

Operating and Service Manual

DC3510A

Model

10011637

Part Number

Serial Number



Declaration of Conformity

Issue Date: December 2018
Model #/s: Model DC3510A Series
Type of Equipment: RF Directional Coupler
Function: Designed to be used in a RF immunity test system or for research.

The equipment described above is declared to be in conformity with the following applicable national and international standards. The conformity is valid only when equipment is used in a manner consistent with the manufacturer's recommendations and the reference documents.

HAZARDOUS SUBSTANCES (RoHS 3):
DIRECTIVE (EU) 2017/2105 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 November 2017 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)
RECYCLING (WEEE):
DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE) (recast)
SUBSTANCES OF VERY HIGH CONCERN (REACH):
REGULATION (EC) 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Substances of Very High Concern Chemicals (SVHC)

Supporting documentation is held by AR RF/Microwave Instrumentation's Quality department in Pennsylvania, United States.

Place of issue: AR RF/Microwave Instrumentation
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Souderton, Pennsylvania 18964 USA

Authorized officer of the company:

Patricia Thrasher
Manager Quality & Service

OPERATING INSTRUCTIONS

MODEL DC3510A

WARNING:



Do not exceed maximum power ratings. Do not drop. Internal components are fragile.

Refer to drawing 10011636 at the end of this section for dimensions and connector locations.

Operation of the Model DC3510A is quite simple. The input signal is fed into the connector type N male (J1) marked **INPUT** and the output is taken from the connector type N female (J2) marked **OUTPUT**.

Forward coupled output is taken from the jack (J3) marked **FWD**, and Reverse coupled output is taken from the jack (J4) marked **REV**. Both coupled output jacks on the unit are Type N female.

See Specification Sheet for detailed specification.



**Model DC3510A, M1
Model DC3510, M1
Dual Directional Coupler
200 Watts CW
9kHz–1000MHz**

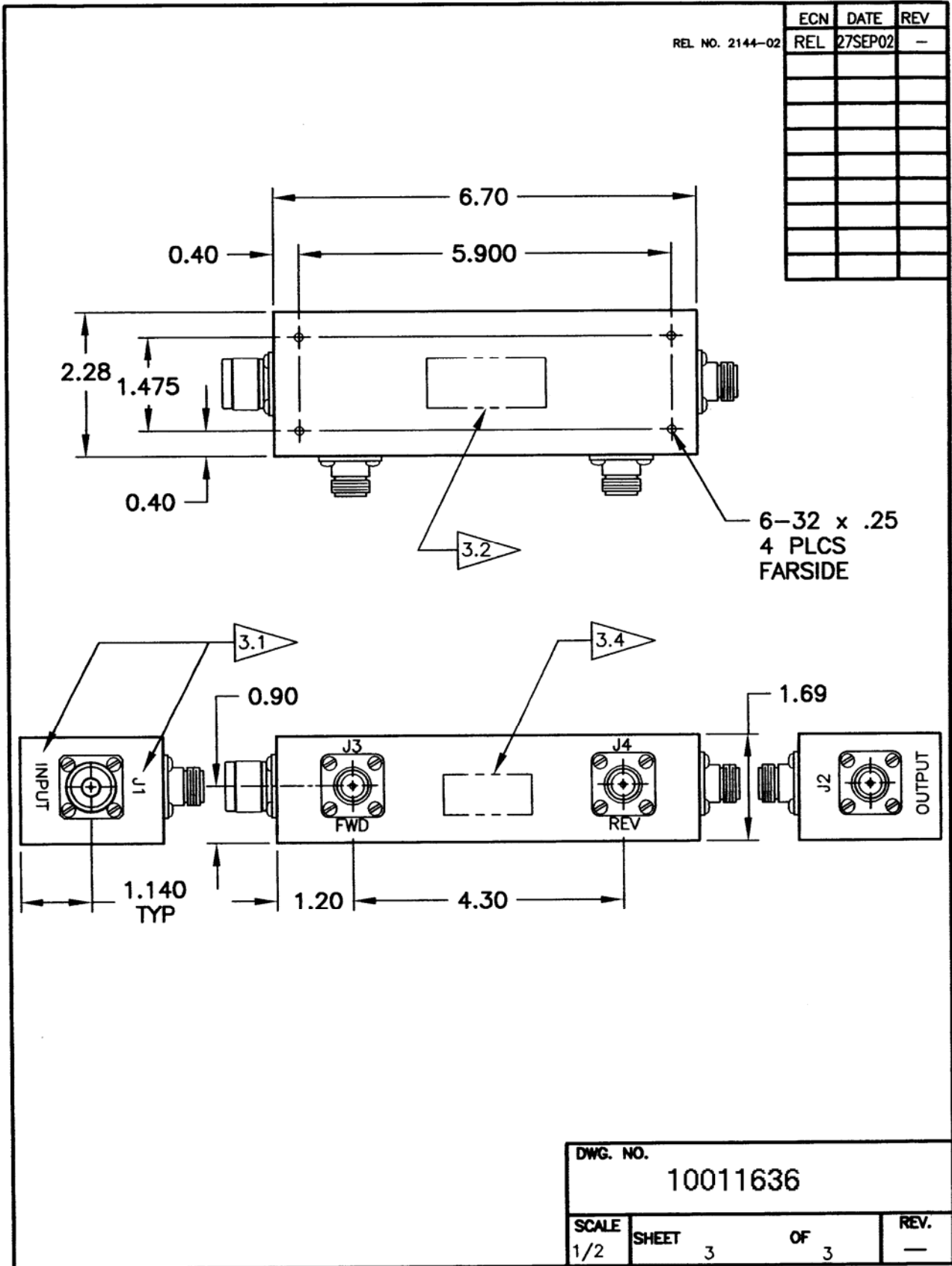
The Model DC3510A is a high power ultra-broadband dual directional coupler with excellent performance characteristics over a range of more than 14 octaves. This dual directional coupler is a convenient means of simultaneously monitoring forward and reflected power in RF power systems using normal laboratory oscilloscopes, voltmeters, power meters and spectrum analyzers.

The Model DC3510A is uniquely suited for use with our "A", "L" and "W" series low power amplifiers, other amplifiers operating within this frequency and power range, and our PM2002 power meter.

SPECIFICATIONS

- FREQUENCY RANGE.....9kHz–1000MHz
- POWER (maximum) (infinite VSWR).....200 watts CW, 400 watts peak
50 OHM (1.0:1 VSWR)500 watts CW, 1000 watts peak
- COUPLING FACTORSee Model Configuration
- COUPLING FLATNESS.....± 0.6dB
- DIRECTIVITY.....25dB typical
20dB minimum (.01-1000MHz)
15dB minimum (.009-.01MHz)
- INSERTION LOSS (maximum)0.5dB
- IMPEDANCE (main line).....50 ohms, VSWR 1.3:1 maximum
- CONNECTORS
MainlineSee Model Configuration
CoupledType N Female
- WEIGHT (maximum).....1.36 kg. (3 lbs)
- SIZE (maximum) W x H x D)15.7 x 5.8 x 4.3 cm (6.2 x 2.28 x 1.69 in)
- EXPORT CLASSIFICATION.....EAR99

Model Number	Model Configuration	
	Mainline Connector, J1/J2	Coupling Factor
DC3510A	N(M)/N(F)	40 ± 0.8dB
DC3510AM1	N(M)/N(F)	50 ± 0.8dB
DC3510	N(F)/N(F)	40 ± 0.8dB
DC3510M1	N(F)/N(F)	50 ± 0.8dB



WARRANTIES: LIMITATION OF LIABILITY

Seller warrants (i) that seller has title to the goods sold and (ii) that Amplifiers (all parts excluding traveling wave and vacuum tubes), Antennas, field monitors, field probes, field analyzers, field analyzer processor units, system controllers, system interlock, power meters, leak detectors, RF conducted probes, RF conducted clamps, Multi-tone, EMI receiver systems, RF down converters, RF conducted immunity systems, conducted immunity accessories, radiated immunity test systems, safety meters, safety sensor heads, tripods, directional couplers, waveguide adapters, termination loads, load attenuators, impedance stabilization networks, and coaxial cables will be free from defects in material and workmanship for a period of three (3) years from date of shipment shown on AR RF/Microwave Instrumentation invoice.

All modules, used in the amplifiers for the 1-6 GHz, 4-18 GHz, 6-18 GHz, all HPM products, and other applications, are hermetically-sealed. This sealing process protects the internal hybrid circuitry from humidity that could compromise the long term reliability of the product. These modules are not field-repairable and should *never* be opened outside of AR's Microelectronics Lab. The modules in these product lines have a security label on two sides of the modules between the housing and lid/cover. If the security label is removed and or cut, the warranty of the module will be voided.

Vacuum tubes in the 'L' series amplifiers, traveling-wave tubes in TWT amplifiers, and power heads will be free from defects in material and workmanship for a period of one (1) year.

Contact AR RF/Microwave Instrumentation for warranty information regarding items not listed.

Seller's sole responsibility in fulfilling these warranties shall be to repair or replace any goods which do not conform to the foregoing warranties or, at seller's option, to give buyer credit for defective goods. The warranty is valid only when used in the country specified at time of order. Warranty service must be obtained from the repair facility designated at that time. If warranty service is not available in the country where the equipment is to be used, it must be returned to AR RF/Microwave Instrumentation. Warranty service will be provided only for defective goods which are returned within the warranty period, freight costs prepaid to AR RF/Microwave Instrumentation or its designated repair facility.

There are no other warranties, express or implied, including any warranty of merchantability or fitness. Seller shall not be responsible for any incidental or consequential damages arising from any breach of warranty.

No person other than an officer of Amplifier Research Corporation, has any authority to bind seller to any affirmation, representation or warranty except as specifically included in the preceding terms and conditions.

