*Enermet's **M100-T** Modem is an ideal solution for communication in telephone networks.*

*The **M100-T** Modem can be used for remote reading and control of district heat meters, industrial electricity meters and concentrators.*

*The **M100-T** Modem does not need extra wiring for power since it uses directly the normal mains voltage.*

*The **M100-T** can even be used to feed the mains voltage to the meter.*

*The modem's caller identification and call-back function are a guarantee for secure operation.*

# PSTN Modem M100-T

## M100-T in a Metering System

Thanks to the standard casing, the M100-T Modem can be mounted to new or already installed metering devices. The M100-T Modem functions as a link between the metering device and system. Using appropriate reading software the metering information can be read from the metering device via the M100-T Modem.

The M100-T Modem can also be used with metering devices that have originally been planned for local serial communications only. This is possible as the M100-T does not require extra handshaking signals or commands from the metering device.

The M100-T Modem can be used with either heat or electricity meters. Thus it allows the integration of heat and electricity metering into one metering system.

## Modem Communications

The M100-T Modem supports data communication with speeds from 300 up to 33600 bits/second in telephone networks or with leased lines. Therefore the company can make use of its own signal cable network.

The M100-T Modem has a standard RS-232 interface, and also two-wire current loop signalling for up to three metering devices (CS-interface), extending the communication range also to CS-meters. The communication interface type can be changed on the field simply using a switch.

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# Benefits of Enermet's M100-T Modem

## Standardised Solution

The M100-T Modem is compliant with the European CTR-21 requirements and naturally it fulfils the standard European requirements regarding electrical safety and electromagnetic interference.

## Caller identification

The A-subsciber identification makes it possible to use public telephone lines without disturbing the end-user. It is possible to configure up to 52 telephone numbers into the modem's memory. After that it accepts only calls coming from these numbers.

Thanks to the A-subscriber identification, the modem is protected from unauthorised use and configuration. A-subscriber identification for the M100-T Modem is available in Finland, Denmark, Norway, Sweden and the Netherlands.

## Security

The M100-T Modem has a call-back function which helps to protect the device from answering any illegal calls. Thanks to caller identification, the M100-T Modem can be configured to accept calls from specified numbers only.

As a further safety measure, the M100-T Modem can be configured not to answer the call even if it accepts the number, but to call back after a while. This way the modem ensures that the call is from a correct number.

The M100-T Modem can be configured so that the device it is connected to decides if an incoming call is answered. Both of these features together with the caller identification increase the modem's security in use.

## Compatibility

With the M100-T Modem Enermet offers a comprehensive communications solution for the overall metering system. The M100-T Modem is compatible for example with the following items of the Enermet product range: MC110 concentrators, E700 industry meters, MT33r terminal units as well as the 9EVL, 10EVL and 11EVL heat meters. Regarding compatibility with other metering devices, please contact Enermet.

## Easy Installation

The M100-T Modem is easy to install to the terminal block of electronic DIN or ERMI metering devices, or directly to a wall. The M100-T Modem does not need an external power supply and it can even supply the single phase 230 V e.g. for a heat meter. Wiring can be carried out using slot-headed screws without any special tools.



## Technical Specifications

**Power Supply**
- 230 V, -20 %...+15 %, 50 Hz, 1 Hz
- Power consumption: < 5 VA

**Data Communication**
- RS-232 connection with 3 wires and slot headed screws or CS current loop connection with 2 wires and slot headed screws (switchable on the field)
- DTE speeds: 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600 and 115200 bit/s

**PSTN Characteristics**
- Speeds from 300 to 33600 bps (V.21…V.34)
- Support for dial-up and leased lines
- Easy remote control by AT-commands
- Call reception and dialling out (call back)
- A-subscriber identification in Finland, Denmark, Norway, Sweden and the Netherlands
- CTR-21 approved in Europe

**Case**
- Protection class: IP20
- Insulation class: double-insulated
- Installation: To the terminal board of DIN electronic kWh or ERMI meters or to a wall.

**Additional Information**
- Operating temp.: –20...+50 °C
- Storage temp.: –40...+70 °C
- Humidity:< 93% RH, IEC 68-2-3
- Connections under a sealable cover

**Dimensions**
- Height: 100 mm
- Width: 178 mm
- Depth: 78.5 mm
- Weight: 422 g

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