



## GPS receiver 122980-50



### GPS antenna/receiver

The GPS-receiver is intended for outdoor mounting and the antenna needs clear view upwards.

The receiver can be mounted on a mast by using a clamp or directly to a wall by using the enclosed aluminium bracket. It is also possible to remove the aluminium bracket and mount the enclosure directly to a roof.

A built in LED indicates the signal reception.

Connection to the master clock is done with 3 wires.

### General

The Global Positioning System (GPS) is a satellite based navigation system operated and maintained by the U.S. Department of Defence. GPS consist of a constellation of 24 satellites providing world-wide, 24 hour, three dimensional (3D) coverage. Although originally conceived for military needs, GPS has a broad array of civilian applications including surveying, marine, land, aviation, and precise time. GPS is the most accurate technology available for easy timing.

By computing the distance to satellites orbiting the earth, a GPS receiver can calculate an accurate position. This process is called satellite ranging. A 2-D position calculation requires three satellite ranges. A 3-D position calculation, which includes altitude, requires four satellite ranges. GPS receivers can also provide precise time, speed, and course measurements, which are beneficial for vehicle navigation.

Westerstrand GPS unit uses a miniature 48-channel GPS. Its compact size and low power consumption make it ideal for this application.

### Technical Specifications

|                    |  |
|--------------------|--|
| Signal delay:      | Timing pulse synchronised to UTC within +/- 1 microsecond  |
| Acquisition time:  | Cold start: 2 to 5 minutes. Warm start: 30 seconds (with battery)  |
| Operating temp:    | -40°C to +85°C   |
| Prime power:       | +8V to 35V (Power supply from Master Clock / Time Central)   |
| Power consumption: | 0.2 watt (nominal)   |
| Backup power:      | 3V lithium battery   |
| Antenna:           | Compact, active antenna. Short circuit protection  |
| Connection wire:   | 3 x 0.25mm <sup>2</sup> shielded, maximum length 300m<br>Cable example: ELAKY/ELAQBY 2 x 2 x 0,28 mm <sup>2</sup> , LIYCY 3 x 0,25 mm <sup>2</sup> |
| Housing:           | Plastic case IP55  |
| Dimension:         | 105 x 105 x 55 mm  |
| Weight:            | Approx. 0.3 kg   |