

## General Information



Communication Components, Inc. Outdoor Combiner/Diplexer combines AWS and PCS 1900 band Basestation Tx/Rx onto a common feeder line. Specifically intended for use in dual band systems, the

DIP-1921-O-AISG reduces the number of required feeder lines while providing a high degree of isolation between systems.

The CCI Outdoor Combiner/Diplexer provides full band performance for each band with low insertion loss, low Intermodulation, and high power handling. Excellent return loss delivers the best match to the antennas and base station, saving precious transmit power. DC and AISG pass-through retains full RET and TMA capability utilizing CCI's AISG suite of products.



Model DIP-1921-O-AISG

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### Features:

- Low Loss
- Small, lightweight
- AISG 2.0 compliant
- Good Isolation
- Good IM
- Lightning protected
- High reliability
- Full AWS and PCS bands

## Technical Description

The Diplexer consists of a multiple filters to combine (or divide) full band PCS and AWS signals. This tower mount unit separates (or combines) both Tx and Rx signals of PCS and AWS onto separate DIN 7-16 connectors. The fully weatherproof tower mount unit incorporates bypass circuitry which senses DC and AISG carrier frequency when presented to either port and automatically routes both to the antenna port. The unit has internal lightning strike protection using a multi-stage surge protection circuit.

The filters have been designed to minimize Insertion Loss whilst maximizing isolation. DIN Connectors are fully IP67 unmated.

# PCS/AWS Outdoor Diplexer Electrical & Mechanical Specifications



Electrical Specifications	
<b>PCS Channel</b>	
Passband	Full PCS Band 1850-1910MHz & 1930-1990MHz
Insertion loss	0.2 dB maximum
Return Loss (port 1, port 3)	20 dB Minimum
Rejection (AWS)	50 dB minimum
Power Handling	250 Watts Average, 3KW peak
IM3	150 dBc min., 2 x 20 W carriers
<b>AWS Channel</b>	
Passband	Full AWS Band 1710-1755 & 2010-2155MHz
Insertion Loss	0.2 dB maximum
Return Loss	20 dB minimum
Rejection (PCS)	50 dB minimum
Power Handling	250 Watts Average, 3 KW Peak
IM3	150 dBc min., 2 x 20 W carriers
<b>Common Specifications</b>	
Isolation (PCS to AWS, AWS to PCS)	50 dB min.
DC Pass Current	3A DC
AISG Compatibility	AISG 1.0, 1.1 and 2.0 Compliant
Impedance	50 Ohms
Operating Temperature	-40 to +65 deg. C
Connectors	7-16 DIN Female
Dimensions	6.5" x 5.5" x 2.5" Maximum
Weight	5 Pounds
Finish	Epoxy Powder Coat
MTBF	500,000 Hours Minimum
Mounting	Pole/Wall Mounting Bracket

All specifications are subject to change. The latest specifications are available at [www.cciproducts.com](http://www.cciproducts.com)

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**Ordering Information:**

◆ **Model DIP-1921-O-AISG**

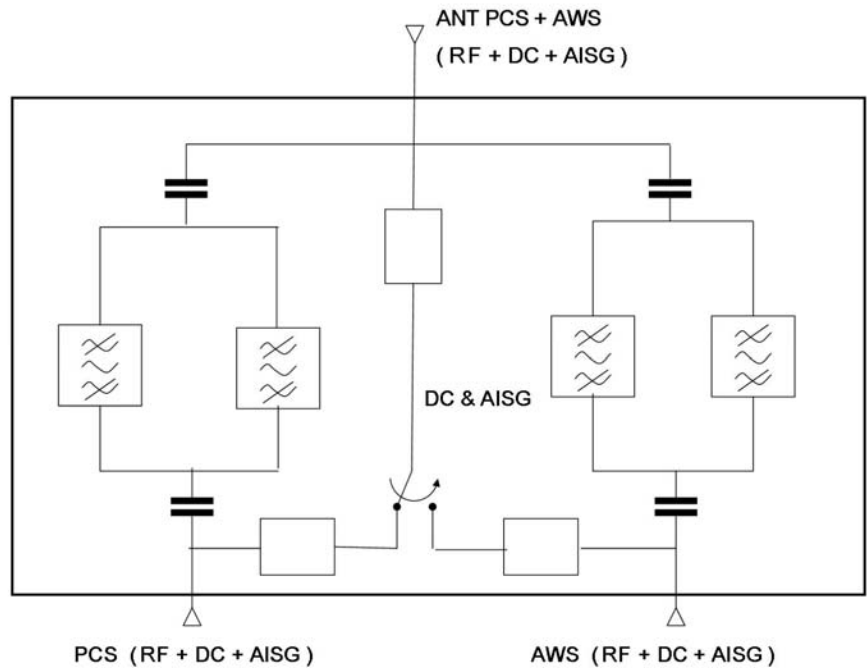
**Options:**

◆ Pole Mount Kit

**Accessories:**

- ◆ AISG 2.0 Site Controller (SCU-AISG2-3-1)
- ◆ AISG Cable Kit (RET-CBK)
- ◆ AISG 2.0 Bias-T
  1. Model BT-0821-DMDF-AG (DIN-Male RF Port, DIN-Female RF+DC+AISG Port)
  2. Model BT-0821-DFDM-AG (DIN-Female RF Port, DIN-Male RF+DC+AISG Port)
  3. Model BT-0821-DFDF-AG (DIN-Female RF Port, DIN-Female RF+DC+AISG Port)

**PCS/AWS Diplexer Unit Block Diagram**



**Tower Mounted PCS/AWS Diplexer Unit Outline Drawing**

