

ATU-HP-TT

FEATURES PRELIMINARY ISSUE 1.3
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3000 W High Power NAVTEX Automatic Antenna Tuning Unit

Remote Monitoring (when used in conjunction with a Nautel Vector Navtex series transmitter)

RF Antenna Current

Resistive match servo inhibited

Inductive tune servo inhibited

Resistive match status/ limit

Inductive tune status/ limit

Local/remote

ATU temperature

Fan fail

Remote Control (when used in conjunction with a Nautel Vector Navtex series transmitter)

Resistive match servo inhibit

Inductive tune servo inhibit

Increase/decrease resistive match

Increase/decrease inductive tune

Metering

Forward power

Reflected power

Antenna current

Servo Inhibit

Automatic resistive match and reactive tuning servos inhibited when Vector Navtex transmitter RF output is not enabled

Local Control

Resistive match servo inhibit

Inductive tune servo inhibit

Increase/decrease resistive match

Increase/decrease inductive tune

Set-up mode

Transmitter On/Off

Local Monitoring

Resistive match servo inhibited

Inductive tune servo inhibited

Resistive match status/limit

Inductive tune status/limit

Set-up mode

Transmitter Off

Local/Remote

Fan fail

CPU ok

DC supply status

Equipment Interface

Remote control/monitoring with RS485 serial communication to the Nautel Vector Navtex Series transmitter (DB-9 connector with 5 connections used and additionally available on terminal block).

AC Input - (Terminal Block)

RF Input - (N Connector)

Antenna feeder connection
(Mechanical Bolt)

Antenna system ground
(Mechanical Bolt)

Shipping

Export packed in wooden crate

All assemblies to remain in ATU for shipment

ISTA Procedure 1B compliant

Options

Sunshield to reduce thermal load

Extended warranty

Adjustable external series resistance of 0.8 to 5.6 ohms in seven fixed increments provides additional antenna bandwidth adjustment (this option includes the sunshield).

CSA inspection



3000 W High Power NAV-TEX Automatic Antenna Tuning Unit

Maximum Carrier Power
3,000 W

Maximum Reflected Power after Auto Resistive Match and Reactive Tune
<3 W at carrier frequency

Frequency Range
Dual Channel 490 kHz + 518 kHz

Automatic Tuning Range
±5% antenna capacity variation

Input Impedance
50 ohms nominal

Channel Change Time
Not exceeding 3 seconds (includes Vector Navtex transmitter tuning time)

Power Requirements
115 V/230 V ac single phase ± 15%, 50 Hz/
60 Hz, 35 VA maximum

Automatic Resistive Matching Range
0.5 R-2 R where R equals antenna system series resistance (including ATU).

Maximum Series Loss Resistance
Not greater than 1/1000 x antenna reactance

Antenna System Resistance
2 to 39 ohms.

Antenna Capacitance
350-3400 pF

MTBF
Greater than or equal to 56,405 hours using MIL HDBK 217E calculation methods.

Field data for Nautel LF/MF systems indicate MTBF in excess of 3,000,000 hours

MTTR
Less than or equal to 30 minutes at PWB/module level

Cooling and Heat Flushing
Cooled by radiation from the enclosure. Internally circulated air at approximately 220 cu. ft./min when internal ATU temperature is greater than 60°C.

Altitude
Up to 3048 m (10,000 ft.)

Environmental Limits
Operating:
-50°C to +55°C
0% to 100% Relative Humidity
Storage:
-50°C to +100°C
0% to 100% relative Humidity

Climate
Any – including tropical

Dimensions (without external series resistor and/or sunshield)
Wall Mount
97.64 cm H x 123.83 cm W x 67.8 cm D
(38.44 H x 48.75 W x 26.69 D in.)

Base Mount
103.35 cm H x 123.83 cm W x 62.4 cm D
(40.69 H x 48.75 W x 24.56 D in.)

Dimensions (with external series resistor and/or sunshield)
Wall Mount
112.78 cm H x 139.9 cm W x 83 cm D
(44.44 H x 53.5 W x 32.69 D in.)

Base Mount
118.6 cm H x 135.9 cm W x 81.9 cm D
(46.69 H x 53.5 W x 32.25 D in.)

Weight (without external series resistor and/or sunshield)
50.3 kg (111 lbs) unpacked
93 kg (205 lbs) packed

Weight (with external series resistor and/or sunshield)
65.4 kg (144 lbs) unpacked
138 kg (304 lbs) packed

Notes: Specifications established at rated power unless otherwise noted. All measurements at standard antenna load; AC input at nominal voltage.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.