# 4MX 50 - Technical Specifications : Technical Specifications

## RF SPECS

**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)

**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**:

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 ft³/min (85.0 m³/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

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## ENVIRONMENTAL

**Temperature**:
0° to 50° C
**Altitude**:
10,000 ft (3,048 M)
**Humidity**:
0% to 95% (non-condensing)

## ELECTRICAL

**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 suppresor supplied

## ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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