

Option 22 Disciplined Oscillator Module

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
- For use with M210 and M211 Modular Timing Systems



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 (Option 10 or Option 33) for inclusion in the Timing System for the output of precision frequency references from the Disciplined Oscillator Module.

The Disciplined Oscillator Module is available as an option on the following products

- M210 Time System
- M211 Timing System

Specifications

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.

Frequency Stability

Oscillator		Stability Per °C	Averaging Time						Holdover Stability Per Day
Option	Description		1s	10s	100s	1000s	10000s	1day	
01	TCXO	1.7×10^{-8}	2×10^{-9}	5×10^{-10}	5×10^{-10}	5×10^{-10}	6×10^{-11}	1×10^{-12}	30ms
02	OCXO	2.5×10^{-9}	3×10^{-10}	3×10^{-10}	4×10^{-10}	4×10^{-10}	5×10^{-11}	1×10^{-12}	30µs
03	Precision OCXO	5×10^{-11}	2×10^{-12}	3×10^{-12}	1×10^{-11}	1×10^{-11}	5×10^{-12}	1×10^{-12}	8µs
04	Rubidium	7×10^{-12}	3×10^{-11}	8×10^{-12}	3×10^{-12}	3×10^{-12}	2×10^{-12}	8×10^{-13}	3µs
05	Precision Rubidium	3×10^{-12}	2×10^{-11}	3×10^{-12}	1×10^{-12}	1×10^{-12}	1×10^{-12}	8×10^{-13}	1µs

Environmental (Operating & Storage)

Temperature: 0°C to +40°C
 Humidity: Up to 95% RH (Non-condensing)
 EMC: CE Compliant

As we are always seeking to improve our products, the information in this document only provides general indications of product capability, suitability and performance, none of which shall form any part of any contract.

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Time & Frequency Solutions Ltd
 25 Eastways, Witham, Essex CM8 3AL UK
 Tel: +44 (0) 1376 514114 Fax: +44 (0) 1376 516116
 E-mail: sales@timefreq.com Web: www.timefreq.com



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