIN = 0123	(PIN 0123 is entered)

DDC4000 and BMR check the PIN automatically.

Setting the M28 modem menu using HRP/LRP as an example

2940	BMS identification	= depending on the system
2950	telephone number 1	= GSM modem no. for BMS
2920	Dialing mode	= Tone
2921	Modeminit	= ATZ0
2922	Baud rate	= 9600
2923	Conn. status	= “Ready” when successful
		= “P90” with BMS connection
		= Init when modem is initialized (must not be pending for longer than 20 seconds)

LED Description

LED off	Device switched off
LED lit for 2 seconds	Switch on/reset
Rapid flashing	Network search (no SIM card, no PIN entered, no network found)
Slow flashing (every 2 seconds)	Logged into network
LED lit constantly	Connection