

## 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.

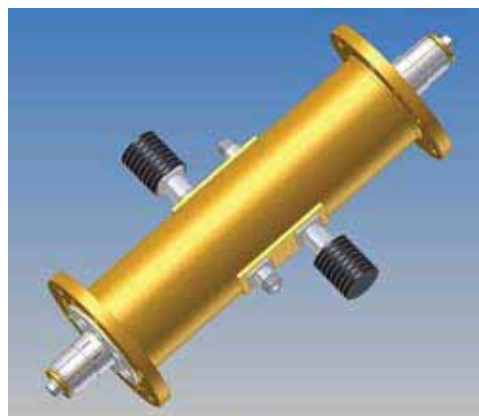
A single directional coupler monitors RF power in one direction only; that is, either incident or reflected power. A dual directional coupler monitors both incident and reflected power. The coupled output is RF, but various detectors can be supplied to convert the RF.

### General Specifications:

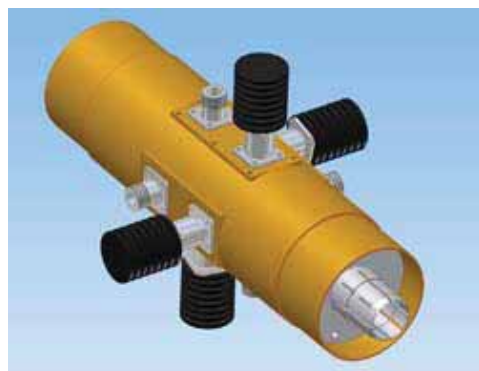
Frequency:	2 - 250 MHz
Coupling Range:	40 - 55 dB; other values by request
Directivity:	30 dB standard; 40 dB available by request
Typical VSWR:	1.05 : 1
Output:	RF standard
Loads:	included in RF couplers

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 58x2-€ Dual Flanged



Model 58x4-N Quad Non-Flanged

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A Division of Howell Laboratories, Inc., P. O. Box 389, Bridgton, Maine 04009 USA  
(207) 647-3327                      1-888-SHIVELY                      Fax: (207)647-8273  
*An Employee-Owned Company*

[www.shively.com](http://www.shively.com)  
[sales@shively.com](mailto:sales@shively.com)  
Certified to ISO-9001:2000

## Specifications by Model:

Model	Size	Flanged/Non-Flanged	No. of Ports	Power Rating, kW	Length, flange-flange or overall(in)	Weight, approx. (lb)
5821-€	1-5/8"	€IA	1	15	12" F-F	6
5821-N	1-5/8"	NF	1	15	11.25" OA	4
5822-€	1-5/8"	€IA	2	15	12" F-F	6
5822-N	1-5/8"	NF	2	15	11.25" OA	4
5831-€	3-1/8"	€IA	1	40	12" F-F	11
5831-N	3-1/8"	NF	1	40	11.25" OA	9
5832-€	3-1/8"	€IA	2	40	12" F-F	11
5832-N	3-1/8"	NF	2	40	11.25" OA	9
5833-€	3-1/8"	€IA	3	40	12" F-F	1
5833-N	3-1/8"	NF	3	40	11.25" OA	9
5834-€	3-1/8"	€IA	4	40	12" F-F	11
5834-N	3-1/8"	NF	4	40	11.25" OA	9
5841-€	4-1/16"	Flanged	1	80	12" F-F	
5841-N	4-1/16"	NF	1	80	11.25" OA	
5842-€	4-1/16"	Flanged	2	80	12" F-F	
5842-N	4-1/16"	NF	2	80	11.25" OA	
5843-€	4-1/16"	Flanged	3	80	12" F-F	
5843-N	4-1/16"	NF	3	80	11.25" OA	
5844-€	4-1/16"	Flanged	4	80	12" F-F	
5844-N	4-1/16"	NF	4	80	11.25" OA	
5861-€	6-1/8"	€IA	1	160	12" F-F	
5861-N	6-1/8"	NF	1	160	12.75" OA	
5862-€	6-1/8"	€IA	2	160	12" F-F	
5862-N	6-1/8"	NF	2	160	12.75" OA	
5863-€	6-1/8"	€IA	3	160	12" F-F	
5863-N	6-1/8"	NF	3	160	12.75" OA	
5864-€	6-1/8"	€IA	4	160	12" F-F	
5864-N	6-1/8"	NF	4	160	12.75" OA	