

DESCRIPTION:

The MBT-2 is a carefully designed, custom-built 1:1:1 microphone bridging transformer whose characteristics are optimized for use with balanced low-impedance microphones or similar sources. Special winding techniques and a high-permeability (80% nickel) core lamination preserve full frequency response while minimizing signal losses and other "loading" effects. Mu metal can and separate electrostatic shields for primary (input) and each secondary (output) winding reduce capacitive coupling of ground-borne electrical noise between main, stage monitor and recording or broadcast feed mixers, eliminating annoying 60-Hz hum and buzz. The source impedance of the MBT-2 is very similar to that of a low-impedance microphone to ensure proper matching to the input circuitry of the mixers. The result is clean transient response (minimal overshoot or ringing) and low distortion even at low frequencies and high input levels.

PHYSICAL CHARACTERISTICS

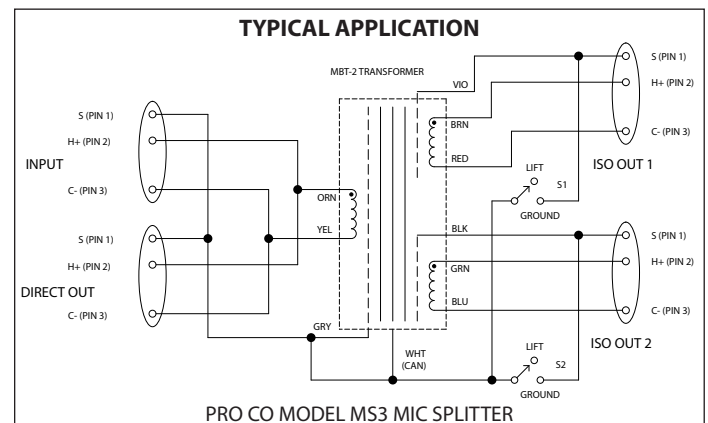
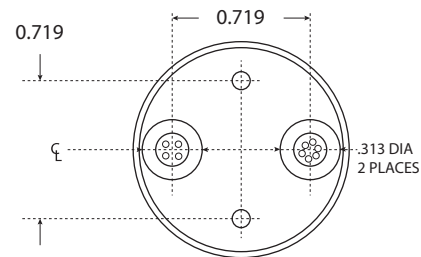
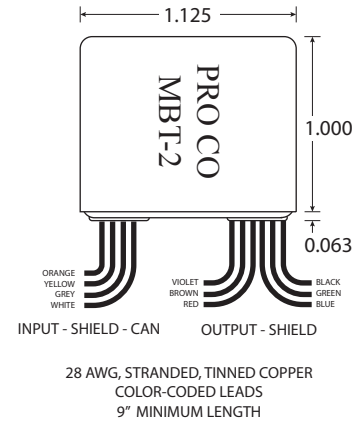
- PACKAGE:** MU metal can
TERMINATION: 9" (228mm) 28 AWG tinned copper, color-coded leads
DIMENSIONS: 1.125" L x 1.125" W x 1.063" H
 (28.575 L x 28.575 W x 27.0 H)
MOUNTING: 2 holes, 0.09375" (2.38mm) dia, 0.7185" (18.25mm) centers

Note: Pro Co recommends using only #4 Type B self-tapping screws to mount transformer through mounting holes. Allow no more than 0.15" penetration into the transformer housing.

TYPICAL PERFORMANCE:

All measurements made with 150 ohm source and 1.0 kohm load to simulate typical "real world" microphone and mic preamps. 0 dBv ref. = .775 volt.

| | ONE SECONDARY LOADED | BOTH SECONDARIES LOADED |
|--|--|--|
| VOLTAGE LOSS: | < 1.2 dB | < 2.5 dB @ 1.0 kHz. |
| INPUT IMPEDANCE: | > 1070 ohm > 1090 ohm | > 570 ohm @ 1.0 kHz. > 570 ohm @ 10 kHz. |
| SECONDARY SOURCE IMPEDANCE: | < 285 ohm < 310 ohm | < 255 ohm @ 1.0 kHz. < 270 ohm @ 10 kHz. |
| TOTAL HARMONIC DISTORTION: | < .03% 20 Hz-20 kHz @ -30 dBv output. < .1% 30 Hz-20 kHz @ -15 dBv output. < .25% 20 Hz-20 kHz @ -15 dBv output. | |
| MAX INPUT LEVEL FOR 1% THD: | 0 dBv @ 20 Hz. +4 dBv @ 30 Hz. +8 dBv @ 50 Hz. | |
| FREQUENCY RESPONSE: | -0.5 dB -0.25 dB -3.0 dB @ 120 kHz | -0.25 dB @ 20 Hz -0.10 dB @ 20 kHz -3.0 dB @ 140 kHz |
| PHASE RESPONSE (@20 kHz): | < -18 degrees | < -13 degrees |
| RISE TIME (2.0 kHz square wave, 10%-90%): | < 3.0 μ Sec. | < 2.4 μ Sec. |
| OVERSHOOT: | < 1% | < 3% |
| COMMON-MODE VOLTAGE (MAXIMUM): | > 1500V RMS | |
| COMMON MODE REJECTION RATIO: | > 80 dB @ 1.0 kHz | |



GENERAL CHARACTERISTICS

- TURNS RATIO:** 1:1:1 (2 secondaries)
IMPEDANCE RATIO: 150:150:150 ohm
PRIMARY SOURCE IMPEDANCE: 1.0 kohm (typical microphone)
SECONDARY LOAD IMPEDANCE: 1.0 kohm (typical microphone preamp)
FARADAY SHIELD: 3 shields with separate leads
CORE MATERIAL: 80% nickel alloy
MAXIMUM INPUT LEVEL AT 20 HZ: 0 dBv (ref. = 0.775 v)