



T-GPS Series Time Synchronisation Equipment

GPS-3000 is a time synchronisation product that utilises the GPS (Global Positioning Satellite) system to provide an accurate time reference for power system.

It combines a GPS receiver with a micro-computer and buffers, to provide a local time source with a variety of outputs. The format of the output signals is configured to match the requirements of all available disturbance recorders, sequence of event recorders, travelling wave fault locators, SCADA systems and other equipment requiring accurate timing.

Features

- High timing accuracy to 1 μ s
- Simple Installation
- Can act as master or slave
- Multiple time code output formats
- Front panel display of local time
- Flexible output arrangement

Specifications

- Power Supply Requirements:
 - DC 190-260V
 - AC 190-260V, 47Hz-63Hz
- Power Consumption: 5W max.
- Data Acquisition Time During Start-Up
 - 90s max. typical
 - 90s max. with location changes
 - 45s max. without location change
 - 20s max. after power supply interruption
- Time Accuracy: 1 μ s
- Selectable Output Port Features:
 - Pulse output (PPS/PPM/PPHH/PPH):
 - Dry output,
 - TTL output,
 - 422/485 output
- IRIG-B output:
 - DC output (TTL output and 422/485 output),
 - AC output
- DCF77 output: Dry contact
- Serial Output: RS232 and RS422/485
- Ethernet output
- Configuration: Master or slave (with correct configuration)
- Optional output modules:
 - Dry contact output module (Max. 12 outputs, 6 modules)
 - Serial port output module (Max. 4 outputs, 6 modules)
 - TTL output module (Max. 12 outputs, 3 modules – Pulse or IRIG-B)
 - RS422/ 485 (Max. 12 outputs, 3 modules – Pulse or IRIG-B)
 - Ethernet (1 per module, 6 modules)
- Environmental
 - Operating temperature 0°C to 50 °C
 - Storage temperature -40°C to 50 °C
- Dimensions
 - 483mm x 323 x 83mm (19", 2U rack)

T-GPS has 7 blank modular space for the various optional modules. However, for power consumption reasons, the maximum number of TTL modules is limited to 3, the maximum number of 422/485 is also 3 and IRIG-B has a maximum of 4 modules.

If T-GPS is used as a master, the mandatory modules are Power Supply module, Alarm module, Antenna module and Signal Output module (to slave). Leaving 6 blank modules for the options.

If used as a slave, the mandatory modules are 2 IRIG-B IN modules (for redundancy), one Power Supply module and one Alarm module. There will again be 6 blank modules for the options



Rear view showing the modular construction