QUALITY MAGNETICS SINCE 1979

CM-2436

Telecommunications Line Voltage Sense Transformer
1 : 1

- **Very high impedance line voltage sensing transformer**
- **Excellent Bandwidth +/- 0.1 dBu 20Hz - 50kHz**
- **Excellent CMRR: 115 dB at 1kHz**
- **Very good THD**
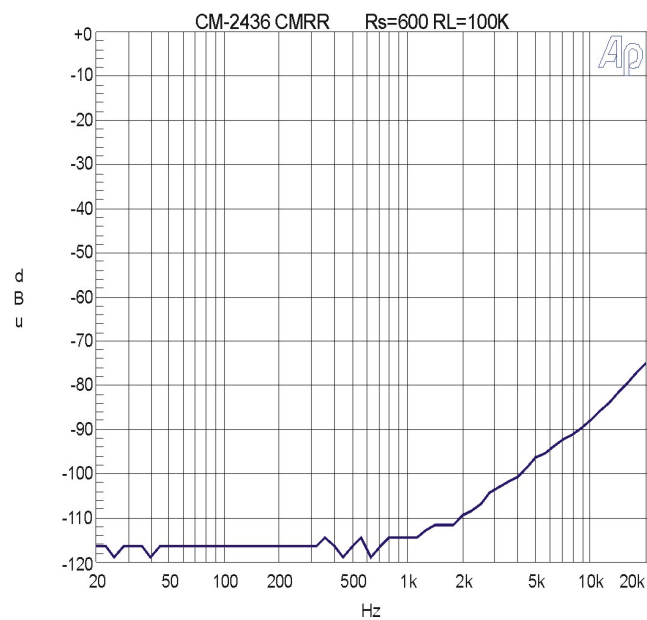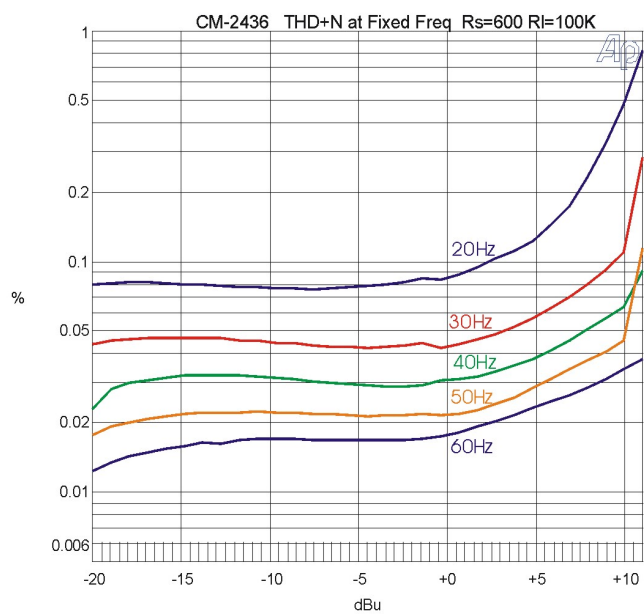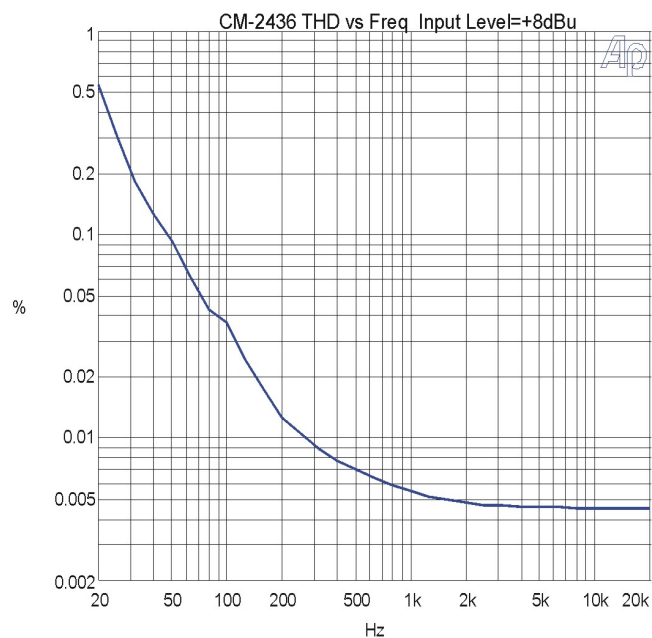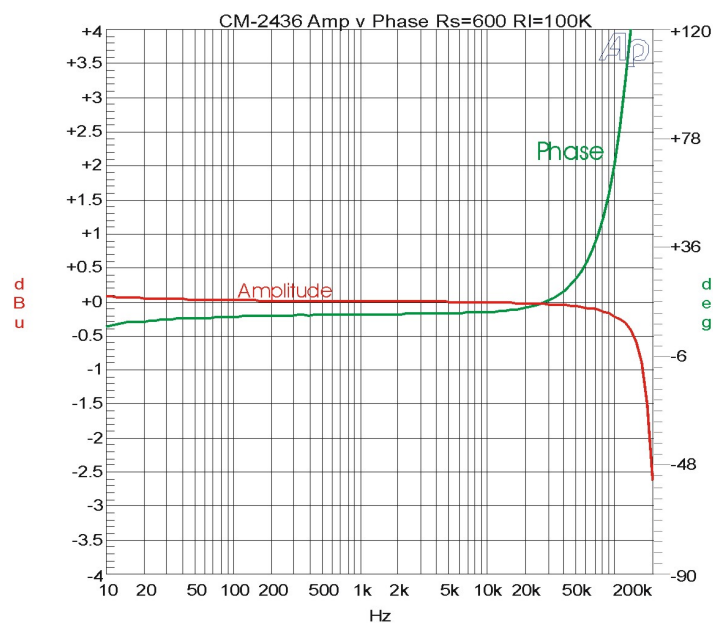- **Hum-bucking construction**

The CineMag CM-2436 telecommunications line voltage sensing transformer was developed to allow precision monitoring of 600 Ohm line voltages. It has uncompromising CMRR and bandwidth. Being hum-bucking as well as being housed in a mu-metal can, it is virtually immune to stray magnetic field pickup which can compromise signal integrity. It provides precise amplitude and phase response throughout the telco bandwidth.
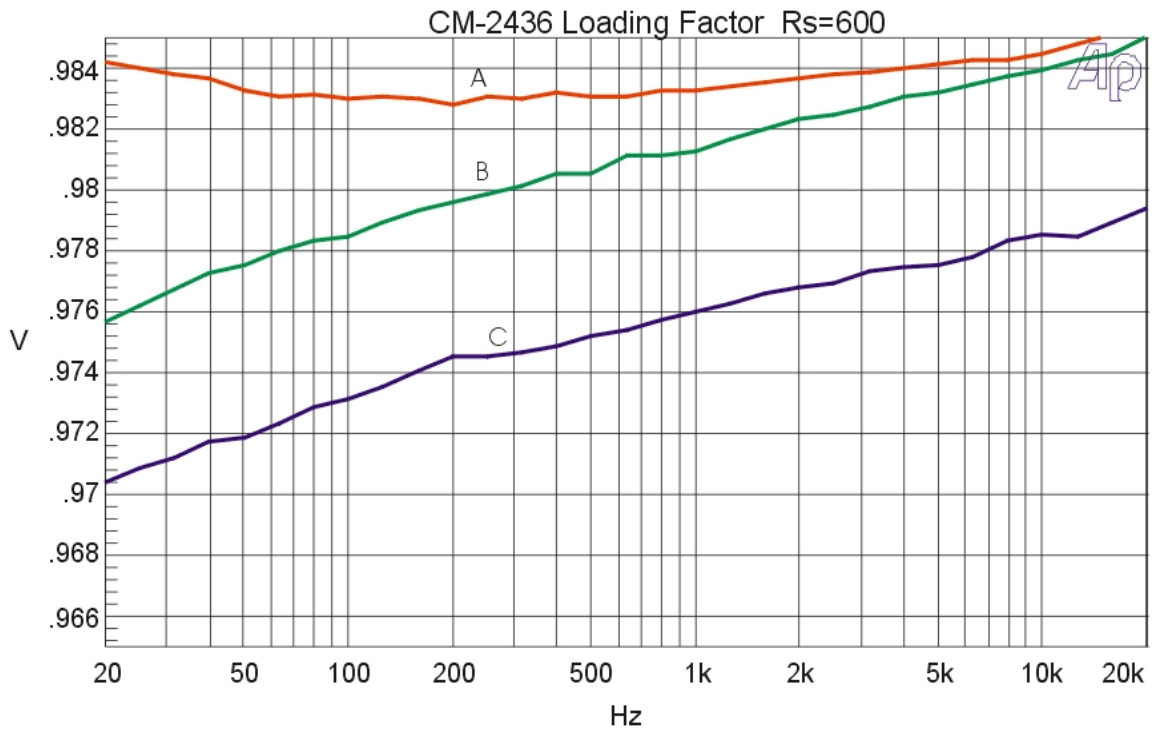
The CM-2436 only minimally perturbs the line being monitored. When used as suggested with a 100K load resistor on the secondary, the typical reflected impedance on the primary is greater than 99K.

Please refer to the CM-2411 which was designed along with this transformer to monitor the current waveform on the telecommunications line being tested.
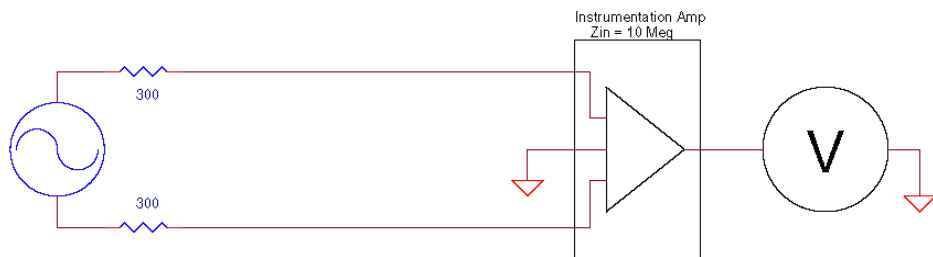
CM-2436

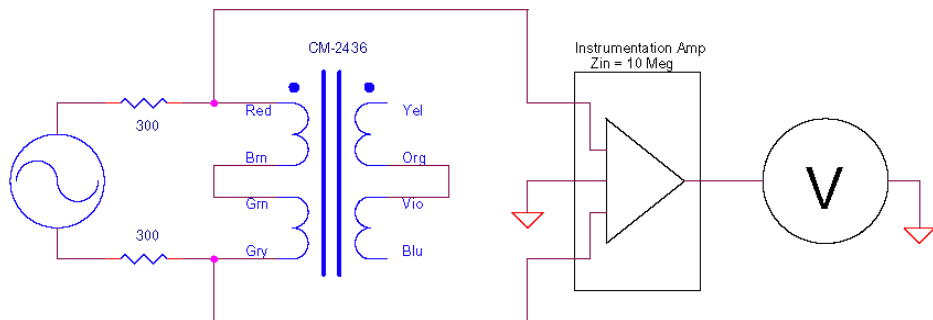| Parameter	Conditions	Typ
Turns Ratio		1 : 1
Voltage Gain	1 kHz, -20 dBu 150Ω input, 100K secondary load impedance	<0.007 dBu
Distortion (THD+N%)	1 kHz, +8 dBu Test circuit 1 50 Hz, +0 dBu Test circuit 1	0.006% 0.025%
Max 20 Hz input level	1.0% THD; Test Circuit 1	+12 dB
Response, ref 1 kHz	20 Hz Test Circuit 1 20 kHz Test Circuit 1 -3 dB	-0.5 dB +0.01 dB >200 kHz
Phase Shift at 20 Hz Phase Shift at 20 kHz	Referenced to source generator Test Circuit 1	-0.03° -0.01°
CMRR	60 Hz Test Circuit 2 per IEE Std 389-1996 ¶19 1 kHz Test Circuit 2 per IEE Std 389-1996 ¶19	>115 dB >115 dB
Operating Temp Range	Operation and storage	0° C Min 70° C Max
Max Soldering Temp (p.c.)	5 Seconds	270°C Max

9050 Independence Ave. Canoga Park, California 91304   ☎(818) 993-4644   ✉ (818) 993-4604   http://www.cinemag.biz

REV A

CM-2436 Amp v Phase Rs=600 RI=100K

Ap

Phase

Amplitude

dBu

deg

Hz

CM-2436 THD vs Freq Input Level=+8dBu

Ap

%

Hz

CM-2436   THD+N at Fixed Freq Rs=600 RI=100K

Ap

20Hz

30Hz

40Hz

50Hz

60Hz

%

dBu

CM-2436 CMRR   Rs=600 RL=100K

Ap

dBu

Hz

CM-2436 Loading Factor Rs=600

A

B

C

Test Circuit 1

CM-2436

300

10MFD

300

Red · Brn · Grn · Gry

Yel · Org · Vio · Blu

100K

OUT Hi

OUT Lo

Test Circuit 2

CM-2436

300

10MFD

300

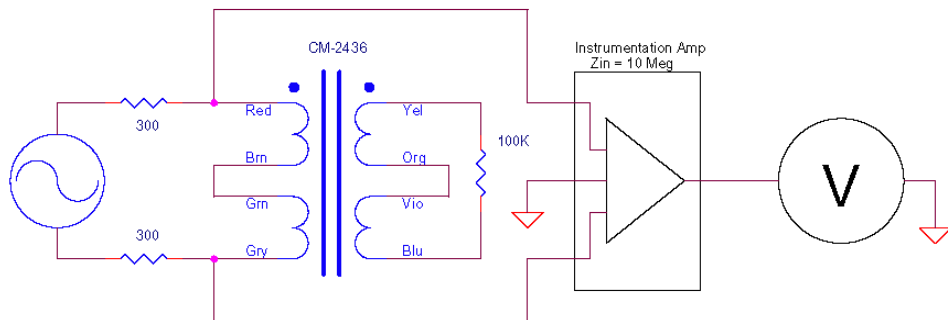Red · Brn · Grn · Gry

Yel · Org · Vio · Blu

100K

OUT Hi

OUT Lo
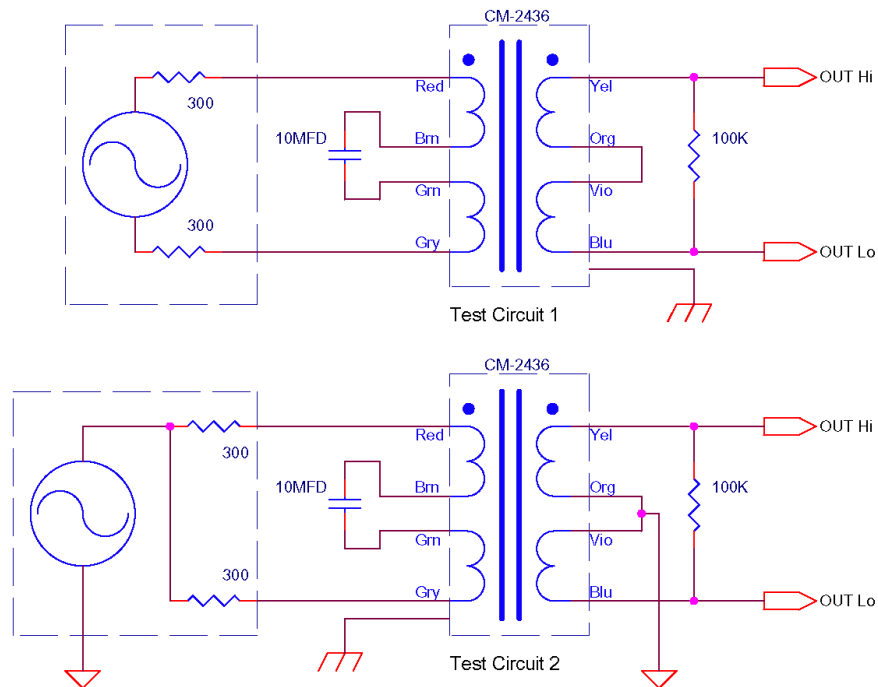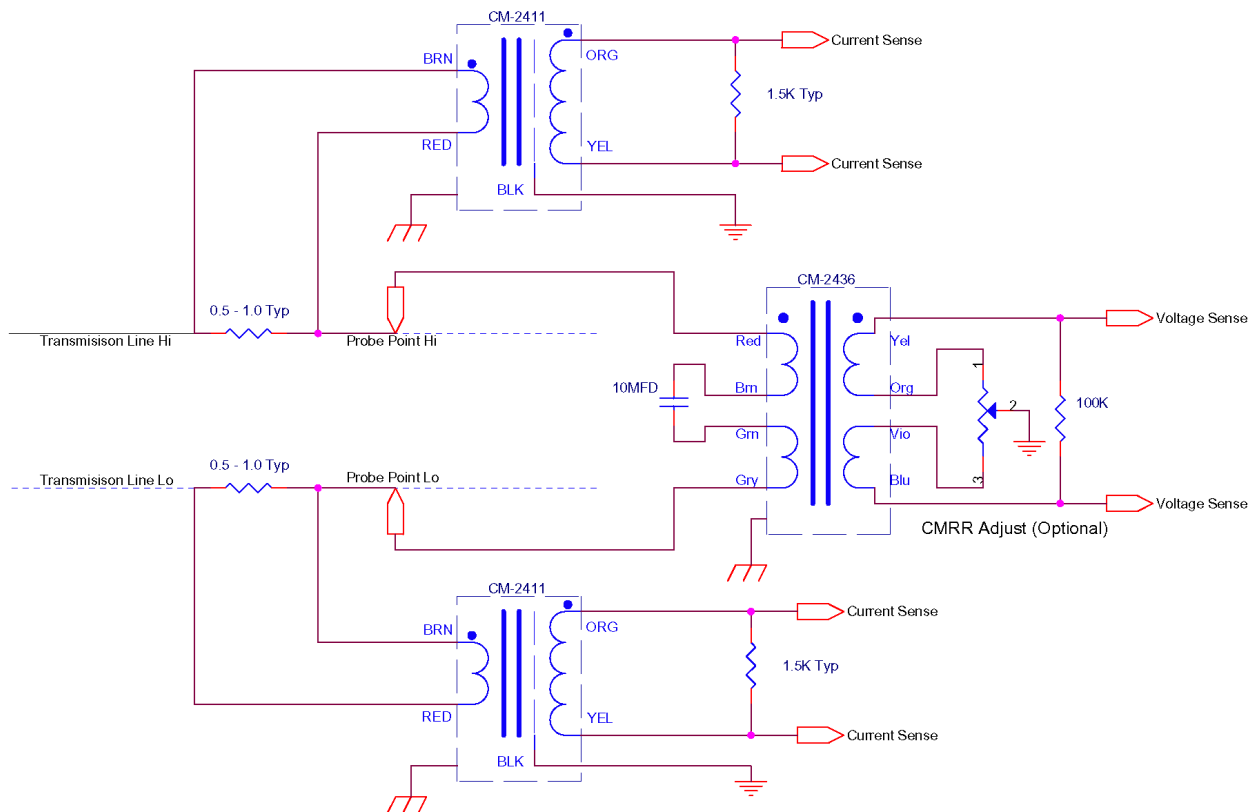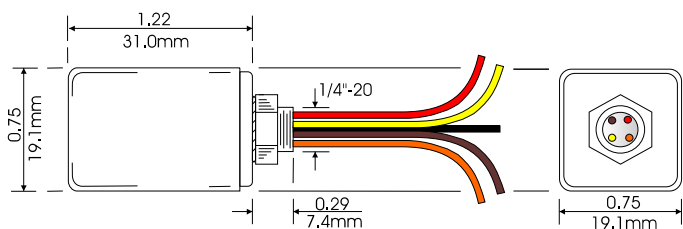
NOTES:

1.   All graphs generated from one (1) randomly chosen device. No statistical averaging or weighting. Data from one swee p.

CM-2411

BRN · RED · BLK

ORG · YEL

1.5K Typ

Current Sense

Current Sense

0.5 - 1.0 Typ

Transmisison Line Hi

Probe Point Hi

CM-2436

Red · Brn · Grn · Gry

Yel · Org · Vio · Blu

10MFD

Voltage Sense

100K

CMRR Adjust (Optional)

Voltage Sense

0.5 - 1.0 Typ

Transmisison Line Lo

Probe Point Lo

CM-2411

BRN · RED · BLK

ORG · YEL

1.5K Typ

Current Sense

Current Sense

Voltage & Current Monitor

1.22
31.0mm

0.75
19.1mm

1/4"-20

0.29
7.4mm

0.75
19.1mm

REV A