circuit termination set

T279

Features

- Balanced Coil with Center Tap
- Switchable Termination
- Means for Inserting Longitudinal Signals
- Switchable Longitudinal Current Test
- Accommodates Measuring Set or Phones
- Cords for Connecting Circuits
- Passive Circuitry
- Dial Thru Provisions

Description

The Model T279 provides the termination and balance arrangements required for sectionalizing noise measurements on a circuit. It is designed to facilitate noise investigations by installers and repairmen.

When it is necessary to make noise measurements on sections of a circuit to identify the section which may be introducing the noise, it is necessary to provide the proper termination of the section under test with an appropriate terminating resistor and a well balanced center tapped coil to provide means for maintaining the longitudinal circuit. The balance of the coil must be such that it will not contribute any unbalance to the circuit under test.

The Model T279 includes a balanced center tapped coil, a terminating resistor, two pairs of clip leads labeled FIELD and CO, and binding post terminals labeled TO MEAS SET. A toggle switch selects the direction in which measurement is to be made, either toward CO or toward FIELD, as shown on the front panel schematic illustration. The balance coil is connected across the line in the direction of measurement, while the line in the opposite direction is shorted and connected to the coil center tap to maintain the longitudinal path. A binding post terminal labeled G provides a means for making an external connection to the coil center tap. This terminal should be left unconnected during most measurements.

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Description *(continued)*

A group of three toggle switches provides the following circuit functions.

1. A TERM switch, in the ON position, connects a 750 ohm terminating resistor across the balance coil.

2. A LONG. CURRENT / CKT switch, in the CKT position, connects the MEAS SET terminals across the coil and line. In the LONG. CURRENT position the MEAS SET terminals are connected across a 7.5 ohm resistor in series with the longitudinal path.

3. A DIAL/MEAS switch, in the DIAL position, connects the line (in the selected direction) directly to the MEAS SET terminals, with the balance coil and terminating resistor disconnected.

Under some conditions, it may be desirable to introduce an external longitudinal signal from a signal generator. This can be done by connecting the generator between the G binding post and a suitable ground. Thus, noise and balance determinations can be made at other than power line frequencies.

Measurements with a noise measuring set located at the T279, or at the other end of the section under test, will provide quantitative data on circuit noise which can be used for determining circuit balance. Headphones also may be connected to the MEAS SET binding posts. Listening tests can provide a quick qualitative test to determine which section is noisy.

For convenience a DIAL/MEAS switch is provided so that all line-holding circuits are disconnected from the selected terminals of the T279, permitting dialing without having to disconnect leads.

Specifications

Balance coil:
4 H, 400 ohms, center tapped
Max dc current 100 mA.
Balance: 70 dB min, 300 Hz to 3 kHz, with zero to 80 mA dc, measured in accordance with IEEE Std 455-1976 at TO MEAS SET terminals (T,R,G,), FUNCTION switches in MEAS., CKT., and TERM ON positions, direction switch in either position.

Terminations:
750 ohms

Longitudinal Resistance:
107 ohms

Longitudinal Current:

To MEAS SET is connected across a 7.5 ohm resistor in series with Longitudinal path.

Controls:
Direction toggle switch for measuring toward CO or toward FIELD. 3 FUNCTION toggle switches:
DIAL/MEAS
LONG. CURRENT/CKT.
TERM ON/OFF

Physical
Height: 3 3/8" (86 mm)
Width: 4" (102 mm)
Depth: 5 1/4" (133mm)
Weight: 1 1/2 lbs (0.68kg)

Ordering Information

Model	Part Number
T279 Circuit Termination Set	30279012
CLEI Code: T279	TENMWM06AA

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P.O. Box 508, Laconia, NH 03247
Tel: 603/524-2622 • 800/222-1898 • Fax: 603/524-3735
Web Site: www.wilcominc.com