



Satellite Time Signal Receiver

GPS 3000/3100

For the precise time-synchronization of Master Clocks HN 400 series, Master Time Server MTS, Compu Time Center CTC, Master Time Center MTC and almost any electronic device or computer capable to read-in the time/date information serial on RS 232/RS 422 or as DCF time code.

The GPS 3000 series receives the radio signal from the satellites and

provides the accurate time/date information (UTC) in the telegram format TSIP or NMEA 0183 on the RS 232/422 output.

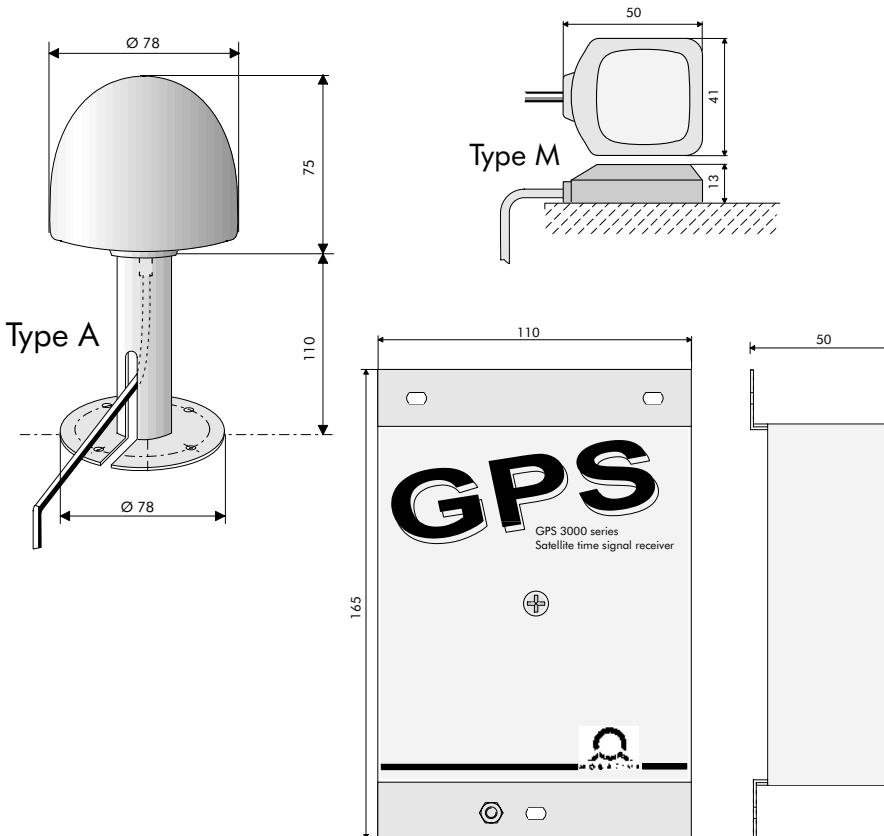
The GPS 3100 series computes the time of a selectable time zone and performs automatically Summer/Winter time changes. The time information is available as serial ASCII string on the RS 232/422 output and as DCF 77 time code (current-loop).

Satellite Time Signal Receiver

GPS 3000 / 3100 series

General description

The GPS 3000/3100 satellite time signal receiver consists of an antenna receiving the 1.57542 GHz signal, transmitted by the 24 GPS satellites orbiting at 10 000 miles from the earth's surface; each satellite carrying 2 ultra high precision time bases. The received time information is evaluated in our GPS 3000/3100 receiver box and sent to any master clock or time base able to read the TSIP protocol on RS 422. The GPS 3100 models even provide a DC-coded DCF output with pre-programmed and user-programmable daylight saving time change-over. Consequently all clocks and master clocks accepting the DCF code can be connected directly to a GPS 3100.



Antenna technical data

Type M:

GPS miniature active antenna for outdoor mounting (L 50 x W 41 x H 15 mm), magnetic fixation, 5m RF cable from antenna to receiver box (cannot be extended).

Temperature: -40°C to +85°C

Housing protection: IP 65

Type A:

GPS active antenna for outdoor mounting (Ø 78 x H 185 mm), 30 m RF cable from the antenna to the receiver box (cannot be extended).

Temperature: -40°C to +85°C

Housing protection: IP 65

Receiver box technical data

Input power supply:

GPS 3012 = 10..35 VDC

GPS 3048/3148 = 18..72 VDC

Powered from the master clock or from an external AC/DC power supply unit.

Power consumption: 2 W

Temperature: -20°C to +60°C

Housing protection: IP 40

Weight: 0.6 kg

Connection cable:

15 m connection cable from receiver box to master clock included. Can be extended to up to 200 m.

GPS 3000 series: Outputs TSIP (Trimble Standard Interface Protocol), 1 PPS strobe impulse (synchronized on UTC within 500 ns)

GPS 3100 series: Outputs DCF-77 time code with selectable time zones on passive current loop, ASCII serial time telegram via RS 422 or RS 232, 1 pps strobe impulse (synchronized on UTC within 500 ns)

Time zones (GPS 3100 series):

Table with a total of 100 time zones composed of standard- and daylight saving time offsets, as well as the rule for automatic daylight saving time change-over, 80 pre-defined time zones, 20 freely programmable.

Display elements (LED's):

Power, Alarm, DCF, 1 PPS

Connectors

Plug-in spring terminals, RJ10 for ASCII serial telegram on RS 232.