



Data Logger MRL-7

Weatherproof data logger with integrated data transmission

Collecting, processing, storing and transmitting of monitoring data - easy, convenient and quick. The MRL-7 is a battery run data, modem supported logger with splash-proof housing, USB data read-out functions and integrated solar charge controller. The very energy efficient operating mode as well as a weatherproof box qualifies the MRL-7 for data applications in remote areas far from any infrastructure.

Features and advantages

- Weatherproof logger with integrated remote data transmission using 2G / 3G / 4G modem
- Reliable and energy-saving: optimised to collect environmental monitoring data in remote areas without any infrastructure
- Logger can be operated fully independently (with batteries or solar module), integrated solar charge controller, protection IP 67
- Ideal integration and compatibility with complete SOMMER sensor family as well as popular sensor technology products
- Backlit display for easy data reading and logger parameterisation
- Parameterisation via RS-232 and Bluetooth
- Data readout with USB memory stick or Bluetooth-interface
- Minimum energy demand; integrated solar charge controller
- Solid, compact, and weatherproof aluminium box (powder coated)

Fields of application

Similar to the "smaller" MRL-6, also the MRL-7 is used for applications in environmental monitoring, where low maintenance and a very energy saving operation is needed as for example at sites with no landline power network or where no additional switch cabinet shall be installed. The MRL-7 provides comfortable data transmission through its integrated modem. For this reason all-in-one solutions (sensor, data collection and transmission) can be realised very easily. In addition, remote access as well as wireless data read out and storing are possible.

Technical details

General

- **Dimensions** MRL-7: 180 x 150 x 60 mm | MRL-7B (with integrated battery): 180 x 150 x 60 mm (W x H x D)
- **Housing** aluminium box, powder coated

- **Protection** IP 67
- **Power supply**
 - internal battery (MRL-7B): gel battery, 12 V 4 Ah
 - external battery: max 12 V / 50 Ah
 - external power supply: 6 ... 30 V DC
 - integrated solar charge controller for solar panel with max 40 W / 12 V
- **Sensor supply** 5 /100 mA or 12 V / 200 mA
- **Reference voltage** 2.5 V for potentiometer (max. 4 mA)
- **Display** LCD unit with digital contrast setting, 2 x 16 characters; LED background illumination with splash water proof cover and extended temperature range
- **Keypad** 5 keys for reading current measurement values and observer confirmations/inputs
- **Number of channels** up to 99
- **Memory (internal)** 4 MB failure-resistant flash memory (equivalent to approx. 500,000 measurement values)
- **Operating temperature** -35 °C ... +60 °C (storage temperature: -35 °C ... +60 °C)
- **Installation** easy installation; attaching to walls without extra housing
- **Functions** date values, intensity, maximum, aggregate values, mean values etc.
- **Deep discharge protection** for logger and for MRL-7 supplied sensors

Interfaces

- **Inputs**
 - 4 x analogue 0 ... 2.5 V (thereof 1 x PT-100 4-wire connection, 1 x NTC, 1 x 0 ... 0.3 V)
 - 2 x counters (thereof 1 x impulse, 1 x shaft encoder up and down)
 - 1 x frequency input for wind speed and wind gust
 - 1 x potentiometer input for wind direction (replaces 1 x counter)
- **Digital sensor interfaces** 1 x RS 485 (SOMMER-Bus / ASCII protocols), 1 x RS-485 for web cam, 1 x SDI-12 interface
- **User Interface** 1 x communication interface: RS-232: transfer rate 9.6 to 115 k Bd, 1 x USB host (only for data readout of data on USB flash drive), 1 x Bluetooth
- **Output (digital resp. analogue)** 4 x outputs (thereof 3 x switching outputs for alarm management)

Data transmission

- **Modem** integrated remote data transmission with 2G, 3G or 4G modem
- **Target server** up to three target servers (http / ftp) simultaneously
- **Further characteristics**
 - Independent transmission intervals possible
 - IP call activation for remote servicing (permanent or limited over time); fixed IP
 - Time synchronisation via NTP (Network Time Protocol)
- **GPS (optionally)** GPS for location detection