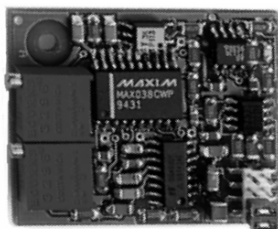


Reference Sine Oscillator Module for LIA-BV-150/LIA-MV-200 Series



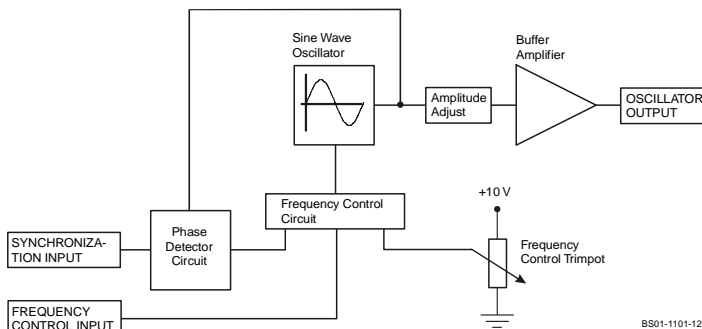
Features

- Sine Wave Output from 5 Hz to 130 kHz
- Adjustable Frequency and Amplitude
- PLL for Synchronization to External Reference
- Plug-In Module for Series LIA-BV(D)-150/LIA-MV(D)-200 Lock-In Amplifiers

Applications

- Reference Source for Lock-In Amplifier

Block Diagram



Specifications

	Test Conditions	$V_s = \pm 5 V, T_a = 25^\circ C$
Oscillator Frequency	Frequency Range	4 ranges, 5 Hz ... 130 kHz total (factory set at 1 kHz)
	Manual Frequency Control	4 range settings via jumpers 5-6 and 7-8, adjustable frequency within range via 25-turn trimpot
	Remote Frequency Control	4 range settings via digital control input pins 4 and 6, leave jumpers 5-6 and 7-8 open, adjustable frequency within range via control voltage
	THD	0.8 % typ.
Oscillator Amplitude	Amplitude Range	0 ... 2 Vrms (factory set at 1 Vrms)
	Amplitude Control	25-turn trimpot
Oscillator Output	Output Impedance	10 Ω (terminate with load > 1 k Ω)
	Maximum Output Current	± 5 mA
External Synchronization	Synchronization Input	opto-coupler input with reference to synchronization ground pin 3
	Sync. Input Voltage Level	Low: - 0.8 V ... + 1.2 V, High: + 3.5 V ... + 6 V
	Sync. Input Current	0 mA @ 0 V, 6 mA @ + 5 V typ.
Power Supply	Supply Voltage	± 5 V
	Supply Current	± 70 mA

Reference Sine Oscillator Module for LIA-BV-150/LIA-MV-200 Series

Board	Dimensions Weight	31 mm x 39 mm 10 g (0.022 lbs)																									
Temperature Range	Storage Temperature Operating Temperature	- 40 ... + 100 °C 0 ... + 60 °C																									
Absolute Maximum Ratings	Power Supply Voltage	± 6 V																									
Jumper Settings (JP6)	Frequency Range Selection	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%; text-align: center;">5 - 6</td> <td style="width: 25%; text-align: center;">7 - 8</td> <td style="width: 25%;"></td> </tr> <tr> <td></td> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black;"></td> <td style="border-top: 1px solid black; text-align: center;">Frequency Range</td> </tr> <tr> <td></td> <td>close</td> <td>close</td> <td>5 Hz ... 90 Hz</td> </tr> <tr> <td></td> <td>open</td> <td>close</td> <td>60 Hz ... 1.2 kHz</td> </tr> <tr> <td></td> <td>close</td> <td>open</td> <td>900 Hz ... 18 kHz</td> </tr> <tr> <td></td> <td>open</td> <td>open</td> <td>7 kHz ... 130 kHz</td> </tr> </table>		5 - 6	7 - 8					Frequency Range		close	close	5 Hz ... 90 Hz		open	close	60 Hz ... 1.2 kHz		close	open	900 Hz ... 18 kHz		open	open	7 kHz ... 130 kHz	
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	3 - 4		Synchronization																								
	open		on																								
	close		off																								
Jumper Positions Diagram																											
Connector	Connector Type	2 mm pitch socket, 10-pin																									
	Oscillator Output	Pin 2:	oscillator output																								
		Pin 8:	output GND																								
	Control Inputs	Pin 4:	frequency range control input, MSB																								
		Pin 6:	frequency range control input, LSB																								
		Pin 10:	frequency control input																								
		Pin 1:	external synchronization input																								
		Pin 3:	external synchronization input GND																								
	Power Supply	Pin 9:	power supply - 5V																								
		Pin 5:	power supply + 5V																								
		Pin 7:	power supply GND																								

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