

DFM AC HPA 5K-20K

FM DIGITAL TRANSMITTER

Main Characteristics

- Direct-to-Channel RF frequency generation for superior RF and audio performance
- Output power up to 20kW
- The full complement of audio inputs - L&R analog, composite, mono analog and AES are concurrently available for primary and backup source assignment
- Ethernet connectivity links for programming and data transmission
- Universal power supply with power factor correction and high/low voltage detection
- External frequency reference input for locking to GPS other external source
- A basic RDS Encoder is included, the connection for SCA or RDS encoder are provided.
- RF output low-pass filter is included for use on air
- LCD menu system eases setup, operation, maintenance
- 1 ASI input (PID Filtering) - optional



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GENERAL

RF Power Output:	Up to 20kW
Output Impedance:	50 ohms nominal
VSWR:	Rated power into 1.5:1 VSWR. Open and short circuit protected at all phase angles
Frequency Range:	87.5MHz to 108MHz; 100kHz increments, 50kHz-10kHz when specified
Frequency Stability:	Internal VCXO: +/-1Hz, -10° C to +50° C, External Output: +/- accuracy of reference source
Audio Inputs:	AES/EBU (wire), L&R analog, MPX, SCA/RBDS/RDS. internal RBDS/RDS generator Internal stereo encoder generator
Modulation Type:	Digitally generated FM Digital direct Up-conversion
Modulation Capability:	Up to 300kHz
Asynchronous AM S/N Ratio:	80dB below rated power reference carrier with 100% AM modulation at 400Hz, 75usec. de-emphasis with no FM modulation present
Synchronous AM S/N Ratio:	60dB below rated power reference carrier with 100% AM modulation at 400Hz, 75usec. de-emphasis with FM modulation +/- 75kHz at 400Hz
Spurious and Harmonic:	85dB or better; low pass filter standard

AES/EBU

Operational Modes:	Stereo, mono
Input Level:	-24- 0 dBfs for 100% modulation; typ. -6dBfs
Impedance:	110 ohms
Connector:	BNC
Amplitude Response:	+/- 0.01dB, 20Hz to 15kHz
THD:	0.006% or better
S/N Ratio:	80dB or better below 100% modulation @ 400Hz
Stereo Separation:	80dB, 20Hz to 15kHz
Linear Crosstalk:	80dB below 100% modulation; 20Hz to 15kHz; main to sub and sub to main
Pilot Stability:	+/- 0.1Hz, 0 degrees C to +50 degrees C

MECHANICAL	Dimensions (WxHxD)	Weight (approx.)
	mm 600x2100x800	Kg 268

AC MAINS

AC Input:	Three phase : 380 VAC +N; 50-60Hz
Power Consumption	6.6kVA @ 5.0kW 26.4kVA @ 20.0kW
Power Factor:	> 0.97
Surge Protection:	Tested with IEEE C62.41-1991 recommended waveforms for location category B3 and IEC 801-4 standard waveforms for severity level 4
Regulatory:	FCC; DOC; CE; CCIR; IEC 215 Safety

ENVIRONMENTAL

Temperature Range:	-10° C to +50° C
Altitude:	10,000 ft (3048 m)
Humidity:	95% maximum, non-condensing

MPX

Input Level:	0-12 dBu typ. 6dBu for 100% modulation
Impedance:	Unbalanced: 2k ohms
Connector:	BNC
Amplitude Response:	+/- 0.02dB; 20Hz to 53kHz; 0.1dB; 53kHz to 99kHz
Phase Response:	+/- 0.1 degree from linear phase; 53kHz to 100kHz
THD:	0.02% or less
FM S/N Ratio:	80dB below 100% modulation @ 400Hz

STEREO/MONO Analog Input

Operational Modes:	Stereo, Mono (L only)
Input Level:	0-12 dBu typ. 6dBu for 100% modulation
Impedance:	600 ohms or 2k ohms
Connector:	Mini XLR
Amplitude Response:	+/- 0.2dB; 20Hz to 15kHz
THD:	0.02% or less; 20Hz to 15kHz
Linear Crosstalk:	80dB below 100% modulation; 20Hz to 15kHz;
FM S/N Ratio:	70dB below 100% modulation @ 400Hz