



New Generation of Satellite Time Signal Receivers **GPS 4500**

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

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 Receivers.

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 approx. 20,000 km 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 or CET) code, capable to calculate local time, can be connected directly to a GPS 4500.

Option: Surge protection box SP 4500

Optionally, 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	< 0.4 W (< 40 mA @ 10V)
Operating temperature	-30 ... +70°C
Standards	EN 50081-1, EN 61000-6-2
Degree of protection	IP 65
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 ² (AWG 23), extension up to 200 m possible
Isolated output	Time code (UTC or CET, DCF 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	56 channel satellite tracking, min. 3 satellites required
Accuracy of leading edge	typically +/- 5 µs (measured at output GPS 4500)
Synchronization time	< 5 minutes
Display (LED on bottom side)	red: UTC time output; green: CET local time output
- After startup, not yet synchr.	power ok → flashing every 5s
- Synchronization OK	flashing once a second (DCF signal)
- Synchronization lost	flashing every 5s
Order reference GPS	GPS 4500 (Art. no.: 201 821)
Order reference Option	SP 4500 (Art. no.: 202 154)

