

# PCS/DCS Indoor and Outdoor Bias Tees

## *Coverage Enhancement Accessory Family*



The RE MEC family of Tower Mounted Amplifiers offers a cost-effective solution for extending the uplink coverage and improving the quality of service from either new or existing BTS sites. The Tower Mounted Amplifier Bias Tee enables the injection of DC supply and ALP™ communication signals onto the existing coaxial feeder for simple implementation of the Tower Mounted Amplifier system.

### **Bias Tee - RF Function**

The Bias Tee incorporates a network for the injection of DC and ALP™ communications signals onto the existing RF feeder. The RF path has low insertion loss, high return loss and excellent passive intermodulation (PIM) performance. A high voltage, high Q coaxial capacitor isolates the BTS and antenna ports while maintaining a low loss RF path. The antenna port DC injection is achieved by a low resistance high impedance RF isolating network.

### **Bias Tee - DC and Control Function**

The Bias Tee DC supply connections are fed onto the RF line via the RF isolating network. The DC connection is protected by a gas discharge tube (GDT) with secondary protection using a transient protector diode. For ALP Enabled™ Tower Mounted Amplifier installations the DC connection also carries the ALP™ communication signals from the PDU.

### **FEATURES**

- Bias Tee feed of DC supply and ALP™ signals - no additional tower cabling
- Extremely low RF insertion loss
- Excellent return loss
- Exceptional passive intermodulation (PIM) performance
- Available with 7/16 DIN connectors or Type N connectors
- Interfaces directly with the RE MEC Power Distribution Unit (PDU)
- 10 kA lightning protection
- High MTBF
- Designed to meet ETSI 11.21

### **PACKAGING**

- Compact and lightweight
- Indoor and outdoor versions available
- Outdoor versions IP68 rated
- Simple installation

### **BENEFITS/APPLICATIONS**

- Low cost of installation
- No additional tower feeders
- Replaces existing lightning protectors with 10 kA capability

### **ORDERING INFORMATION**

- See table on back of data sheet for model number information, configurations, and frequency bands

**RE MEC**

Building solutions  
through teamwork

# PCS/DCS Indoor and Outdoor Bias Tees

## Coverage Enhancement Accessory Family

Tx Characteristics	Specification	Connectors			
		Model No.	Type	BTS Side	TMA Side
Frequency Band	1710 to 1990 MHz	S0300701	Indoor	7/16 Male	7/16 Female
Insertion Loss	≤ 0.1 dB typ. ≤ 0.2 dB max.	S03025A1	Outdoor	7/16 Male	7/16 Female
ALP <sup>TM</sup> Signal Loss	>2.0 dB K@ 455 kHz	S03033A1	Indoor	N Female	N Male
Return Loss	≥24 dB	S03041A1	Outdoor	7/16 Female	7/16 Male
Rated RF Power	+52 dBm CW (158 W) +61.6 dBm peak (1440 W)	S03049A1	Outdoor	N Male	N Female
PIM (2 x +43 dBm Carriers)	-120 dBm (7/16 connectors) -110 dBm (N connectors)				
DC Resistance	<1.2 Ohms				
Max TMA DC Current	750 mA	010-11154-0001	Indoor	7/16 Male	7/16 Female Bulkhead
DC Voltage	7 to 15 Vdc				

Mechanical Characteristics	Specification	
Environment	Indoor	Outdoor
Dimensions (excluding connectors)	62 x 47 x 32 mm (2.44 x 1.85 x 1.26 in.)	62 x 51 x 41 mm (2.44 x 2.01 x 1.61 in.)
Weight	0.35 kg (0.77 lb.)	0.85 kg (1.87 lb.)
Connectors - BTS side & TMA side	See Model No. information above for connector types and gender	
Connector - DC	SMB	Binder type 768

Environmental Characteristics	Specification	
Environment	Indoor	Outdoor
Operating Temperature Range	-40 to +65°C (-40 to +149°F)	-40 to +65°C (-40 to +149°F)
Relative humidity	5 to 95%	5 to full immersion
Enclosure Protection	IP50	IP68
Lightning Protection	8/20 µsec pulse @ 10 kA	8/20 µsec pulse @ 10 kA
EMC	ETS 300 342-3 Compliant	ETS 300 342-3 Compliant
MTBF	>1,000,000 hours	>1,000,000 hours

### REMEC Locations

#### Americas Region

14020 Stowe Drive  
Poway, California 92064  
Tel: 858.505.3720  
FAX: 858.505.3666

#### EMEA Region

Midshires Business Park  
Smeaton Close  
Aylesbury  
Buckinghamshire  
HP 19 8HL, United Kingdom  
Tel: +44 (0)1296 319 319  
FAX: +44 (0)1296 319 200

This document gives only a general description of the product(s) and shall not form part of any contract.  
PCS/DCS Bias Tee, Rev.010505

# REMEC