



## New Generation of Satellite Time Signal Receiver **GPS 4500**

For the precise time-synchronization of Master Clocks like EuroTime Center ETC, MobaTime Server MTS and almost any electronic device or computer capable to read in the time/date information as DCF 77 time code (current loop, UTC).

The GPS 4500 is constructed as an all in one device. That means, antenna and recei-

ver module are both located in the high quality outdoor case.

UV-protected 4 wire cable for power supply and time code transmission.

The miniaturized concept simplifies the mounting and commissioning of this new generation of Satellite Time Signal Receiver.

# Satellite Time Signal Receiver GPS 4500



## General description

The GPS 4500 satellite time signal receiver consists of an antenna receiving the 1.57542 GHz signal, transmitted by the GPS satellites orbiting at 10 000 miles from the earth's surface; each satellite is carrying 2 ultra high precision time bases. The received time information is evaluated in our GPS receiver and sent to any master clock or time base.

Consequently all clocks and master clocks accepting the DCF (UTC) code, capable to calculate local time, can be connected directly to a GPS 4500.

## Option: Surge protection box SP 4500

Optional a SP 4500 can be mounted between the GPS 4500 and a master clock. As a result, the master clock will be protected against lightning.



## Technical Data GPS 4500

Input voltage	10 – 40 VDC
Power consumption	< 0.5 W (< 50 mA @ 10V)
Operating temperature	-30 ... +70°C
Standards	EN 50081-1, EN 61000-6-2
Degree of protection	IP 54
Dimensions (without bracket)	L 85 x W 80 x H 86 mm (L = distance from wall)
Weight	approx. 200 g
Cable	10 m, UV-protected, 4 wires, 0.25 mm <sup>2</sup> (AWG 23), extension up to 200 m possible
Isolated output	Time code (UTC, DCF 77 coded), typical pulse duration: logical 0: 100ms; logical 1: 200 ms; leading edge of time code pulse is synchronized to GPS second pulse (PPS)
Satellites	8 channel satellite tracking, min. 3 satellites required
Accuracy of leading edge	better ±10 µs
Synchronization time	< 25 minutes
Display (LED on PCB)	- After startup, not yet synchr. power ok → flashing every 5s - Synchronization OK flashing once a second (DCF 77 signal) - Synchronization lost flashing every 5s
Order reference GPS	GPS 4500 (Art. no.: 201 821)
Order reference Option	SP 4500 (Art. no.: 202 154)

