

## Satellite Time Signal Receiver

### GPS 4500

GPS satellite time signal receiver with serial time code output (DCF 77 coded, UTC or MET) for synchronization of Master Clocks (MTC, CTC, MTS, ETC, NMC, DTS, LTS, HN 50...) or other devices with DCF 77 current loop input.



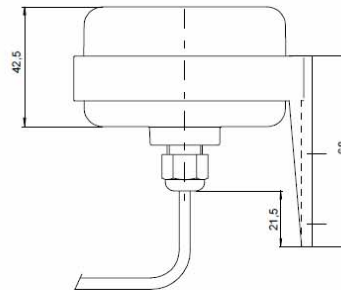
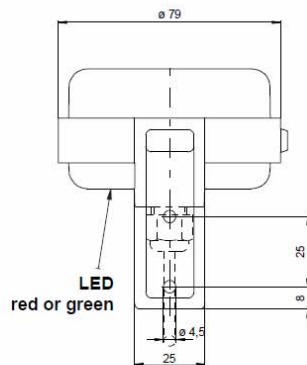
- Easy mounting: Direct connection to Master Clock with UV-resistant 4-wire cable for power and time code signal.
- Low power consumption.
- LED status display (viewable from bottom side, cable side)  
red : UTC time output  
green : MET local time output
- Time code output selection UTC or MET:

cable color	Connection for time code output	
	UTC	MET
yellow	V+ (10 – 40 VDC)	V- (GND)
green	V- (GND)	V+ (10 – 40 VDC)

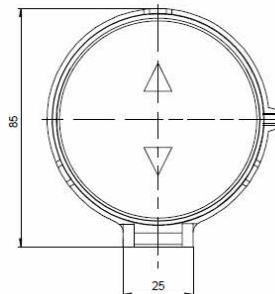
Time code signal MET: Automatic winter / summer change according the valid rule.

MET: last Sunday in October 03:00 → 02:00

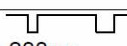
MEST (CEDT): last Sunday in March 02:00 → 03:00



Standard cable length 10m  
(max. length 200m)



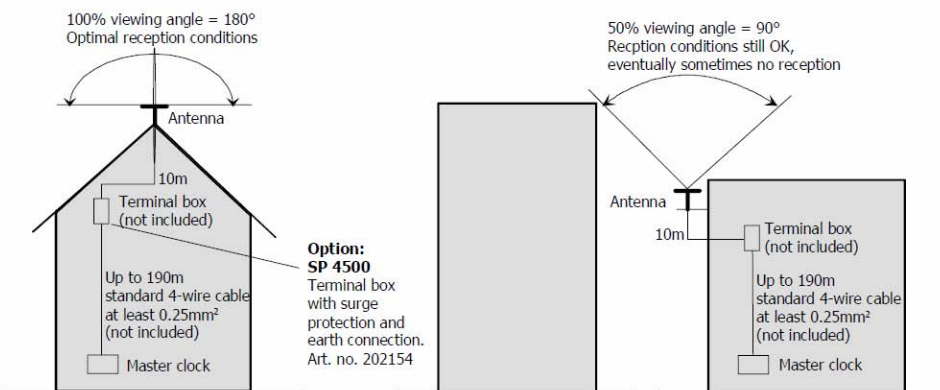
### Technical Data

GPS 4500	
Input voltage	10 – 40 VDC
Power consumption	< 0.5 W (< 50 mA @ 10V)
Operating temperature	-30 ... +70°C
Standards	ETSI EN 301489-1, EN 60950
Degree of protection	IP 54
Dimensions (without bracket)	L 86 x B 80 H 86 (L=distance from wall)
Weight	ca. 200 g
Cable	10m, UV-protected, 4 wires, 0.25mm <sup>2</sup> (cable type AWG 23) extension up to 200m possible
Insulated output	time code (UTC or MET, DCF 77 coded),  typical pulse duration: logical 0: 100ms; logical 1: 200ms leading edge of time code pulse is synchronized to GPS second pulse (PPS)
Satellites	12 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. Synchronization OK Synchronization lost	power ok → LED flashing every 5s LED flashing once a second (DCF signal) LED flashing every 5s

### Connection

Cable wires (colors)	Function	
white	DCF+	optocoupler output (insulated)
brown	DCF-	optocoupler output (insulated)
	Time code output UTC	Time code output MEZ
yellow	V+ (DC 10-40V)	V- (GND)
green	V- (GND)	V+ (DC 10-40V)
	red LED	green LED

### Mounting



## SP 4500 / Art. No. 202154

Optional lightning protection box for GPS receiver GPS 4500.

Terminals are described on the p.c. board.



Dimensions: L x W x H in (mm): 140 x 77 x 33

