

ATU 3100 HVST

HF Antenna Tuning Unit



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FEATURES

RF input power	1 000 Watts CW and PEP
Tuning	4000 frequencies memory Fast tuning algorithm (1 sec typ.) 25 msec tuning from memory BITE capability Silent tune capability
Bypass function	Available
Chassis	Pressurized waterproof aluminium case with cooling ribs

GENERAL

The ATU 3100 HVST is a 1000 Watt high quality remotely controlled antenna coupler, capable of providing efficient matching of whip antennas 23 ft. and longer (approx. length 7 m to 11 m) or wire antennas between approximately 49 ft. and 151 ft. (15 m to 45 m) to a 50 Ω transmission line, over the frequency range of 1.5 MHz to 30 MHz. In addition, the coupler may be used as a 'line flattener' to correct the VSWR of resonant antennas.

The coupler is controlled via the user menu of the ERX 3003 exciter/receiver of an HMK Series 3003 transceiver or transmitter.



Hagenuk Marinekommunikation

A company of the ATLAS ELEKTRONIK Group

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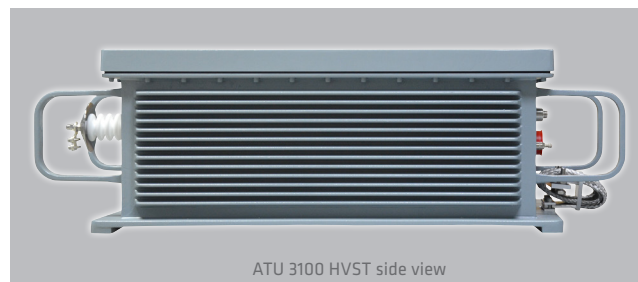
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TECHNICAL DATA

Frequency range	1.5 MHz – 30 MHz
RF input power	Up to 1000 Watts (+1 dB) CW / PEP
Tuning memory	4000 channels
Input impedance	50 Ω
Tuning accuracy	VSWR 1.5 or better on 99.5 % of all operating frequencies
Tuning time	Typ. 4 sec (10 sec max.), 25 msec from memory
Tuning power	Min. 25 W single tone at ATU input port
Tuneable antennas	> 7 m whip: 3 MHz – 30 MHz > 11 m whip: 1.5 MHz to 2 MHz: - 1000 W PEP/500 W CW 2 MHz to 30 MHz: - 1000 W PEP/CW Long wire: 15 m – 45 m with long wire adapter
Circuit protection	RF input spark gap Control line protection against transient and lightning surge Internal spark gap at antenna insulator
Duty cycle	Continuous
RF connector	N-type
Interfaces	Antenna Power supply & control (RS 422 with 9.6 kBit/s)
Cable length between TRX and ATU	Up to 66 m possible with standard cable; can be extended up to 119 m with special cable
Power supply (from TRX 3100)	28 VDC / max. 5 A during tuning, max. 2 A in idle mode

Environmental specifications

Storage temp.	-40 °C to +85 °C, acc. to MIL-STD-810H, method 501.7 procedure I, method 502.7 procedure I
Humidity	50 °C, 95 % RH, acc. to MIL-STD-810H, method 507.6, procedure II
Functional shock, general vibration, environmental vibration	The product design is in service on several vessel types since more than 15 years without any problems, even in arctic regions
Pressure	Ati 4.572 m (15.000 ft), acc. to MIL-STD-810H, method 500.6 procedure
EMC	MIL-STD-461G, procedure CS114, CS115, CS116, RE101, RS101, RS103 IEC 60945:2002-08, chapter 9.3, 10.3, 10.4, 10.5, 10.6, 10.9
Salt fog	MIL-STD-810H, method 509.7
Sand and dust	MIL-STD-810H, method 510.7, procedure I - dust
Solar radiation	MIL-STD-810H, method 505.7, procedure I - cycling, A2 basic hot (30 °C to 63 °C)
Enclosure	IPX6 acc. to IEC 60529:1989+A1:1999+A2:2013
Dimensions	
Height	292 mm (without shock mounts)
Depth	989 mm (without ground strap, incl. insulator)
Width	500 mm
Weight	Approx. 58 kg (without shock mounts)
MTBF	> 12.000 hours (normal operation)
MTTR	< 60 min



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