

SR2000

GPS disciplined frequency generator

Functions

- The equipment is a high precision frequency generator disciplined by GPS. The equipment is housed in a rackable drawer 19 " 2U height.
- This generator integrates various types of oscillators: Standard OCXO PULSAR, Rubidium, ultra low noise...
- On the front face of the equipment, alphanumeric display LCD allows to visualize the visibility of the satellites and the operating mode of the equipment. Three leds give the operating status of the system (Power supply, GPS Ok, oscillator Ok).
- Six keys allow the operator to move in the various menus and to control the status of the equipment.
- GPS Receiver is a 12 channels module which can acquire simultaneously twelve satellites. The module delivers a signal second of reference (PPS) of a very high degree of accuracy available to the user.
- The entries and outputs of the signals are carried out by the rear face of the equipment. Twelve connectors are available:
 - A GPS antenna entry on a coaxial base plate,
 - 10 x10 MHz or 5 MHz sine outputs,
 - A RS232 connection for teleprocessing.
- The power supply is carried out by a standard power supply EEC 230V AC connector with fuse, filter sector and On/Off switch .
- The equipment is provided with a Windows 9x/2000/XP software for remote control and parameters management.



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Characteristics

Precision 1 PPS pulse: ± 20 ns with the 12 channels receiver when it is locked and in fixed position.

Internal pilot: OCXO 10 MHz or 5 MHz - Rb 10 MHz

Output Frequency: frequency of the internal oscillator : 10 MHz or 5. Level +13 dBm out of 50 Ohm.

Teleprocessing: parameter setting and remote control monitoring by asynchronous serial connection. RS232 Levels.

GPS Antenna: active antenna with cable length to be chosen.

Connectors : base plates BNC for the analogical and impulse signals, base plates Sub' D 9 points females for the serial RS232 connection (Teleprocessing)

Dimensions: L = 19 " (483 mm), H = 2U (89 mm), P =295 mm, Overall: 483 X 45 X340 mm

Weight: 5 kg

Consumption: 30 W

Reliability: MTBF = 65.000 H

- **Oscillators Stability**

	10 MHz ocxo & Low noise		5 MHz		Rubidium	
	WITHOUT GPS	WITH GPS	WITHOUT GPS	WITH GPS	WITHOUT GPS	WITH GPS
1 s	< $\pm 5.10^{-11}$		< $\pm 5.10^{-11}$		1x10 ⁻¹¹	
10 s	< $\pm 5.10^{-11}$		< $\pm 5.10^{-11}$		3x10 ⁻¹²	
100 s					1x10 ⁻¹²	
DAY	< $\pm 2.10^{-10}$	$\pm 1.10^{-11}$	< $\pm 1.10^{-9}$	$\pm 1.10^{-11}$		$\pm 1.10^{-11}$
MONTH	< $\pm 5.10^{-9}$	$\pm 1.10^{-11}$	< $\pm 3.10^{-8}$	$\pm 1.10^{-11}$	3x10 ⁻¹¹	$\pm 1.10^{-11}$
YEAR	< $\pm 5.10^{-8}$	$\pm 1.10^{-11}$	< $\pm 2.17^{-7}$	$\pm 1.10^{-11}$		$\pm 1.10^{-11}$

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- Oscillators phase noise

	10 MHz	5 MHz	Rubidium	Ultra Low noise
1 Hz	< - 95 dBc/Hz		< - 80 dBc/Hz	- 100 dB/Hz
10 Hz	<-125dBc/Hz	<-110dBc/Hz	<-100 dBc/Hz	- 120 dBc/Hz
100 Hz	<-140dBc/Hz	<-130dBc/Hz	<-130 dBc/Hz	- 150 dBc/Hz
1 KHz	<-145dBc/Hz	<-140dBc/Hz	<-140 dBc/Hz	- 165 dBc/Hz
10 KHz	<-150dBc/Hz	<-145dBc/Hz	<-150 dBc/Hz	- 165 dBc/Hz

On request, other values of stability and phase noise are available.



Front face of the equipment



Rear face

Ordering information

SR2000-1-10	Generator with OXCO 10 MHz
SR2000-1- 5	Generator with OXCO 5 MHz
SR2000-2-10	Generator with Rb 10 MHz
SR2000-W	Generator with ultra low noise oscillator