

GSM/GPRS Modem Quadband TC63i

Order-No: P8150.63 (Modem & Accessories)
P8150M.63 (incl. installation)

- Data transfer via mobile telecommunications
- Compatible with Ammonit measuring systems
- Integrated text messaging functions
- Quadband (E) GSM 850/900/1800/1900
- Email dispatch via GPRS

When meteorological stations are in remote locations there is usually no access to mains electricity and a telephone line. As a consequence it is necessary to visit the site regularly to collect data and to check that the station is still in good working order. Not only are these visits costly and time-consuming, but there is the additional disadvantage that the checks will not be frequent enough to allow a direct reaction to any faults in the system.

Measurement stations "online"

Many countries now have a widespread mobile communications network that can be used for the data transfer. Ammonit offers as an option for its measuring stations a GSM system which provides easy and inexpensive access to the station via PC and mobile telephone.

The following functions are provided:

- Unlimited data exchange between PC and measuring station with the logger software provided
- Checks on the measurement station and access to measurements via mobile telephone with replies as text messages (SMS)
- Automatic text message warning of station malfunctions to the operator's mobile telephone

A station fitted with a GSM can be run on a 5 Watt solar supply, provided access to the measuring system is restricted to a few hours daily; our standard actually is at 10W. Warnings from the data logger are sent out without delay, as soon as the modem is booked in its network, so that the operator can react immediately.

Applications

The following web site provides an overview of the GSM-networks in all countries:

www.gsmworld.com/roaming/gsminfo/index.shtml

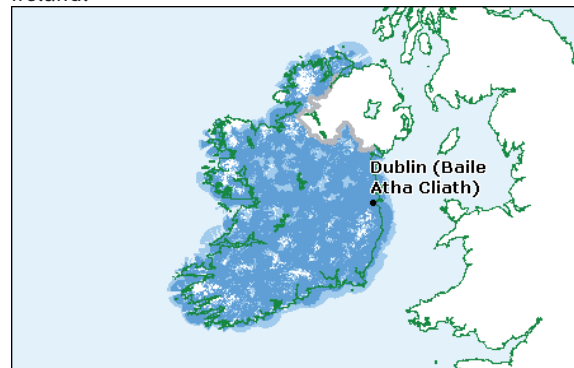
First make sure that the local network operator provides the necessary services. You will require:



- DATA ASYNCH 9600 bps - MO/MT (Data, OBLIGATION, CSD)
- SMS - MO/MT (text messaging functions; recommended)
- GPRS (Optional)

Look under "Coverage" to find a map showing the areas covered by the network in the country you have selected, e.g.

Ireland:



This map will only provide a rough overview! There may be areas with inadequate reception in some regions, and isolated places with good reception that are not marked. You should therefore visit the proposed location and simply check whether your mobile telephone works there! In some cases you might want to order the system with a directional antenna: P8151.63 respectively the antenna itself P8111 for better signal quality at a "weak" site.

To operate the GSM modem you will need a telephone card (mini-SIM) with a data channel. We have good experience with so called "combined Data&Fax cards". It is important that the data channel is also cleared to receive calls, because the connections will be set up from your desk-top PC. You can either use an appropriate local card or one for the country from which the data will be accessed. Please also note, that a legal / governmental registration of the imported modems may be necessary (especially in turkey & mexico).

Specification GSM/GPRS Modem Quadband TC63i: P8150.63 & P8150M.63

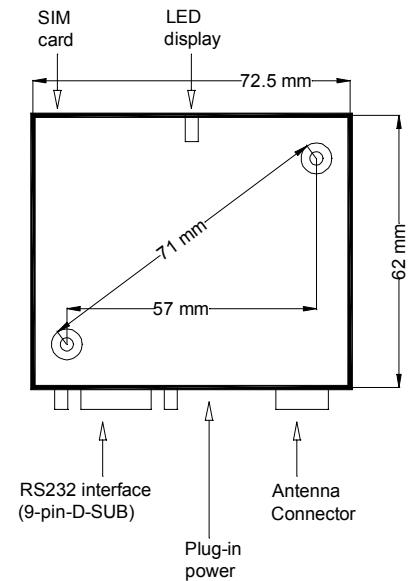
Installation and operation

The GSM-system consists of the modem, an antenna, and logger and power cables. An external 12 V DC power supply is required (available in the steel cabinet).

The data transfer is only possible if both logger and modem have an external power supply!

The GSM-system is switched on and off by the logger at pre-programmed times. Therefore it is very important to set these two parameters within the data logger before it goes into use:

- Connect the data logger to your PC and start the supplied software.
- Select (depending on the system):
 - "CALLaLOG98": Stations - Connect - DFÜ/Alarm
 - "CALLaLOG02": Site/Logger - Connect - Settings - GSM/Remote
- Enter the **PIN** number of the data card and at least one period of time in which the logger is to be accessible. Transfer the changes to the data logger.



Check that the data card is installed properly in the modem and then connect the cable between the data logger and the GSM-modem.

In order to check that the data logger is working it must be connected to an external supply and be activated (Display is on).

- depending on equipment select the topic "GSM/GPRS/SAT" (or similar) with the button **Select** or lightly press the internal control button twice to the left until the display shows "Modem".
- If everything is in working order, then after a few seconds the display will show the name of the network operator.
- The modem can be deactivated by the button **UP** or again pressing the control button lightly to the left twice.

Data transfer Logger - PC

Data transfer with the "CALLaLOG" software works just like the connection with an analog modem. There are two special points which are not included in the manuals.

Text message warnings (SMS)

The alarm function in the measuring system can be activated using the logger software (Menu DFÜ/Alarm).

As soon as a fault is detected, the logger sends out a warning to the last number from which a call was received!

Therefore it is important that after installation you send a message to the measurement station, so that your number can be registered.

After sending a warning the logger deactivates the alarm functions. After you have investigated (and corrected) the fault, then you must reactivate them yourself.

Station control by mobile telephone

You can use the text messaging function of your mobile telephone as a remote control for the measuring system without PC. Send a message from the following table to the telephone number of the station. You will receive an answer a few minutes later, or when the GSM-system next becomes active.

Functions ("series 32")

Function	Text	Reply
View current data	A	*
Activate/deactivate digital output of the Data Logger	O+ resp. O-	*
Activate/deactivate warning messages by mobile phone (SMS)	W+ resp. W-	*
Set GSM settings to 02:00, 08:00, 14:00, 20:00; period of the activation = 1 hour from each time	D	
Request Modem & provider information from System	G	
Deactivate GSM modem (stand-by)	S	
Switch on Slow Motion Recorder (SMR)	T	*
Activate/deactivate SMR message in case of programmed events by mobile phone (SMS)	E+ resp. E-	*
To set a call number for SMS information ("warnings" and "SMR") Afterwards all SMS informations will be send to the addresser of these SMS	N	*

The measurement station responds to messages with Reply = * with a status report: "Station number, status, current measurements..." the others will have more detailed replies.

Information about the E-Mail function with the GPRS Service can be found in a separate information sheet. Please ask us for it.