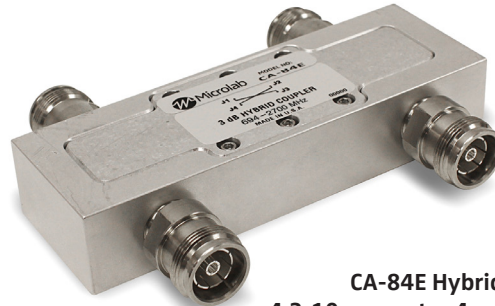


- ◆ Low Specified PIM performance
- ◆ **Models for Outdoor Environments**
- ◆ High Isolation, Low VSWR and Loss
- ◆ Single and Dual Band Ranges Tetra, SMR/PMR, Cellular, PCS and UMTS
- ◆ Rail Standard EN 50155:2007 (Class T1) Certified
- ◆ High Reliability, Moisture sealed
- ◆ Easy mounting to pole or wall



**CA-84E Hybrid Coupler  
4.3-10 connector 4 port Model**

These Hybrid Couplers have been designed to meet the special needs of the wireless market. They are most commonly used to combine two wireless carriers in the band to a single antenna feed or distribution cable. This requires the termination of one output port in 50Ω and results in a 3 dB loss in each signal. In situations where two similar feeds are required, as required for an in-building application, both outputs may be used eliminating the need for a termination and the 3 dB loss. For powers to 400W see CA-86D.

Connectors, spaced to allow controlled wrench tightening, are available with alternate genders. See below for models with integral terminations, and for outdoor environments add suffix 'P' to Model No. (e.g. CA-84NP).

Coupling:	3 dB nominal
Impedance:	50Ω nominal
Environment:	-35 to +65°C
PIM (Intermod):	-161 dBc (-118 dBm) (2 tones at +43 dBm)
Housing Finish:	
Indoor/IP64:	Standard model Passivated Al.
Outdoor/IP67:	Painted Add P to Model No.
RoHS	Compliant
Connectors:	Triplate

Model Number			Frequency	Isolation	VSWR	Sensitivity	Dissipative	Power/Input max.	
N conn	7/16 DIN	4.3-10	Range, MHz	dB	Max	dB	Loss, dB	Avg.	Peak
CA-84N	CA-84D	CA-84E	694 - 2,700	>30	1.20:1	±0.40dB	<0.2 dB	80W	1.5 kW
CA-94N	CA-94D	CA-94E	380 - 520	>30	1.15:1	±0.25dB <sup>‡</sup>	<0.2 dB	100W	3.0 kW

Add 'P' to Model Number for Outdoor Finish

<sup>‡</sup>Sensitivity: ±0.45db, 340-380 MHz

### Models with Integrated Terminations

The Hybrid Combiner is a network that allows the combination of signals without those signals interacting, however close they are in frequency, and at higher powers than would be possible with standard Wilkinson Dividers. If both outputs cannot be used (as would be the case in an in-building distribution system) the unused output must be terminated with a load. The rating for this load must be at least half the sum of the power of the two inputs.

CA-84GN and CA-84GD are available with a 3W integrated load, by the addition of a 'G' in the Model Number, as shown on right. Note that the isolation will degrade by up to 5dB due to the effect of the load VSWR and the PIM performance of the coupler will not be maintained. If guaranteed low PIM is a requirement, then a low PIM termination must be used, either externally or integrated as in the CT series.

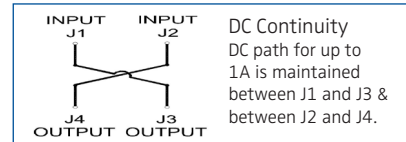
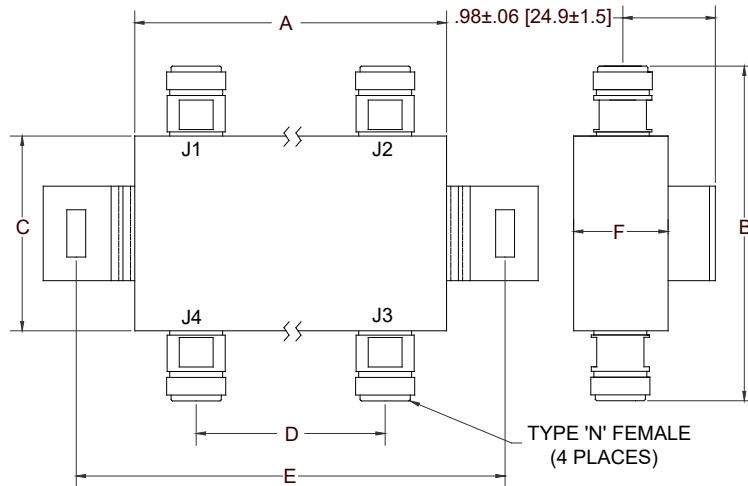
Model No/Conn	Integrated	Input	Added Wt.
N conn	7-16 Load Power	Isolation	oz (g) nom
CA-84GN CA-84GD	3W avg.	>25 dB	None



Note: Specifications are subject to change without prior notification.

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### Standard N connector 4 port Models

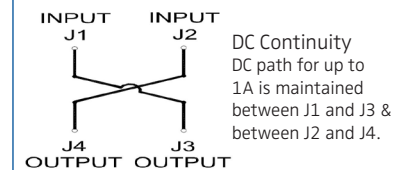
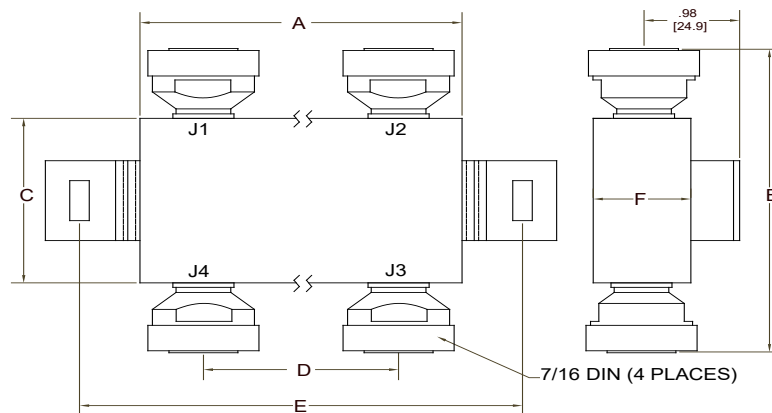


Dimensions and **Weight:**  
**Inches (mm); Wt: oz (g) nom.**

	CA-84N	CA-94N
A	5.20 (132)	5.35 (136)
B	3.21 (82)	3.14 (80)
C	1.73 (44)	1.66 (42)
D	3.30 (84)	4.10 (104)
E	5.99 (152)	5.99 (152)
F	1.00 (25)	1.00 (25)
Wt.	23 (644)	23 (644)

All dimensions  $\pm 0.60$  inches unless otherwise noted. Dimensions in mm are for reference only.

### Standard 7/16 DIN connector 4 port Models

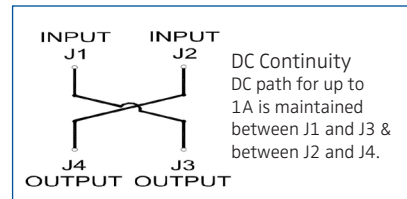
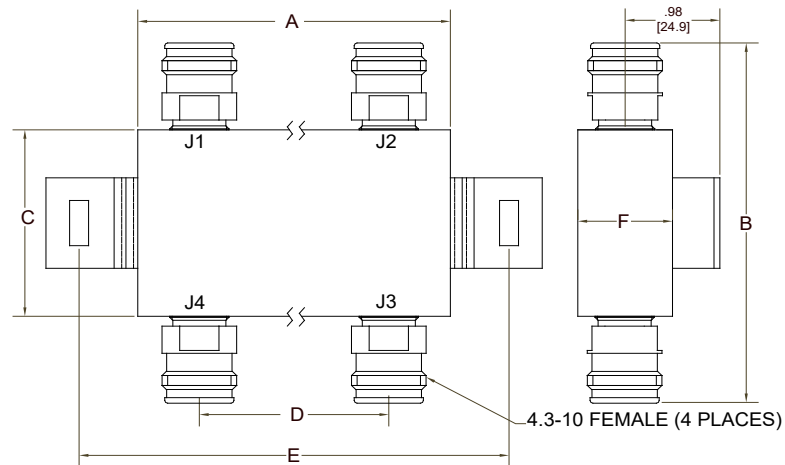


**Dimensions and Weight:**  
Inches (mm); Wt: oz (g) nom.

	CA-84D	CA-94D
A	5.20 (132)	5.35 (136)
B	3.46 (88)	3.39 (86)
C	1.73 (44)	1.66 (42)
D	3.30 (84)	4.10 (104)
E	5.99 (152)	5.99 (152)
F	1.00 (25)	1.00 (25)
Wt.	25 (700)	23 (644)

All dimensions  $\pm 0.60$  inches unless otherwise noted. Dimensions in mm are for reference only.

## Example CA-84E with 4.3-10 connectors



### Dimensions and Weight: Inches (mm); Wt: oz (g) nom.

CA-84E	
A	5.20 (132)
B	3.65 (93)
C	1.73 (44)
D	3.30 (84)
E	5.99 (152)
F	1.00 (25)
Wt.	19 (528)

All dimensions  $\pm 0.60$  inches unless otherwise noted. Dimensions in mm are for reference only.

## Example CA-84GN Models with 3W Integrated Termination

