

Compact Portable Rubidium Frequency Reference

- ❑ Greater than 2 hours battery operation
- ❑ Operates from car 12vdc output
- ❑ Less than 3 minute warm up
- ❑ Compact form factor 103x55x122mm <500g for a wide range of applications



This portable Rubidium frequency standard 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 frequency reference benefits from Quartzlock's SMAC Rubidium Oscillator technology and state-of-the-art internal high capacity batteries.

Features

- 10MHz Output
- Ageing < 5×10^{-10} /Year
- -95dBc/Hz @ 10Hz
- 5×10^{-11} accuracy
- 8×10^{-12} /s @ 100s

Benefits

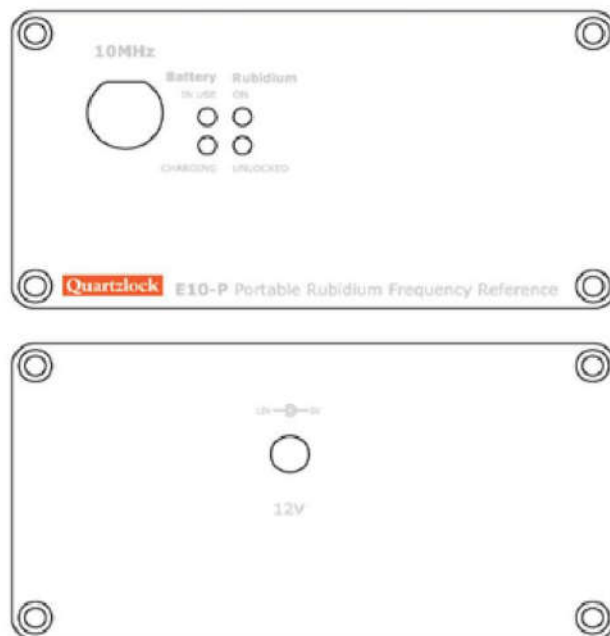
- Atomic accuracy
- No antenna
- Quick and simple use and Installation
- Low drift
- Hand held

Applications

- Remote site frequency for cellular BTS & satellite communication ground stations
- Field service & production test frequency reference
- Frequency standard for counters, signal generators, spectrum and network analysers

Specifications

| | | |
|---|---|---------------------|
| Output | 10MHz Sine, 10dBm, ± 3 dBm | |
| Harmonics | <-40dBc | |
| Accuracy | $\pm 5 \times 10^{-11}$ at shipment @25°C | |
| Short Term Stability (AVAR) | 1s | 8×10^{-11} |
| | 10s | 3×10^{-11} |
| | 100s | 8×10^{-12} |
| Drift | 1 day | 5×10^{-12} |
| | 1 month | 5×10^{-11} |
| Phase to Noise (SSB) | 10Hz | -95dBc |
| | 100Hz | -125dBc |
| | 1kHz | -135dBc |
| Input Power | 6W at 12V @ 25°C, Max 1.2A | |
| Input Voltage Range | 90...245V ac or +12V dc | |
| Run Time Battery | 2 hours | |
| Charge Time Battery | 4 hours | |
| Warm Up | 5 minutes to lock @ 25°C | |
| Retrace | < $\pm 2 \times 10^{-11}$ | |
| | < $\pm 4 \times 10^{-11}$ /Gauss | |
| Magnetic field sensitivity, dc (± 2 GAUSS) | | |
| External Trim Range | $*5 \times 10^{-9}$ (0V~5V) option | |
| Size | 103 x 55 x 122 mm | |
| Weight | 500gm approx | |
| Warranty | 24 months | |



Environmental Specifications

| | |
|-----------------------------------|----------------------------------|
| Operating Temp Range | -20°C~+50°C Typical: -30~+65°C |
| Temperature Coefficient (ambient) | 2×10^{-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 |