

## TMR 5300 HF DIGITAL TRANSMITTERS

THE TMR 5300 family of transmitters is part of Thales Communications' high performance Series 5000 HF range which has been designed to meet the requirements for civil and professional communications.

The TMR5300 1kW HF transmitter is part of the high performance Series 5000 integrated equipment range.



*TMR5300 1kW HF Transmitter*

Series 5000 is a fully integrated of transmitters, receivers and transceivers. It features a common low-level module architecture and a common control protocol which together with DSP technology, and a wide range of control options provides flexible and configurable solutions for ATC ground-air and other critical applications.

Associated radio gateway, adaptive controllers and high-speed data modems define the cost effective Series 5000 as a state of the art integrated communications system.



*TMR5300 DSP Exciter*

### KEY FEATURES

- High performance 125 W and 1 kW transmitters in a range configurations
- 1.5 to 29.999999 MHz in 1 Hz steps
- Multimode including high speed data transmission and ALE capabilities
- Blank or Operator Control front panel
- DSP technology and optional built-in high selectivity post-selector
- Wide range of remote control facilities
- HF Datalink (HFDL) Capability
- Comprehensive BITE
- Meets ITU and ICAO Annex 10 requirements

TMR 5300 transmitters are available in 125W and 1kW versions. They share a common module architecture and a common software protocol with the associated Series 5000 receivers and transceivers. This flexibility of design enables complex HF systems, with facilities for voice, fax and data file transfer, to be configured and controlled. Narrow band filtering and baseband signal processing are implemented using flexible and programmable digital signal processing techniques. TMR5300 transmitters are designed for output at full rated power in continuous duty applications.

## Technical Specifications

### GENERAL

#### Stored Channels

1000 user-programmable preset channels

#### Frequency Stability

0.33 ppm from 0° C to +35° C  
 2 ppm from 0° C to +50° C typical  
 External frequency standard input 0.1, 1, 5  
 or 10 MHz  
 Optional OCXO 0.01 ppm from 0° C to +50° C

#### Modes of Operation

USB, LSB, ISB, CW, AME

#### Tuning

Direct frequency/channel entry from keyboard  
 or keypad

#### Synthesizer Tune Time

<20 ms

#### Remote Control Interfaces

RS-232 or RS-485

#### Line Input/Output

Two independent channels, -20 dBm to +10 dBm,  
 600 Ohms balanced audio

#### Power Supply

AC 85-132 / 170-264 V, 47-63 Hz

#### Control Options

Local, Remote Computer Control

### EQUIPMENT CONFIGURATION

One or two independent half-duplex exciter/  
 receiver in one 4U chassis

### EXCITER

#### Frequency Range

1.5 MHz to 29.999999 MHz in 1 Hz steps

#### Output Power

50 mW +-1 dBPEP, 50 Ohms

#### Carrier Suppression

>60 dB

#### Unwanted Sideband Suppression

>60 dB

#### In-band SNR

>50 dB in 3 kHz bandwidth

#### Temperature Range

-5° C to +55° C operating, -40° C to +70° C storage

#### Weight

<18.5 kg (depending on the configuration)

#### Size

Height 178, width 483, depth 460mm

### POWER AMPLIFIERS

#### 1 kW Power Amplifier

RF Output 1000 W PEP/AVG  
 Frequency Range 1.5 MHz to 30 MHz  
 Forward Intermodulation Products 34 dB (below PEP) and better  
 38 dB in enhanced linearity mode  
 Harmonic Level Suppression -73 dBc  
 BITE To module level  
 Weight 56 kg  
 Size (H x W x D) 480 x 483 x 510 mm  
 Associated ACU 1 kW fast antenna tuning unit (AEA 179)

#### 125 W Power Amplifier

125 W PEP/AVG  
 1.5 MHz to 30 MHz  
 34 dB (below PEP) and better  
 -65 dBc  
 To module level  
 10 kg  
 178 x 483 x 510

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