

Directional Couplers

Shively Labs manufactures directional couplers to provide constant monitoring of main-line RF power and to detect RF system problems as they are manifested by reverse power flow (reflected power). A directional coupler output can activate such protection systems as transmitter shutdown or transmitter power reduction, and can display incident and reflected power using an optional reflectometer display unit.

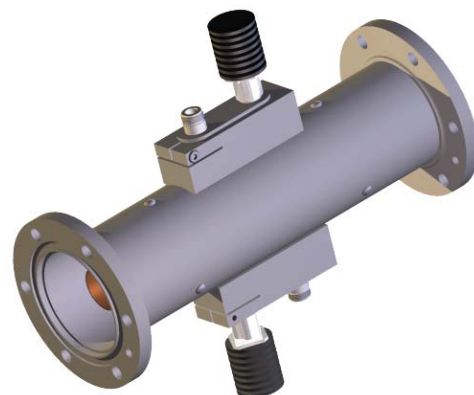
A single directional coupler monitors RF power in one direction only; that is, either incident or reflected power. A dual directional coupler monitors both incident and reflected power. The coupled output is RF, but various detectors can be supplied to convert the RF.

General Specifications:

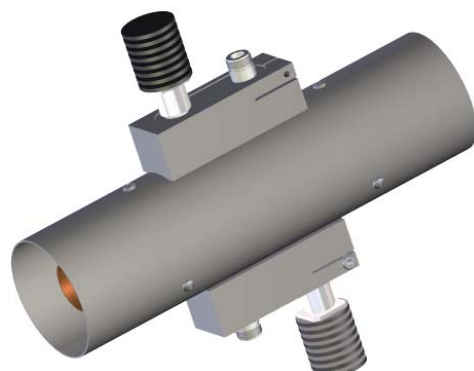
Frequency:	2 - 250 MHz
Coupling Range:	40 - 55 dB; other values by request
Directivity:	30 dB standard; 40 dB available by request
Typical VSWR:	1.05 : 1
Output:	RF standard
Loads:	Included in RF couplers
Construction:	Aluminum outer with copper inner
Interfaces:	Female-female, standard cutback, except 7/8"

These directional couplers are designed so that a spectrum analyzer can be attached directly to them, thus displaying the frequency spectrum and showing any distortions. An optional RF monitoring port is available, to provide a nondirectional, uncalibrated RF signal for less-precise monitoring.

The couplers have the added feature of a building block design which allows both detectors and loads to be removed in the field for purposes of checking the individual parts; i.e. detector, load or basic coupler. For military, airborne, or other requirements which exceed the standard specifications, contact the factory for a quotation.



Model 318F-2P



Model 318NF-2P

Specifications by Model:

Model	Size	Flanged/Non-Flanged	No. of Ports	Power Rating, kW	Length, flange-flange or overall(in)	Weight, approx. (lb)
078F-2P	7/8"	EIA	2	4.5	5" M-M	3
158F-2P	1-5/8"	EIA	2	15	12" F-F	3.5
158NF-2P	1-5/8"	NF	2	15	11.62" OA	2.5
318F-2P	3-1/8"	EIA	2	40	12" F-F	4.5
318NF-2P	3-1/8"	NF	2	40	11.50" OA	3
416F-2P	4-1/16"	EIA	2	80	12" F-F	6
618F-2P	6-1/8"	EIA	2	160	12" F-F	8

NOTE: Contact the factory for 1-, 3-, and 4-port configurations.

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