



- High power coupler at 300 W across a wideband from 698 to 6000 MHz
- Low RF Insertion Loss and excellent return loss performance
- Outdoor unit with a wide range of coupling values from 5 to 40 dB
- Available with 7-16 DIN and 4.3-10 Connectors
- Rugged and high reliability design
- Designed for ultra-low PIM performance
- RoHS compliant

Overview

CCI's QCO-70 series of outdoor directional couplers cover a broad frequency range from 698 to 6000 MHz, while delivering high power performance of up to 200 Watts at the input port. Each model has a nominal coupling value with very low insertion loss and excellent return loss performance. The units are offered in a wide range of coupling values and are ideal for optimizing RF power distribution, which is often required for distributed antenna systems (DAS).

The extremely wide frequency range of the couplers enables their use with multiband and broadband antennas as well as a both active and passive DAS systems. The CCI couplers are also rated for outdoor use; this along with the high power handling makes them well-suited for use with wireless base stations. The design of CCI's directional couplers provides for extremely low insertion loss and excellent PIM performance. These units are constructed with a weatherproof aluminum IP67 rated housing and with IP66 immersion rated connectors which enhances the overall reliability.

CCI filter and combiner products are designed and produced to ISO 9001 certification standards for reliability and quality at our state-of-the-art engineering and manufacturing facilities.



SPECIFICATIONS

High Power Directional Coupler

QCO-70-xxxx

Electrical Specification

RF Parameter	QCO-70-05Fx	QCO-70-06Fx	QCO-70-07Fx	QCO-70-10Fx	QCO-70-15Fx
Model Number	QCO-70-05Fx	QCO-70-06Fx	QCO-70-07Fx	QCO-70-10Fx	QCO-70-15Fx
Coupling Values 698 - 6000 MHz	5.0 dB	6.0 dB	7.0 dB	10.0 dB	15.0 dB
Accuracy 698 - 6000 MHz	±1.0 dB	±1.0 dB	±1.0 dB	±1.2 dB	±1.2 dB
Isolation	≥ 24 dB	≥ 25 dB	≥ 26 dB	≥ 28 dB	≥ 33 dB
Insertion Loss	≤1.75 dB	≤1.7 dB	≤1.4 dB	≤0.8 dB	≤0.5 dB

RF Parameter	QCO-70-20Fx	QCO-70-25Fx	QCO-70-30Fx	QCO-70-35Fx	QCO-70-40Fx
Model Number	QCO-70-20Fx	QCO-70-25Fx	QCO-70-30Fx	QCO-70-35Fx	QCO-70-40Fx
Coupling Values 698 - 6000 MHz	20.0 dB	25.0 dB	30.0 dB	35.0 dB	40.0 dB
Accuracy 698 - 6000 MHz	±1.2 dB	±1.5 dB	±1.5 dB	±1.5 dB	±1.5 dB
Isolation	≥ 38 dB	≥ 43 dB	≥ 48 dB	≥ 53 dB	≥ 58 dB
Insertion Loss	≤0.4 dB	≤0.3 dB	≤0.2 dB	≤0.2 dB	≤0.2 dB

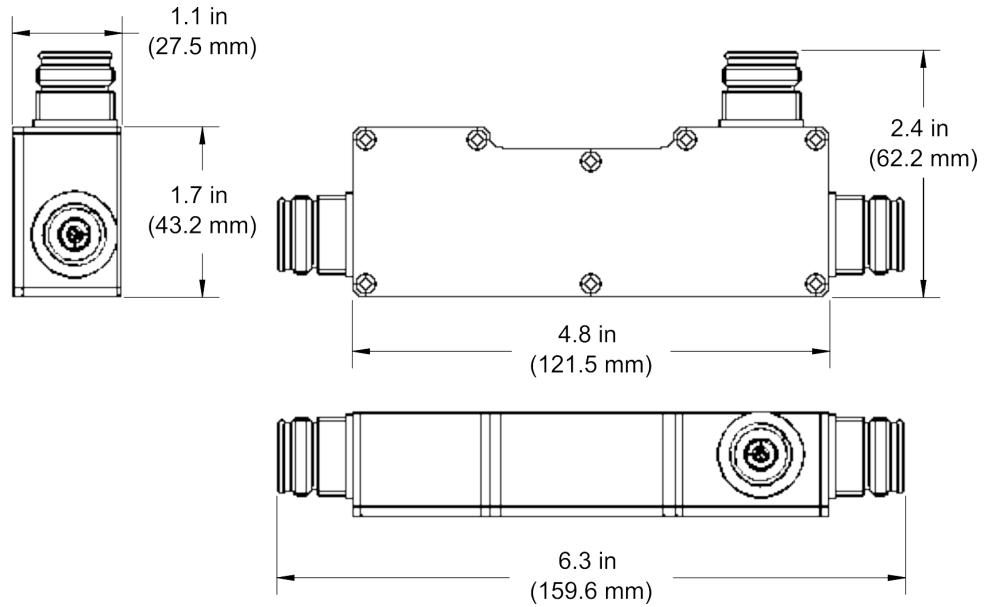
General Characteristics	
Return Loss	18 dB minimum, 20 dB typical
Continuous Average Power	300 W at the input port
Peak Envelope Power	3.0 kW max.
Impedance	50 ohms
Intermodulation Performance	≤ -117 dBm (-160 dBc) at 2 × +43 dBm tones

Environmental Specification

Operating Temperature	-25°C to +75°C
Enclosure	IP67, outdoor use
Relative Humidity	0 - 95 %

Mechanical Specification

Model	QCO-70-xxF1	QCO-70-xxF2	QCO-70-xxF3
Connectors	3 x 7-16	3 x 4.3-10	3 x N-type
Housing Dimensions	128.0 x 45.8 x 32.0 mm	121.5 x 43.2 x 27.5 mm	121.5 x 43.2 x 27.5 mm
Overall Dimensions	205.2 x 62.2 x 32.0 mm	159.6 x 62.2 x 27.5 mm	159.6 x 62.2 x 27.5 mm
Weight	0.80 Kg (1.76 lbs)	0.70 Kg (1.55 lbs)	0.60 Kg (1.32 lbs)



High Power Coupler with 4.3-10 Female Connector (QCO-70-xxF2) Outline Drawing



DAS Products

STANDARDS & CERTIFICATIONS

High Power Directional Coupler

QCO-70-xxxx

Parts & Accessories

QCO-70-05Fx	Ultra-broadband High Power 5dB Coupler
QCO-70-06Fx	Ultra-broadband High Power 6dB Coupler
QCO-70-07Fx	Ultra-broadband High Power 7dB Coupler
QCO-70-10Fx	Ultra-broadband High Power 10dB Coupler
QCO-70-15Fx	Ultra-broadband High Power 15dB Coupler
QCO-70-20Fx	Ultra-broadband High Power 20dB Coupler
QCO-70-25Fx	Ultra-broadband High Power 25dB Coupler
QCO-70-30Fx	Ultra-broadband High Power 30dB Coupler
QCO-70-35Fx	Ultra-broadband High Power 35dB Coupler
QCO-70-40Fx	Ultra-broadband High Power 40dB Coupler

Option (-x)	Description
-1	with DIN 7-16 connectors
-1	with 4.3-10 connectors
-3	with N-type connectors

Standards & Compliance

Safety	EN 60950-1, UL 60950-1
Emission	EN 55022
Immunity	EN 55024
Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-02-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN 60529 IP67 & IP68

Certifications

Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US, ISO 9001



CCI Communication Components Inc.

EXTENDING WIRELESS PERFORMANCE