



**FREQUENCY
CONTROLS**

Powered By **ABRACON**

Leading Manufacturer of Ultra-Low Phase Noise Frequency Control Products

Trusted Industry Leader

For nearly 40 years, NEL Frequency Controls has been a leader in ultra-low phase noise crystal oscillator technology. As an AS9100D certified manufacturer with locations in Burlington, USA, and Rehovot, Israel, NEL is a global authority in designing and producing precision timing products to meet the most stringent benchmarks in ultra-low phase noise, power consumption, and low G-sensitivity in the most compact form factors.

**NEL designs and manufactures
solutions for system critical applications**

Focus Markets



**Aerospace &
Defense**



RADAR Systems



Communications



**GPS/GNSS
Navigation**



**Test &
Measurement**

Applications

- Avionics
- RADAR systems
- RF Communications
- Network Analyzers
- Instrumentation
- Oscilloscopes
- Master Reference
- 5G communication
- Equipment
- Custom Frequency
- Solutions
- Test and Measurement
- Spectrum Analyzers
- Precision Timing Clocks
- Microwave/RF Equipment
- Crystal Oscillators
- Frequency Synthesizers and Sub-Systems

 262.763.3591

Visit nelfc.com to learn more

 NEL-support@abracon.com

From design through production, customers choose NEL to:

- Leverage NEL's research and unmatched product development capability supporting customer applications that push performance boundaries in system speed, bandwidth, resolution, accuracy and power consumption
- Utilize NEL's expert design and manufacturing capabilities for applications requiring crystal oscillators with challenging performance specifications
- Benefit from NEL's technical expertise in selecting the optimal frequency control solution for their end-application

NEL Solution's Offer:

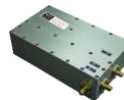
- ✓ Optimal phase noise
- ✓ Industry-leading performance in high-vibration environments
- ✓ Compact product package availability
- ✓ Precision over temperature fluctuations

Product Highlights

OCXOs



- Frequency availability from 5 MHz to 1.3 GHz
- 10 MHz close in phase noise as low as -123 dBc/Hz @ 1Hz
- 100 MHz phase noise floor as low as -185 dBc/Hz @ 100 kHz
- 10 MHz Allan Deviation as low as 3E-13 @ 1 second



MOXOs

- Frequency availability from 2 GHz to 12 GHz
- Internal built in 1GHz OCXO
- 2 GHz close in phase noise down to -76 dBc/Hz @ 10 Hz
- 2 GHz phase noise floor as low as -151 dBc/Hz @ 100 kHz

TCXOs



- Frequency availability from 10 MHz to 2 GHz
- 10 MHz close in phase noise as low as -90 dBc/Hz @ 1 Hz
- 100 MHz phase noise floor as low as -170 dBc/Hz @ 100 kHz
- Low G Sensitivity down to 0.2ppb/G



Clean Up Clocks

- Phase noise improvement up to -50 dBc/Hz
- Keeps accuracy of the Atomic or GNSS Clock Input
- TCXO or OCXO accuracy in absence of REF IN
- Low G Sensitivity down to 0.2ppb/G

VCXOs



- Frequency availability from 1 MHz to 2 GHz
- 10 MHz close in phase noise as low as -90 dBc/Hz @ 1Hz
- 10 MHz phase noise floor as low as -170 dBc/Hz @ 100 kHz
- Low G sensitivity down to 0.2ppb/G
- Pullability as wide as +/- 1000 ppm



Frequency

Reference- Rack

- Output availability from 5 MHz to 8 GHz
- Input option of 10 MHz, 1 PPS, or GNSS signal
- Simple Plug and Play design

[Click here to learn more about NEL's solutions](#)