

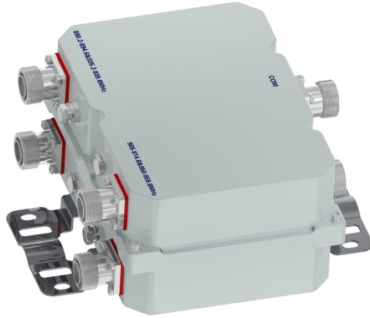


Filters & Combiners

DATA SHEET

800 Band/850 Band Combiner

PFC-885-601



- Combines two Base Station Outputs on the 800 Band and 850 Band onto a Single Feeder
- Low Loss Combining
- Full Transmit and Receive Combining typ. 1.0 dB loss
- High Reliability Design
- High Power Handling
- Excellent Filter Response
- Temperature Stable
- Fully Passive
- Low Intermodulation
- Optional Wall Mount Kit Available

Overview

CCI's Low Loss 800 Band and 850 Band Combiner combines two Base Station outputs onto a single feeder without the insertion loss normally associated with hybrid combiners. The unit is fully passive and delivers a matched low insertion loss solution for the sharing of common feeder lines and antennas. The unit requires no power and has a DC Block on the Input ports. The unit is housed in a weatherproof outdoor enclosure suitable for tower mount application.

Technical Description:

Internal duplexers deliver signal to independent Tx and Rx filter combiners, enabling a high level of control and performance to maintain good isolation while minimizing insertion loss. Stages are kept to a minimum to maximize power and efficiency. Transmit paths are fully isolated from Receive paths to prevent intermodulation products. The tower mount unit consists of multiple band-pass filters which are housed in an IP67 moisture proof enclosure, with IP68 immersion proof 7-16 (4.3-10 available as an option) connectors suited for long-life masthead mounting. The unit provides protection against lightning strikes via a multi-stage surge protection circuit.



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SPECIFICATIONS

800 Band/850 Band Combiner

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Electrical

RF Parameters	Ports	Frequency(MHz)	Specification	
Return Loss	COM	825.0 - 831.8	18 dB minimum, 20 dB typical	
		870.0 - 876.8	18 dB minimum, 20 dB typical	
		842.0 - 852.0	18 dB minimum, 20 dB typical	
		801.0 - 810.9	18 dB minimum, 20 dB typical	
	PORT 1	825.0 - 831.8	18 dB minimum, 20 dB typical	
		870.0 - 876.8	18 dB minimum, 20 dB typical	
		842.0 - 852.0	18 dB minimum, 20 dB typical	
		801.0 - 810.9	18 dB minimum, 20 dB typical	
Insertion Loss	PORT 1 to COM	825.0 - 831.8	1.0 dB max.	
		870.0 - 876.8	1.0 dB max.	
	PORT 2 to COM	842.0 - 852.0	0.3 dB typical, 0.5 dB at band edge over Temp.	
		801.0 - 810.9	0.3 dB typical, 0.5 dB at band edge over Temp.	
		PORT 1 to PORT 2	825.0 - 831.8	30 dB minimum
			870.0 - 876.8	30 dB minimum
	Isolation	PORT 1 to PORT 2	842.0 - 852.0	30 dB minimum
			801.0 - 810.9	30 dB minimum

General Characteristics	
Impedance	50 ohms
Continuous Average Power	100 W max. (all ports)
Peak Envelope Power	2 kW max. (all ports)
Intermodulation Performance (at COM port in RX band)	<-107 dBm (-150 dBc) typical (2 x +43 dBm tones) all bands
DC Pass Current/AISG Pass (Port 2 to COM)	3A/AISG signal (2.176 MHz) per AISG 2.0

Environmental

Operating Temperature	-20 °C to +65 °C
Relative Humidity	5% - 95%
Enclosure	IP67 (Unit Body), IP68 (Connector) - Suitable for Outdoor Applications
MTBF	>500,000 hours
Lightning Protection	8/20us, ±10KA max, 10 strikes per IEC61000-4-5

Mechanical

Model	Twin
Connectors	6 x 7-16 DIN female (6 x 4.3-10 female optional)
Body Dimensions (HxWxD)	9.37 x 6.89 x 4.41 in. (238 x 175 x 112 mm)
Overall Dimensions (HxWxD)	9.37 x 10.47 x 5.00 in. (238 x 266 x 127 mm)
Weight	13.2 lbs (6.0 kg)
Mounting	Pole/Wall mounting bracket

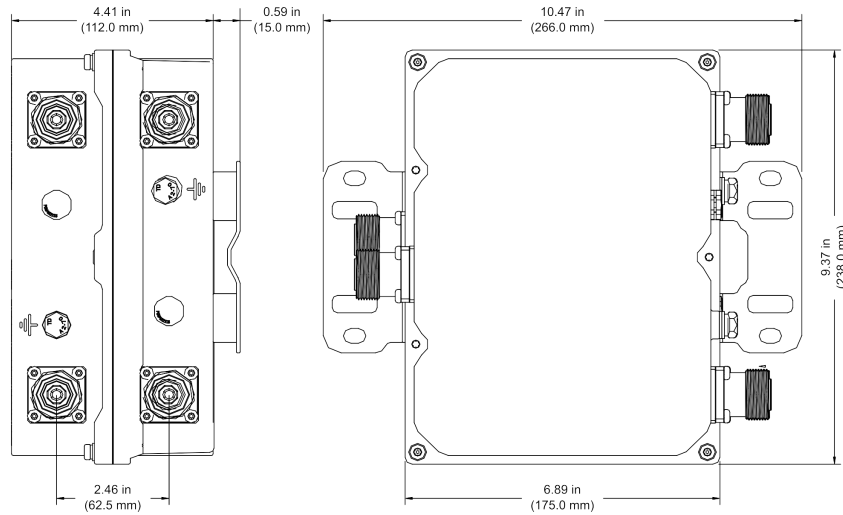


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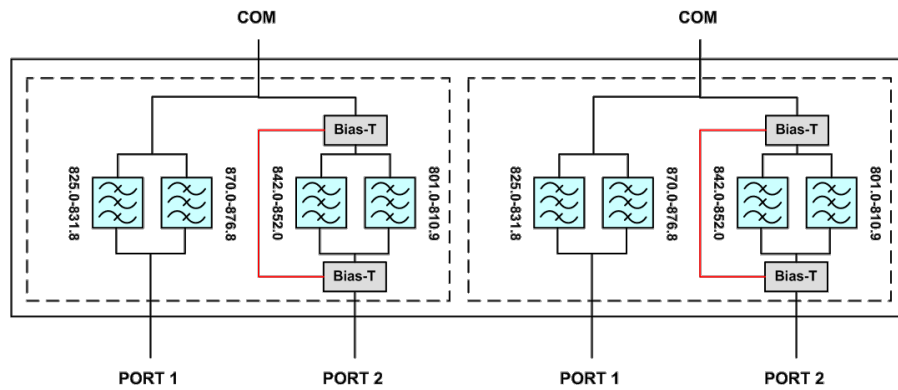
800 Band/850 Band Combiner

PFC-885-601



Twin 800 Band/850 Band Combiner Outline Drawing

Block Diagram



Twin 800 Band/850 Band Combiner Block Diagram



Filters & Combiners

800 Band/850 Band Combiner

PFC-885-601

STANDARDS & CERTIFICATIONS

Parts & Accessories

PFC-885-601 Twin 800 Band/850 Band Combiner with 7-16 connectors and bracket

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, IEC61000-4-5, GR-63-CORE 4.3.1, EN 60529 IP67, IP68

Certifications

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

