



General Description

The MT 4 four-channel distribution transformer is packaged in a space saving 1U, 19-inch rack-mount tray. The fully isolated, high performance toroid transformers provide flat frequency response within 1 dB from 40 Hz to 20 kHz. Each transformer is designed for 8Ω 100 watt input, and 100 watt 70 volt or 100 watt 100 volt output. The recommended load for the 70 volt tap is 50Ω. The recommended load for the 100 volt tap is 100Ω. Convenient Euroblock connectors are provided on the rear of the chassis.

The MT 4 comes ready to use with four mounted transformers and strain-relief Euro connectors. The tray with Euro connectors (model KT 4) and individual transformers with mounting hardware (model TF 4) are available separately, allowing the installer to build a tray with just the number of channels required. (see the mounting in Figure 4, next page).

While the MT 4 was designed for use with the Rane MA 4 amplifier, it is ideal for the MA 6S amplifier, or any application where high performance 100 watt, 100 / 70 volt, isolated distribution transformers are required.

For 25 volt audio distribution systems, the TF 4 can be used by connecting the 25V loads between its 70V and 100V taps (green and yellow wires). Thermal resistance of the TF 4 is only 1C/W and is lower when mounted in a MT 4 chassis.

Other creative combinations are possible. For example, the yellow/green pair can drive 8Ω loads near to the amplifier, with the red/yellow pair being simultaneously used for a 70 V system.

Depending on loading of the 70 V system, this arrangement presents an impedance between 4 and 8Ω to the amplifier.

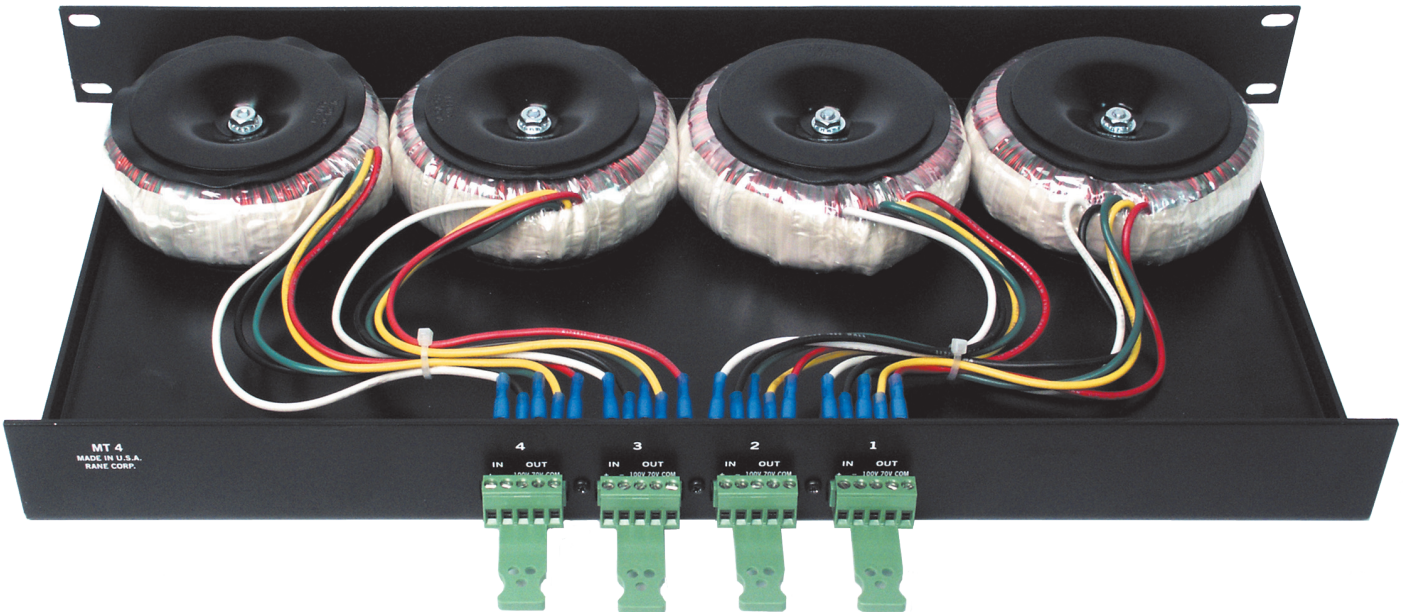
TF 4 can be used at power ratings much higher than 100W, provided that the low-cut frequency is moved up accordingly. Since voltage capability doubles with each octave, power capability quadruples each octave. See the RaneNote "Constant-Voltage Audio Distribution Systems: 25, 70.7 & 100 Volts."

Features

- Four channels, 100 watts, 100 / 70 volt
- Input 8Ω, 100 watts
- Euroblock strain-relief connectors
- 1U, 19 inch rackmount tray
- Frequency response 40 Hz to 20 kHz +0, -1 dB
- Separate mounting tray and individual transformers available

Options

- MT 4 rackmount tray with four transformers (shown below)
- KT 4 rackmount tray only
- TF 4 individual transformers

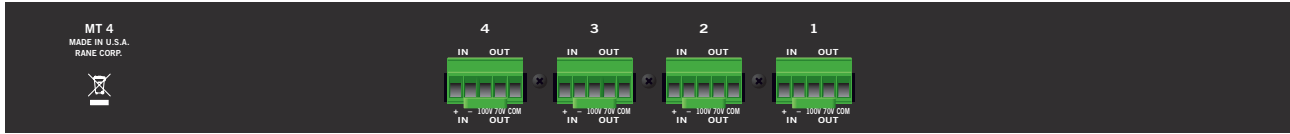


MT 4

MULTICHANNEL TRANSFORMER



Rear Panel



Parameter	Specification	Limit	Units	Conditions/Comments
Transformer Rating	100		Watts	Maximum average power
.....Connectors	30		Watts	Maximum continuous average power
.....Chassis	Chassis mounted Euroblock			Strain relief
Input voltage	1U rack-mount tray			
Output Tap 1: Voltage	28.28		Vrms	100 watts / 8Ω
Output Tap 2: Voltage	70.7		Vrms	50Ω load
Frequency Response	100		Vrms	100Ω load
THD	40 to 20 kHz	+0, -1	dB	100 watts with specified load
THD	0.1	typ	%	1 kHz, 100 watts
THD	0.2	typ	%	40 Hz to 20 kHz, 100 watts
Unit: Panel Construction	12 gauge steel			
.....Size: 1U	1.75"H x 19"W x 9"D			4.45 cm x 48.26 cm x 22.86 cm
.....Weight	18 lb			8.2 kg

TF 4 Transformer, 100V / 100W

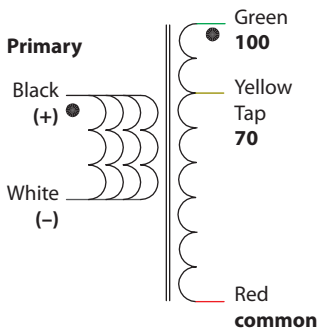


Figure 1. Schematic

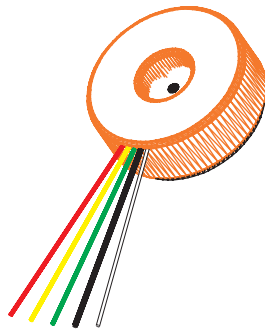


Figure 2. Perspective

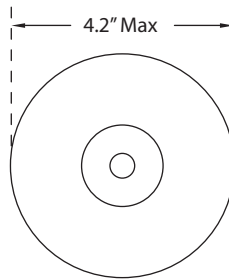


Figure 3. Top View

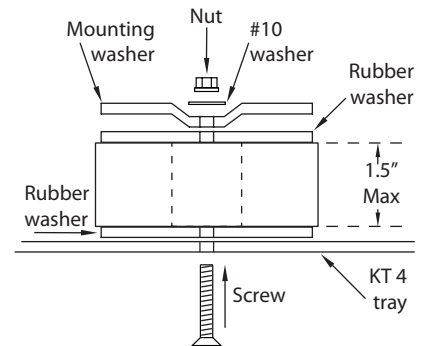


Figure 4. Mounting, Side View

Insulation & Flammability

1. Insulation materials compatible with surface operating temperatures > 60°C.
2. All materials flammability rated UL94V0.

Electrical

1. Primary DC resistance: Black-White < 500 mΩ
2. Secondary DC resistance: Red-Yellow < 4Ω, Red-Green < 6Ω.
3. Magnetizing Inductance: Primary: > 1H (1V, 100 Hz)
4. Leakage Inductance: Primary (secondaries shorted): 20 mH.

Performance Specifications

1. Max Output Power: 100 Vrms @ 1 Arms.
2. Average Input Power (for thermal dissipation): 30W.
3. Maximum Power Loss: <20W @ 100W Output (8Ω load).

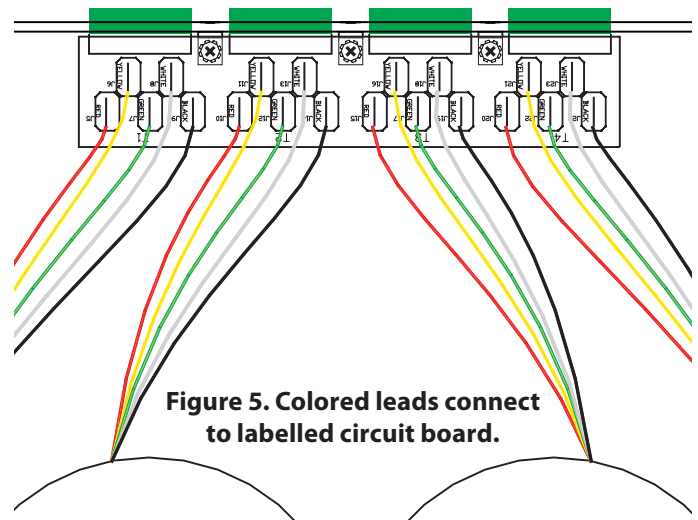


Figure 5. Colored leads connect to labelled circuit board.