

Electrician's True-RMS Multimeters



1. Scope

This standard covers the requirements for electrician's true-rms multimeters.
This standard applies to Seattle City Light (SCL) stock number 765860.

2. Application

This instrument is for field personnel who require a fully-featured, true-rms multimeter with non-contact voltage detection.

This multimeter has many features and capabilities; see the manufacturer's technical data sheet or user's manual for more information.

3. Requirements

3.1 Features

- Non-contact voltage detection
- Automatic ac/dc voltage selection
- True-rms measuring
- Diode testing
- Capacitance measuring
- Frequency measuring
- Continuity beeper
- 6 kV surge protection
- Backlight LED display
- Display hold
- Low battery indicator

- Auto off mode
- Test leads included
- Holster
- Dust/water resistant
- User's manual

3.2 Electrical

Attribute	Requirement
Current range, ac, true-rms	0–10 A
Accuracy ac current, 45 to 500	1.5% +3
Voltage range, ac, true-rms	0–600 V
Accuracy ac voltage	
45 to 500 Hz	1.0% +3
500 to 1 kHz	2.0% +3
Voltage range, dc	0–600 V
Accuracy dc voltage	0.5% +2
Resistance range	to 40.00 megohms

3.3 Environmental

Operating temperature -10°C to 50°C

3.4 Safety

Overvoltage category CAT III 600 Vac/Vdc (UL 61010-1)

3.5 Mechanical

Battery type 1 x 9 V

4. Packaging

Multimeters shall be individually packaged with their accessories and marked with the following information:

- Manufacturer's identification
- Product description
- Seattle City Light stock number

Each shipping container shall be legibly marked with the following information:

- Manufacturer's identification
- Product description
- Seattle City Light purchase order number

5. Issuance

Stock Unit: EA

6. Approved Manufacturer

<u>Manufacturer</u>	<u>Catalog No.</u>
Fluke	117

7. Sources

Shipek, John; SCL Standards Supervisor, originator, and subject matter expert for 7659.39 (john.shipek@seattle.gov)

Fluke Technical Data Sheet, Fluke 117 Electrician's Multimeter with Non-Contact Voltage, 10/2006 2634028 D-EN-N Rev B

Fluke 114, 115, and 117 True-rms Multimeter Users Manual; PN 2572573, July 2006, Rev. 1, 2/07

UL 61010-1; Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements, 2012-05-11