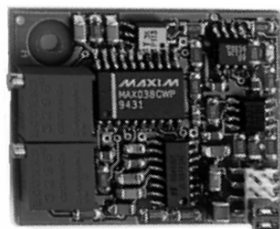


Reference Sine Oscillator Module for LIA-BV-150/LIA-MV-200 Series



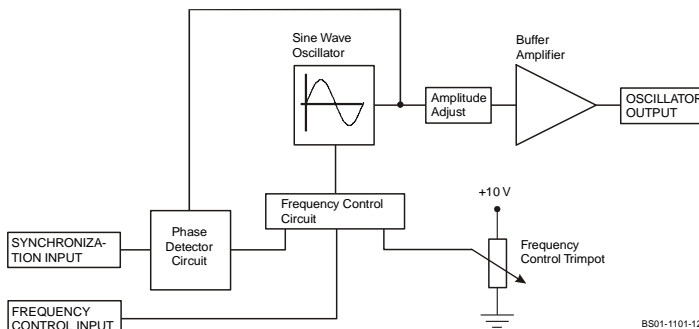
Features

- 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

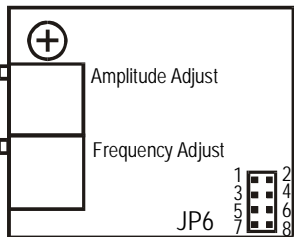
Block Diagram



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;"> <thead> <tr> <th style="width: 33%;">5 - 6</th> <th style="width: 33%;">7 - 8</th> <th style="width: 33%;">Frequency Range</th> </tr> </thead> <tbody> <tr> <td>close</td> <td>close</td> <td>5 Hz ... 90 Hz</td> </tr> <tr> <td>open</td> <td>close</td> <td>60 Hz ... 1.2 kHz</td> </tr> <tr> <td>close</td> <td>open</td> <td>900 Hz ... 18 kHz</td> </tr> <tr> <td>open</td> <td>open</td> <td>7 kHz ... 130 kHz</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Frequency Control</td> <td style="width: 33%;">1 - 2</td> <td style="width: 33%;">Control Mode</td> </tr> <tr> <td></td> <td>open</td> <td>trimpot control</td> </tr> <tr> <td></td> <td>close</td> <td>voltage control (external interface)</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">External Synchronization</td> <td style="width: 33%;">3 - 4</td> <td style="width: 33%;">Synchronization</td> </tr> <tr> <td></td> <td>open</td> <td>on</td> </tr> <tr> <td></td> <td>close</td> <td>off</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	Frequency Control	1 - 2	Control Mode		open	trimpot control		close	voltage control (external interface)	External Synchronization	3 - 4	Synchronization		open	on		close	off
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																																	
Frequency Control	1 - 2	Control Mode																																	
	open	trimpot control																																	
	close	voltage control (external interface)																																	
External Synchronization	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																																	

01 / F€ / V1 / HW / -^ { ç / accessories/ som-1.pdf

Specifications are subject to change without notice. Information furnished herein is believed to be accurate and reliable. However, no responsibility is assumed by FEMTO Messtechnik GmbH for its use, nor for any infringement of patents or other rights granted by implication or otherwise under any patent rights of FEMTO Messtechnik GmbH. Product names mentioned may also be trademarks used here for identification purposes only.

© by FEMTO Messtechnik GmbH
Printed in Germany