



Meinberg Radio Clocks

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GPS-MP: The ready-to-operate GPS systems built up in rackmount slimline modular cases.

The ready-to-operate systems GPS-MQ/F4/MP (GPS-MQ/LCD/F4/MP) and GPS/MP (GPS/LCD/MP)

Our satellite receiver clock provides extremely precise time as well as pulses and frequency outputs. The clock has been developed for applications where conventional radio controlled clocks cannot meet the increasing requirements in precision and reliability.

High precision available 24/7 around the world is the main feature of this high-quality system which receives its information from the satellites of the Global Positioning System.

Key Features

- 2 time trigger inputs
- Pulses per second and per minute
- LC-Display for configuration (.../LCD/... types only)
- 2 RS232 interfaces
- integrated power supply (85 ... 264VAC)
- Optional (only .../F4/... models): four frequency outputs 2.048MHz direct, 3.0Vpp into 50 Ohm 2.048MHz switched, 3.0Vpp into 25 Ohm 10MHz direct, 3.0Vpp into 50 Ohm 10MHz switched, 3.0Vpp into 25 Ohm
- alarm relay output, changeover contact
- Including GPS antenna, 20m standard cable and manual on USB key

Description

The ready-to-operate systems GPS-MQ/F4/MP (GPS-MQ/LCD/F4/MP) and GPS//MP (GPS/LCD/MP) are built up in 19" slimline modular cases (1U).

The frequency locking of the master oscillator to the GPS system enables the module GPS170 to generate fixed and programmable standard frequencies with high accuracy and stability. Various oscillator options allow the cost efficient implementation of different requirements concerning the accuracy of the outputs. The pulse generator of GPS170 generates pulses per second and per minute. As an option three programmable outputs are available. The pulses are synchronized to UTC second.

Up to four serial interfaces are available for sending time strings. These ASCII telegrams include information regarding time, date and status of the GPS receiver. The module provides two inputs for measurement of asynchronous time events. These capture events are shown on the LC display (only LCD models) and can be read via a serial interface.

The front panel of LCD models integrates a LC display that shows information regarding the GPS receiver in different menus. In combination with four push buttons it is also used to setup all configurable parameters.

The ../F4/.. models come with E1/T1 frequency outputs and are widely used in the telecommunication sector.

A powerful and feature-rich software called GPSSMON is available for configuration and monitoring of your Meinberg GPS receivers.

Characteristics

Type of receiver	12 channel GPS C/A-code receiver
Type of antenna	Remote powered [1] GPS antenna/converter unit , up to 300m distance to antenna with RG58 and up to 700m distance with RG213 cable
Display	Optional LC-Display, 2 x 40 characters, with backlight
Control elements	Configuration occurs by using the enclosed monitoring software, connected to the system via the serial interface COM0 in the front panel. ../LCD/.. only Configuration occurs via the 2x40 character front panel LC display or by using a monitoring software, connected to the system via the serial interface COM0 in the rear panel.
Status info	Fail-LED shows that the internal timing has not been synchronized or that a system error occurred Lock-LED shows that the calculation of the position has been achieved after reset
Synchronization time	Max. 1 minute in normal operation mode, approx. 12 minutes after a cold start (discharged buffer battery)
Interface	Two independent serial RS232-interfaces, menu configurable
Data format of interfaces	Baud rate: 300, 600, 1200, 2400, 4800, 9600, 19200 Baud Data format: 7E1, 7E2, 7N2, 7O1, 7O2, 8E1, 8N1, 8N2, 8O1 Time telegram: [2] Meinberg Standard-Telegram , SAT, Uni Erlangen (NTP), SPA, Sysplex, RACAL, NMEA0183 (RMC,GGA,ZDA), Meinberg GPS, COMPUTIME, ION oder [3] Capture-Telegramm

Physical dimensions	485mm x 45mm x 305mm
Time-Trigger inputs	Resolution: 100 nsec, triggered by falling TTL slope Time of trigger event readable via RS232-interface
Antenna connector	type-N connector
Backup battery type	When main power supply fails, hardware clock runs free on quartz basis, almanac data is stored in RAM Life time of lithium battery min. 10 years
Supported Time String Formats	Meinberg Standard Timestring, Uni Erlangen Timestring, SYSPLEX Timer, NMEA, Computime, ABB-SPA, SAT, Arbiter
Firmware	Flash-EPROM, bootstrap loader
Power Supply Unit	Standard PSU: 85 ... 264VAC, 47 ... 63Hz Several other power supply units (even for DC power supply) are available upon request.
Form Factor	19" aluminium case (1U) Schroff Multipac
Protection	IP20
Ambient temperature	0 ... 50°C / 32 ... 122°F
Humidity	Max. 85%
Scope of supply	Included in delivery is our [1] GPS antenna incl. converter unit , 20m GPS antenna cable (RG58) and product documentation.
Warranty	Three-Year Warranty

Manual

The english manual is available as a PDF file: [4][Download \(PDF\)](#)

Links:

[1] <https://www.meinbergglobal.com/english/products/gps-antenna-converter.htm>

[2] <https://www.meinbergglobal.com/english/specs/timestr.htm>

[3] <https://www.meinbergglobal.com/english/specs/capstr.htm>

[4] https://www.meinbergglobal.com/download/docs/manuals/english/gps170_lcd-mp.pdf