

HIGH EFFICIENCY 1KW FM TRANSMITTER EM 1000 HE DIG PLUS

The 1KW FM transmitter **EM 1000 HE DIG PLUS** has been created by the OMB center of development for high efficiency transmitters. It consists on the FMA 1000 HE power amplifier with >73% efficiency and the EM 25 DIG PLUS transmitter. This high efficiency 1KW amplifier has an approximate consumption of 1300VA at 230Vac, so it pays for itself in a short period of time due to its low consumption. It is also available in Dual Drive version.



MAIN ADVANTAGES

- Typical AC efficiency >73% and typical RF efficiency of 84%.
- An amplifying module of 1KW with MOSFET technology.
- TFT screen and touch keyboard to control and to visualize operation parameters.
- Memory recording of events.
- Speed control of cooling fans according to temperature of power modules so as to optimize consumption and to decrease acoustic contamination.
- Advanced protection against load mismatches without transmission cuts and fast protection in case of excessive reflected power and/or excessive input power.
- Analog telemetry, digital remote control and telemetry RS232, remote control by opened/closed contacts
- Low pass filter, Mains EMI filter and internal single-phase transient suppressor.
- Automatic power reduction at night when used in combination with the EM 25 DIG PLUS transmitter.
- Automatic power reduction in case of high temperature, the equipment returns automatically to its rated power value when the temperature reaches back an average value.
- Automatic power reduction in case of excessive reflected power.
- Automatic voltage control for efficiency optimization.

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GENERAL CHARACTERISTICS

AMPLIFIER FMA 1000 HE		
FREQUENCY RANGE	87.5-108MHz	
INPUT RETURN LOSS	-20dB	
INPUT POWER	<15W	
OUTPUT POWER	1000W nominal, manual and automatic	
	adjustable	

POWER GAIN	19.2dB minimum
TOTAL EFFICIENCY	>73% typical
RF EFFICIENCY	84% typical
COOLING	Forced air, speed control of fans
HARMONICS LEVEL	-80dBc
INPUT/OUTPUT IMPEDANCE	50Ω
RF INPUT CONNECTOR	N(F)
RF OUTPUT CONNECTOR	7/16"or EIA 7/8"
RF MONITOR CONNECTOR	BNC(F)
POWER SUPPLY	230VAC ±15% → 195 ÷ 265VAC, 50/60Hz
CONSUMPTION	1300VA (@1000W output power)
PROTECTIONS	Reflected power, forward power, overdrive, and overcurrent in power modules. Smart temperature protection. Ultra-fast protection against reflected and input power. Real time registration of events. Exciter's inhibition
TELEMETRY AND REMOTE CONTROL	Analog telemetry (direct and reflected power measurements). Digital telemetry and remote control RS232. Remote control by opened/closed contacts
OPERATION TEMPERATURE	-5 to +40°C
WEIGHT	20Kg approx. (without rack)
DIMENSIONS	3 standard rack units of 19" (height), 650mm (depth)

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FREQUENCY RANGE FM MODULATION 75KHz (adjustable) peak deviation. Mono 180kF3E and Stereo 256kF3E AUDIO/MPX INPUT LEVEL AUDIO INPUT CONNECTORS AUXILIARY CHANNEL (RDS/SCA) INPUT LEVEL AUX. CHANNEL INPUT IMPEDANCE MODULATION DISTORTION 7.5KHz deviation: -12.5 to 3.5dBm and 2KHz deviation: -24 to -8dBm AUX. CHANNEL INPUT IMPEDANCE MODULATION DISTORTION 7.5Khz deviation: <0.05%, 0.02% typical; 2KHz deviation: <0.2%, 0.05% typical S/N MONO RATIO 30 to 20000Hz: >76dB, 86dB typical, CCIR: >75dB, 81dB typical S/N STEREO RATIO 30 to 20000Hz: >72dB, 77dB typical, CCIR: >68dB, 72dB typical AUDIO CHANNELS BANDWIDTH 30 to 15000Hz ±0.1dB PRE-EMPHASIS TIME CONSTANT Selectable, 25/50/75 microseconds RF NOMINAL OUTPUT POWER 25W TUNING STEPS OF TRANSMITTER 10/100KHz ALC OUTPUT POWER STABILITY ±3% SPURIOUS AND HARMONIC EMISSIONS RF OUTPUT IMPEDANCE RF INPUT POWER CONNECTOR RF SAMPLING CONNECTOR POWER SUPPLY 110-230Vac ±15% 50-60Hz CONSUMPTION 96VA (25W) OPERATION TEMPERATURE RANGE RELATIVE HUMIDITY Up to 95% without condensation DIMENSIONS 484x300x90mm, 2 standard rack units of 19" WEIGHT	FYCITER EM	25 DIG PLUS
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^{*} The images and/or technical specifications are subject to change without previous notice.