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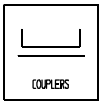
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Find the *Crane / Merrimac CWM-20R-9.2G* at our website: ***Click HERE***

# CWM-R Series DIRECTIONAL COUPLERS

***0.5 to 26.5 GHz / Ultra-Broadband / 10, 16, 20 dB Coupling / High-Perf. Stripline / 25 W / SMA***




## *PRINCIPAL SPECIFICATIONS*

| Model Number | Frequency Range, GHz | Coupling,¤ dB, Nom. | Frequency Sensitivity, dB, Max. | Directivity, dB, Min. | *Insertion Loss, dB, Max. | VSWR Max., Main Line | VSWR Max., Coupled Line | Outline Ref. Dim. |
|---|---|---|---|---|---|---|---|---|
| CWM-20R-9.2G | 0.5 - 18.0 | 20 ±1.0 | ±1.0 | 14 | 1.3 | 1.40:1 | 1.50:1 | 1 |
| CWM-10R-10.2G | 0.5 - 20.0 | 10 ±1.0 | ±1.0 | 14 | 1.3 | 1.35:1 | 1.35:1 | 1 |
| CWM-16R-10.2G | | 16 ±1.0 | | | | | | |
| CWM-10R-10.8G | 1.7 - 20.0 | 10 ±1.0 | ±0.55 | 15 | 1.2 | 1.35:1 | 1.45:1 | 2 |
| CWM-16R-10.8G | | 16 ±1.0 | | | 0.9 | | | |
| CWM-10R-13.2G | 0.5 - 26.5 | 10 ±1.0 | ±1.0 | 12 | 2.0 | 1.50:1 | 1.50:1 | 1 |
| CWM-16R-13.2G | | 16 ±1.0 | | | 1.6 | | | |
| CWM-10R-13.8G | 1.7 - 26.5 | 10 ±1.0 | ±0.6 | 14 | 1.5 | 1.40:1 | 1.50:1 | 2 |
| CWM-16R-13.8G | | 16 ±1.0 | | | 1.0 | 1.35:1 | 1.45:1 | |
| CWM-10R-16G | 6.0 - 26.5 | 10 ±1.0 | ±0.5 | 14 | 1.0 | 1.45:1 | 1.45:1 | 3 |
| CWM-20R-16G | | 20 ±1.0 | | | 0.7 | | | |
| CWM-10R-22G | 18.0 - 26.5 | 10 ±1.0 | ±0.5 | 14 | 1.0 | 1.45:1 | 1.45:1 | 3 |
| CWM-20R-22G | | 20 ±1.0 | | | 0.7 | | | |

¤Coupling is referenced to the **output**

* Insertion Loss **above** Coupling Loss

## *POWER SPECIFICATIONS*

| | | |
|---|---|---|
| Coupled "Loss": | 10 dB units: | 0.46 dB |
| | 16 dB units: | 0.08 dB |
| | 20 dB units: | 0.044 dB |
| | 30 dB units: | 0.004 dB |
| Peak Power: | | 3 kW max. |
| Input Power (Forward): | | 25 Watts max. |
| Reflected Power: | 10/16 dB units: | 5 Watts max. |
| | 20/30 dB units: | 50 Watts max. |

## *GENERAL SPECIFICATIONS*

| | |
|---|---|
| Impedance: | 50 Ω nom. |
| Operating Temp: | – 55° to +85°C |
| Available Options: | |
| Connectors: | TNC & N type available |
| Frequencies: | Available to 65 GHz. |
| Higher Power : | With N connectors |
| Coupling: | 30 dB available |

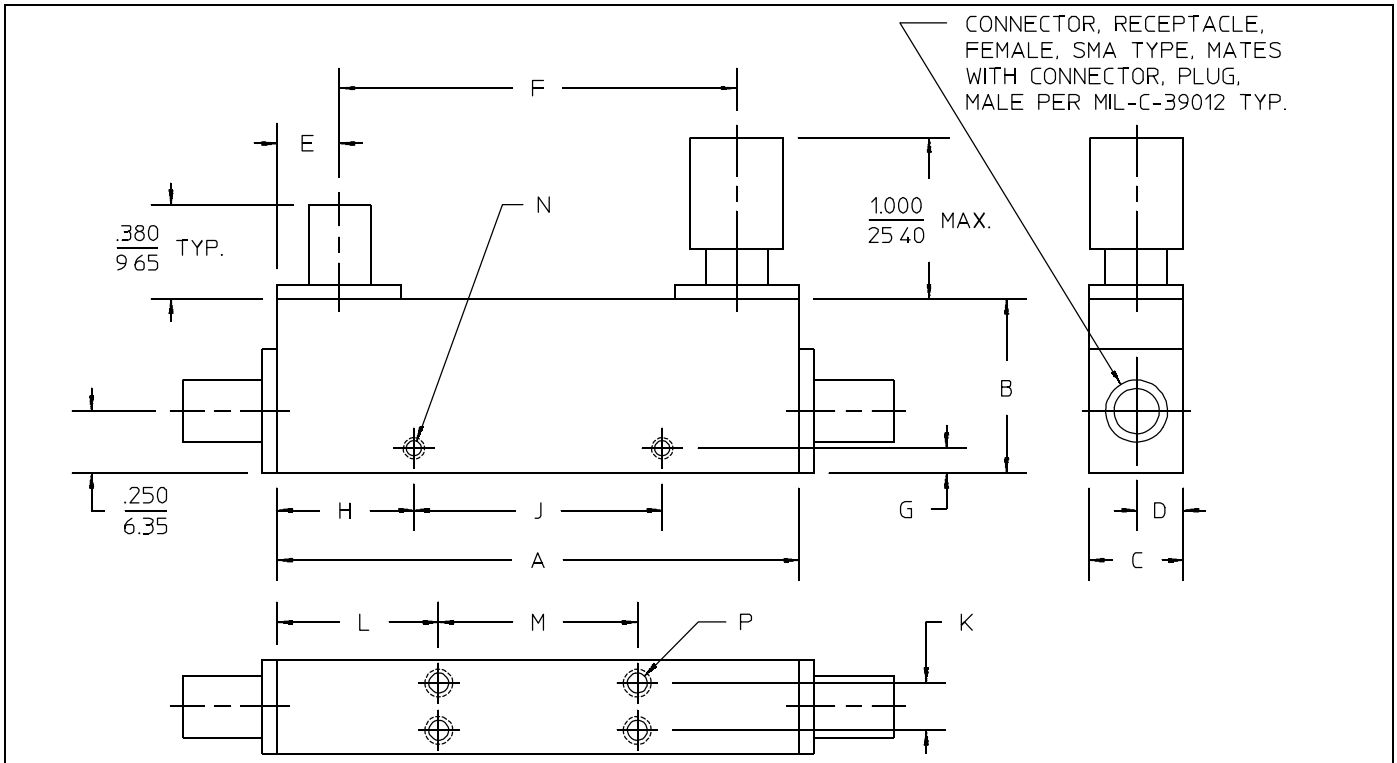
**General Notes:**

1. The CWM-R series of directional couplers consists of three port devices utilizing stripline technology in a connectorized package. Each unit is a multi-section quarter wave coupler designed to cover a very broad band of frequencies. They are ideally suited for monitoring forward or reflected power in EW and similar wideband systems with minimal perturbation to the main line signal.
2. Similar directional couplers may be custom ordered with coupling values up to 35 dB and covering frequency bands up to 26.5 GHz.
3. These units comply with MIL-C-15370 and may be supplied screened for compliance with additional specifications you designate for military and aerospace applications requiring the highest reliability.

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For further information contact ***MERRIMAC / 41 Fairfield Pl., West Caldwell, NJ, 07006 / 973-575-1300 / FAX 973-575-0531***

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| OUTLINE | A | B | C | D | E | F | G | H | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.400 111.76 | .700 17.78 | .500 12.70 | .250 6.35 | .250 6.35 | 3.900 99.06 | — | — | — | .300 7.62 | 1.000 25.40 | 2.400 60.96 |
| 2 | 2.400 60.96 | .700 17.78 | .520 13.21 | .250 6.35 | .250 6.35 | 1.900 48.26 | .350 8.89 | .660 16.76 | 1.080 27.43 | .300 7.62 | .800 20.32 | .800 20.32 |
| 3 | 1.060 26.92 | .625 15.88 | .380 9.65 | .190 4.83 | .250 6.35 | .560 14.22 | .120 3.05 | .530 13.46 | — | — | — | — |

| OUTLINE | N | P | WT. OZ. (G) |
|---|---|---|---|
| 1 | — | ¤4-40 UNC-2B X 250 (6.35) DEEP 4 HOLES BOTH SIDES | 3.0 (85) |
| 2 | ¤2-56 UNC-2B X 078 (1.98) DEEP 2 HOLES BOTH SIDES | ¤4-40 UNC-2B X 250 (6.35) DEEP 4 HOLES BOTH SIDES | 1.9 (54) |
| 3 | ¤2-56 UNC-2B X 078 (1.98) DEEP BOTH SIDES | — | 1.5 (43) |

NOTES:
1. Tolerance on 3 place decimals æ.020(.51) except as noted.
2. Dimensions in inches over mm
3. Weights are nominal.

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