

# Crossguide Directional Couplers Series 270

Flann Crossguide Couplers consist of two waveguides joined at 90° with the coupling element mounted in the common broad wall. Couplers are available in 3 or 4 port configurations and standard coupling values are 20, 30, 40 and 50 dB; directivity for models up to 18 GHz is better than 20 dB\* over the specified frequency range.

The compactness of the crossguide coupler suits many applications where space is at a premium and directivity is not the prime consideration, eg power and frequency monitoring and isolating local oscillators. Models are available with combinations of waveguide and coaxial ports. Special multiport crossguide couplers can be manufactured to suit customers' requirements.



Model 18270-20-03

**IMPORTANT!** All directivities quoted include the measuring port and flange performance when connected to an ideal termination.

Model	Frequency Range (GHz)	Waveguide			* Minimum Directivity (dB)	Coupling		Dimensions (mm)			Weight (kg)		Model
		WG	R	WR		Sensitivity (dB)	Nominal Accuracy (dB)	A	B	C	3 Port	4 Port	
10270	2.60 - 3.95	10	32	284	20	±1.5	±2	90	34	308	5.0	4.9	10270
11A270	3.30 - 4.90	11A	40	229	20	±1.5	±2	62.5	29	256	2.3	1.9	11A270
12270	3.94 - 5.99	12	48	187	20	±1.5	±2	61.5	22	227	2.1	2.0	12270
13270	4.64 - 7.05	13	58	159	20	±1.5	±2	58	21	224	1.8	1.7	13270
14270	5.38 - 8.18	14	70	137	20	±1.5	±2	55	15.5	179	1.4	1.3	14270
15270	6.58 - 10.0	15	84	112	20	±1.5	±2	42.5	12.6	164	0.7	0.65	15270
16270	8.20 - 12.5	16	100	90	20	±1.5	±2	36	10.5	136	0.4	0.4	16270
17270	9.84 - 15.0	17	120	75	20	±1.5	±2	32.5	9.5	108	0.35	0.35	17270
18270	11.9 - 18.0	18	140	62	20	±1.5	±2	30	8	96	0.25	0.25	18270
19270	14.5 - 22.0	19	180	51	18	±1.5	±2	30	7	90	0.22	0.22	19270
20270	17.6 - 26.7	20	220	42	18	±1.5	±2	22.5	4.5	65	0.1	0.1	20270
21270	21.7 - 33.0	21	260	42	18	±2	±2	22.5	4.5	65	0.1	0.1	21270
22270	26.4 - 40.1	22	320	28	18	±2	±2	20.7	3.5	50	0.07	0.07	22270
23270	33.0 - 50.1	23	400	22	15	±2	±2	20	3.0	48	0.08	0.08	23270
24270	39.3 - 59.7	24	500	19	15	±2	±2	20	2.5	48	0.08	0.08	24270
25270	49.9 - 75.8	25	620	15	15	±2	±2	14	2.0	34.5	0.07	0.07	25270
26270	60.5 - 92.0	26	740	12	10	±2.5	±2.5	14	1.6	34.5	0.07	0.07	26270
27270	73.8 - 112	27	900	10	10	±2.5	±2.5	14	1.4	34.5	0.07	0.07	27270
28270	92.3 - 140	28	1200	8	10	±2.5	±2.5	14	1.1	34.5	0.07	0.07	28270

-13 (APC7) Models 10270 to 18270 only  
 -23 (Type N) Models 10270 to 18270 only  
 -33 (SMA) Models 14270 to 20270 only  
 -43 (K Type) Models 19270 to 22270 only

**ORDERING INFORMATION**  
 Model: Coupling Value Suffix-Type and Number of Ports; Description  
 Example: Model 17270-30-33 Crossguide Directional Coupler 30 dB Coupling 3 Port with SMA in coupled arm (the fourth arm is fitted with a termination)

**Note:** Please refer to page 27 for definitions of Flann coupler specifications.

Series 270

For standard flange types and recommendations see pages 108 onwards