



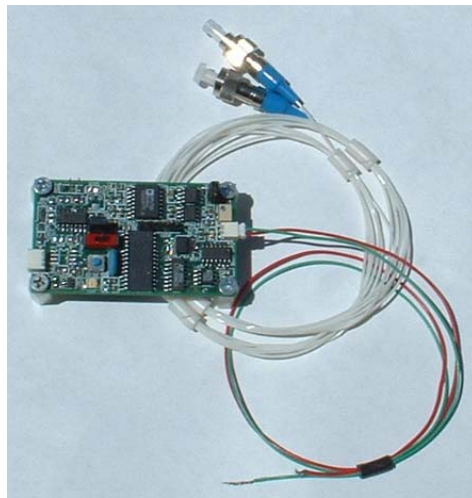
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Specification of Ditherless Bias Controller 0103

(Last updated on 6/10/10, Rev.1.2)

Ditherless Bias Controller is an OEM version standalone device of bias control feedback loop. It locks the bias of the device to desired reference point. It has many applications, such as for MZ Modulator Bias Control or for Fabry-Perot filter control. Since it does not apply pilot tones, therefore, it does not disturb the system, which is very important for many analog systems. It features high accuracy, high dynamic range. The locking slope can be switched with a sliding switch on the board as long as the working function of the device is periodical. When the drift is out of the specified range, the unit will pull the bias back to the desired working point close to 0V. There are two photodiodes built in the board, an external reference voltage can also be applied as specified at order.

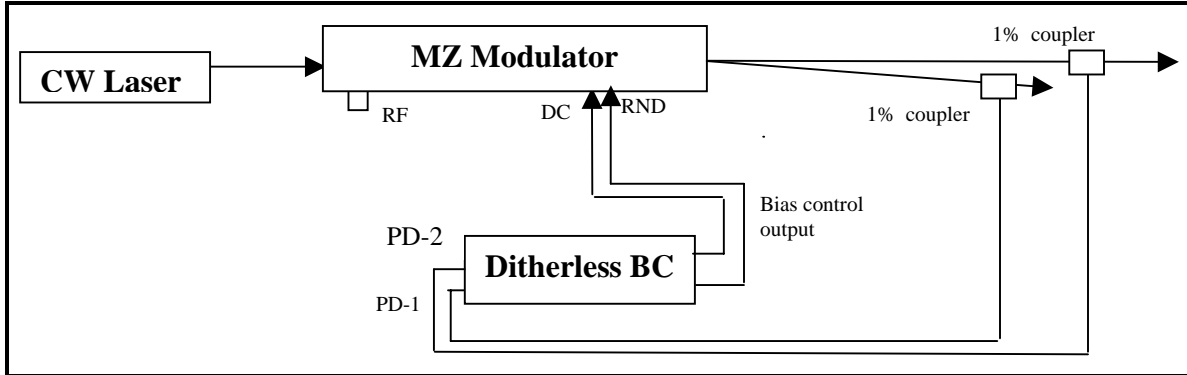


Top View of the Ditherless Bias Controller

Parameters	Min	Typ	Max	Unit
Input signal current	0.1×10^{-6}		1	mA
Input optical power	-60		0	dBm
Locking Accuracy		0.1		%
DC Bias Voltage	-10		+10	V
Positive Power Supply	10	12	+15	V
Negative Power Supply	-10	-12	-15	V
Positive supply current			30	mA
Negative supply current			60	mA
Operating temperature	0		70	C
Storage temperature	-40		80	C
Dimension without case	L2.35×W1.35×H0.5"			

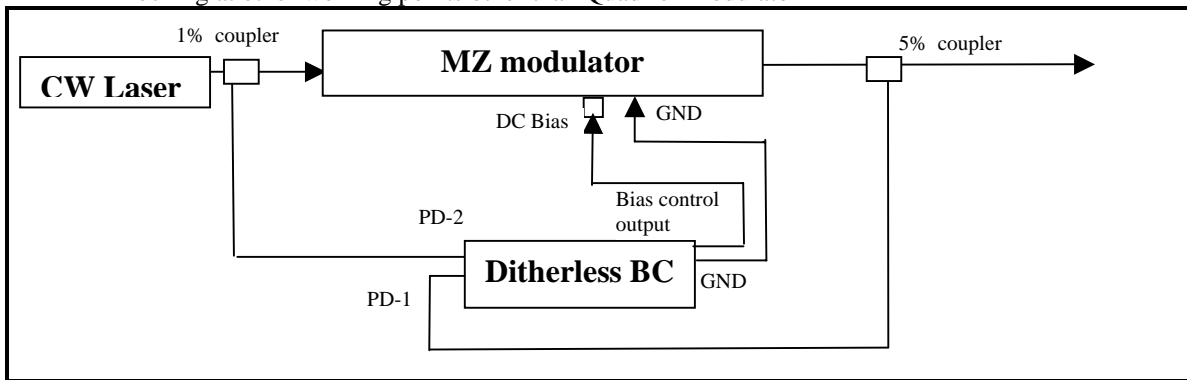
Typical Applications

Locking at Quad for an MZ modulator with balanced outputs:



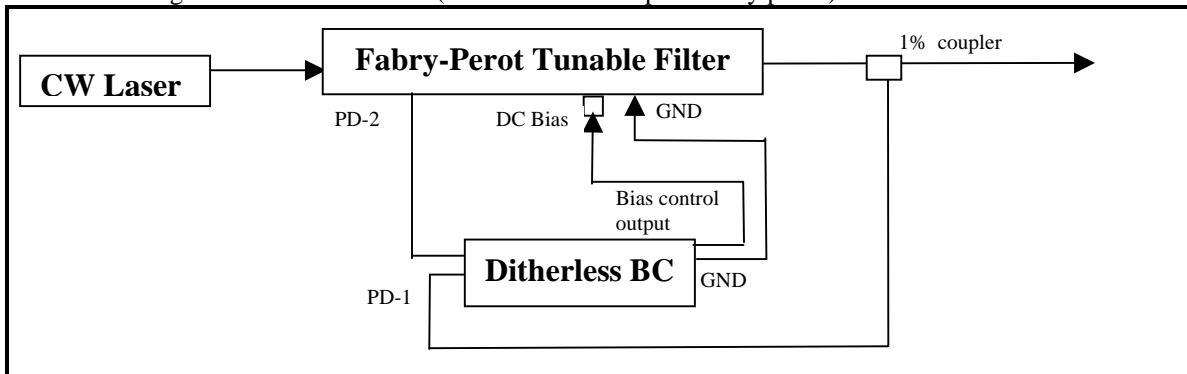
Configuration of Ditherless BC for Quad Application.

Locking at other working points other than Quad for Modulator



Configuration of Ditherless BC for MZ modulator locking to other points.

Using Modulator built-in PD (if the PD is in complimentary phase)



Configuration of Ditherless BC with modulator built-in PD