

### 4MX 50 - Technical Specifications : Technical Specifications

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#### RF SPECS

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**Output Power:****Range:**

250 W to 55.0 kW

**Accuracy:**

±2%

**Efficiency:**

87% at 50 kW RF output; 88% typical

**VSWR:**

1.2:1 or better at rated power

**Impedance:**

50 Ohm

**Frequency:****Range:**

531 kHz to 1700 kHz, supplied on frequency, as ordered; 9 kHz or 10 kHz channel spacing

**Stability:**

±2.5ppm, 0 to 50° C

**Spurious & Harmonic:**

80 dB; Meets or exceeds FCC and other world standards

**Modulation:****Type:**

Patented 4M Modulation

**Capabilities:**

>145% peak positive capability at 55 kW output power into 50 Ohm load

**Carrier Shift:**

<1% at 95% negative modulation at 1 kHz

**Regulatory:**

Meets or exceeds FCC and DOC technical requirements, meets ENG0215 safety requirements

#### AM AUDIO SPECS (ALL AUDIO SPECIFICATIONS ARE AT RATED POWER)

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**Analog:****Modes:**

Mono, HD Radio with external ASi 10

**Connector Type:**

Terminal block

**Input Level:**

-10 dBm to +10 dBm; electronically adjustable

**Impedance:**

600 Ohm, balanced

**Amplitude Response:**

+0.1/-0.25 dB; 20 Hz to 10 kHz

**THD + Noise:**

0.5% or less; 20 Hz to 10 kHz

**Intermodulation Distortion:**

0.5% or less; 1:1 ratio

**Transient Intermodulation Distortion:**

0.5% or less; 4:1 ratio

**Incidental Phase Modulation:**

# Broadcast Electronics

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40 dB @ 1 kHz

**Signal to Noise Ratio:**

-70 dB or better

**Squarewave Overshoot:**

0.1% or less at 400 Hz

**Squarewave Tilt:**

0.5% or less at 40 Hz

**AES:**

**Modes:**

Mono L+R, HD Radio with external ASi 10

**Connector Type:**

Terminal block

**Input Level:**

0 dBFS to -20 dBFS; electronically adjustable

**Impedance:**

110 Ohm, balanced

**Amplitude Response:**

+0.1/-0.25 dB; 20 Hz to 10 kHz

**THD + Noise:**

0.5% or less; 20 hz to 10 kHz

**Intermodulation Distortion:**

0.5% or less; 1:1 ratio

**Transient Intermodulation Distortion:**

0.5% or less; 4:1 ratio

**Incidental Phase Modulation:**

40 dB @ 1kHz

**Signal to Noise Ratio:**

-70 dB or better

**Squarewave Overshoot:**

0.1% or less at 400 Hz

**Squarewave Tilt:**

0.5% or less at 40 Hz

## MECHANICAL & PHYSICAL

**Size/Unpacked:**

45" W x 35" D x 87" H

**Weight/Unpacked:**

1115 lbs (506 kg)

**Cooling Air Requirements:**

Filtered air inlet at lower rear of cabinet, 3000 ft<sup>3</sup>/min (85.0 m<sup>3</sup>/min)

**Air Outlet:**

Air exhaust at top of cabinet

**Heat Dissipation:**

**@ 55 kW, 0% modulation:**

6.8 kW (23,208 BTU/hr)

**@ 55 kW, 100% tone modulation:**

10.2 kW (34,813 BTU/hr)

**Air Conditioning Sizing:**

**@ 55 kW, 100% Tone Modulation:**

2.90 ton

**RF Output Connector:**

3-1/8" EIA Flange, 50 Ohm



### ENVIRONMENTAL

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**Temperature:**

0° to 50° C

**Altitude:**

10,000 ft (3,048 M)

**Humidity:**

0% to 95% (non-condensing)

### ELECTRICAL

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**AC Input Voltage:****3-Phase Closed Delta:**

230 VAC (192-265 VAC), 50/60 Hz

**3-Phase WYE 3 Wire:**

230 VAC (192-265 VAC), 50/60 Hz

**3-Phase WYE 4 Wire:**

400 VAC (332-460 VAC), 50/60 Hz

**Disconnect Size****@ 230 VAC, 55 kW, 100% Tone Modulation:**

250 A (see Installation Notes Figure 1)

**@ 400 VAC, 55 kW, 100% Tone Modulation:**

150 A (see Installation Notes Figure 1)

**AC Wire Size:****@ 230 VAC, 55 kW, 100% Tone Modulation:**

250 KCMIL - 350 KCMIL (see Installation Notes Figure 1)

**@ 400 VAC, 55 kW, 100% Tone Modulation:**

2/0 AWG - 3/0 AWG (see Installation Notes Figure 1)

**Current Draw:****@ 230 VAC (192-265 VAC) input, 55 kW, 100% Tone Modulation:**

240 A per phase (see Installation Notes Figure 1)

**@ 400 VAC (332-460 VAC) input, 55 kW, 100% Tone Modulation:**

138 A per phase (see Installation Notes Figure 1)

**AC Power Consumption:****@ 50 kW RF Output Power, 0% Modulation:**

56.8 kW

**@ 75 kW RF Output Power, 100% Tone Modulation:**

85.2 kW

**Power Factor:**

0.99 or better at full load

**Surge Protection:**

External surge suppressor supplied

### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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