

Disciplined Oscillator Module

For use with Time & Frequency Solutions' M210 and M211 Modular Timing Systems. This module provides a highly stable oscillator that is locked to the synchronising time source. Through the provision of this module in the Timing System, the free-run performance of the Timing System is significantly enhanced.



Features

- Enhances free-run performance of the Timing System
- Automatic calibration of oscillator
- Choice of time synchronisation sources

Key Benefits

By locking the oscillator to the synchronising time source, the oscillator is automatically calibrated, ensuring that a precise frequency is always available.

In the event of interruption in the synchronising time source, the performance of the module reverts to the oscillator specification.

A wide range of oscillators is available for use with this module allowing the selection of an optimum price/performance relationship for any application.

Please contact the Sales Office if you have a special frequency or stability requirement.

Optional Frequency output modules are available for inclusion in the Timing System for the output of precision frequency references from the Disciplined Oscillator Module.

Disciplined Oscillator Module Specifications

Input (Timecode Reader)

The Disciplined Oscillator Module is fitted directly to the main CPU Board and therefore does not require the use of an option slot in the equipment chassis.

The module can be fitted with a variety of oscillators, from cost effective temperature controlled oscillator to a Rubidium Frequency Standard for applications where very high stability is required.

A wide range of oscillators is available for use with this module allowing the selection of an optimum price/performance relationship for any application.

The table below gives a small selection from this large range of the oscillators. Please contact the sales office if you have a special frequency or stability requirement.

Oscillator	Stability per °C	Performance while disciplined						Holdover accuracy at constant temperature after loss of reference		
		Averaging Time						Time	Frequency	
		1s	10s	100s	1000s	10000s	1 day	1 day	1 day	3 days
TCXO	1.5×10^{-8}	2×10^{-9}	5×10^{-10}	5×10^{-10}	5×10^{-10}	6×10^{-11}	1×10^{-12}	<1 ms	$<1 \times 10^{-8}$	$<2 \times 10^{-8}$
OCXO	1.2×10^{-10}	3×10^{-10}	3×10^{-10}	4×10^{-10}	4×10^{-10}	5×10^{-11}	1×10^{-12}	<60 μ s	$<2 \times 10^{-9}$	$<4 \times 10^{-9}$
Precision OCXO	7×10^{-11}	2×10^{-12}	3×10^{-12}	1×10^{-11}	1×10^{-11}	5×10^{-12}	1×10^{-12}	<20 μ s	$<4 \times 10^{-10}$	$<1 \times 10^{-9}$
Rubidium	7×10^{-12}	3×10^{-11}	8×10^{-12}	3×10^{-12}	3×10^{-12}	2×10^{-12}	8×10^{-13}	<1 μ s	$<1 \times 10^{-11}$	$<1.5 \times 10^{-11}$
Precision Rubidium	3×10^{-12}	2×10^{-11}	3×10^{-12}	1×10^{-12}	1×10^{-12}	1×10^{-12}	8×10^{-13}	<0.5 μ s	$<3 \times 10^{-12}$	$<5 \times 10^{-12}$

Environment (Operation & Storage)

Temperature: 0°C to +40°C

Humidity: Up to 95% RH (non-condensing)

EMC: CE Compliant

Ordering Information

Please quote part number when ordering:

Oscillator	Part No.
TCXO	0180BC000N
OCXO	0180BC000F
Precision OCXO	0180BC000S
Rubidium	0180BC000R + X10MRUB8
Precision Rubidium	0180BC000R + X10MRUB8-A

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