

Compact Portable Rubidium Atomic Clock

- Greater than 2 hours battery operation
- Operates from Car 12V DC output
- Less Than 3 Minute Warm Up
- Compact Form Factor 103x55x122mm <500g



This portable Rubidium Atomic Clock will operate from an External 12Vdc Supply or its Internal Batteries.

For remote site operation i.e. cellular BTS the E10-P may run from the cigarette lighter socket to arrive fully charged and warm.

The E10-P Portable Rubidium Atomic Clock benefits from Quartzlock's SMAC Rubidium Oscillator technology and state-of-the-art internal high capacity batteries.

Low Cost Portable Rubidium Atomic Frequency Reference

Specifications

Output	10MHz Sine, 10dBm, ± 3 dBm
Harmonics	<-40dBc
Accuracy	$\pm 5E^{-11}$ at shipment @25°C
Short Term Stability (AVAR)	8E ⁻¹¹ /1s 2E ⁻¹¹ /10s 8E ⁻¹² /100s
Drift	5E ⁻¹² /day 5E ⁻¹¹ /month
Phase to Noise (SSB)	10Hz -100dBc 100Hz -130dBc 1kHz -140dBc
Input Power	6W at 12V @ 25°C, Max 1.2A
Input Voltage Range	90...245V ac (Via Plug Top Adaptor Supplied) or +12V dc
Run Time Battery	2 hours
Charge Time Battery	4 hours
Warm Up	5 minutes to lock @ 25°C
Retrace	$\leq \pm 2E^{-11}$
Magnetic field sensitivity, dc (± 2 GAUSS)	< $\pm 4E^{-11}$ /GAUSS
Frequency Control	>5E-9 (External trim range option: 0V~5V)
External Trim Range	$\geq 5E^{-9}$ (0V~5V) option
Size	103 x 55 x 122 mm
Weight	500gm approx
Warranty	24/36 months

Environmental Specifications

Operating Temp Range	-20°C~+50°C Typical: -30~+65°C
Temperature Coefficient (ambient)	2E ⁻¹⁰ (0~50°C)
Storage Temperature	-55°C~+85°C
MTBF	100,000 hours
Environmental health	RoHS
EMI	Compliant to FCC Part 15 Class B