

Miniature Rubidium Oscillator

- 1PPS Discipline I/O Sync
 - 12V dc 8W
 - High Performance Reference, exhibits excellent drift per hour and per day
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The E10-MRO is a compact cost effective Miniature Rubidium Oscillator Frequency Standard that maintains the high time and frequency accuracy demanded in applications such as telecoms, aviation, nautical and precision test and measurement.

Features

- RS232 Interface
- Low Phase Noise to -165dBc/Hz (option)
- Ageing: 5×10^{-10} /year
- Stability 5×10^{-12} /100s
- 10MHz Output

Benefits

- Simple integration into systems
- Fits 1U case
- Low Failure risk
- 2 year Warranty

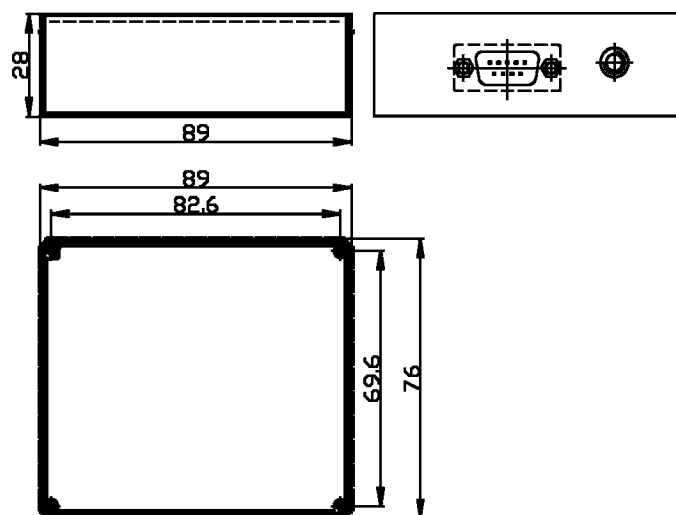
Applications

- Telecom Network Synchronisation
 - Frequency Calibration
 - Broadcast
 - Cellular Wireless Base Stations
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Specification

Output	10MHz	
Optional Outputs	Consult factory	
Accuracy	$\pm 5 \times 10^{-11}$ at shipment @25°C	
Aging	5x10 ⁻¹² /day 5x10 ⁻¹¹ /month	
Retrace	$\leq \pm 3 \times 10^{-11}$	
Short Term Stability	1s	5x10 ⁻¹¹
	10s	1.6x10 ⁻¹¹
	100s	5x10 ⁻¹²
Phase Noise	dBc/Hz	
	10Hz	-85dBc
	100Hz	-125dBc
	1kHz	-140dBc
Input Power	8W at 12V@25°C, Max 2.5A	
Input Voltage Range	12 \pm 0.5Vdc	
Warm-up	5 minutes to lock @ 25°C	
Frequency Control	Internal trim range (trimpot)	$\geq 2 \times 10^{-9}$
	External trim range (0V~5V)	$\geq 2 \times 10^{-9}$
Temperature	Operating Temperature	-20°C to +50°C
	Coefficient (ambient)	2x10 ⁻¹⁰ (-20°C to 50°C)
	Storage	-55°C to +85°C
MTBF	100,000 hours	
Connector	DB-9 Connector, SMA	
Size	89 x 76 x 28 (mm ³) (190cc)	
Weight	0.25kg max	
Warranty	2 years	
Low Noise Option E10-MRO LN	This high performance version exhibits lower phase noise and higher short term stability. A 1PPS locking module is included (see A6-1PPS). Customers may specify lower phase noise than above.	

Dimensions



Connector Interface

- J1: SMA, RF OUTPUT J2: DB-9
 1: lock monitor(bit) 2&4: dc return/ground
 3: locking signal 5: ext C-field (0~5V)
 6, 8 & 9: NC (Used for RS232 option)
 7: +12V