



### 6623 FEATURES

- > Enables 6675A DCC Bridge to Measure at the 1  $\mu\Omega$  Level
- > Easily Controlled from 6675A Direct Current Comparator Bridge
- > Built in Reversing Switch to Reduce Thermal EMF effects
- > Improved Accuracy and Reduced Costs
- > Transformation Ratio Accuracy of  $\pm 0.5$  to 1 ppm
- > Extends Current Capability to 100 Amperes in 3 Ranges

**G**uildline 6623 Range Extender is a high current adapter, including an integral reversing switch, designed specifically for use with the 6675A or 9975 Direct Current Comparator bridges.

The 6623 allows currents of up to 100 Amperes to pass through the resistor under test, and extends the measurement range of the 6675A down to 1  $\mu\Omega$

The 6623 Range Extender is a dc transformer with three primary windings. The three windings divide the input current by a ratio of 10:1, 100:1, and 1000:1. The internal high current reversing relay allows measurements to be made with greatly reduced effects from thermal EMFS. This is made possible by reversing all four connections to the resistors under test. The switching frequency is controlled from the 6675A.

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In addition to its application to standards laboratory resistance measurements, the 6675A/6623 combination offers unparalleled versatility and performance in resistance, thermometry and research applications.

## 6623 DCC BRIDGE RANGE EXTENDER

Transformation Ratio	Transformation Ratio Accuracy ( $\pm$ ppm)	Maximum Input Current (A)	Maximum Output Current (mA)	Maximum Load ( $\Omega$ )	Maximum Output Voltage (V)
10:1	0.5	1.0	100	10,000	33.0
100:1	0.5	10.0	100	10,000	33.0
1000:1	1.0	100.0	100	10,000	33.0

**Note:** The high current source is not included with the 6623.  
The Model 66233 100A Power Supply can be ordered as an accessory.

### 6623 ORDERING INFORMATION

6623 Range Extender  
TM6623 Technical Manual (included)  
Certificate of Calibration (included)  
Report of Calibration (extra charge)

### ACCESSORIES:

**66231** Adapter for use with the 9975 Resistance Bridge  
This adapter is used to connect the 6623 Range Extender output to the 9975 Bridge

**66232** Lead set for connection to 6675A, high current shunts and high current power supply.  
Qty. 1, SCW lead 1m long trimmed at both ends  
Qty. 2, shielded leads 0.9m long with double banana jacks on each end  
Qty. 2, 20A rated black leads 0.9m long with low EMF spade lugs on each end  
Qty. 2, 20A rated red leads 0.9m long with low EMF spade lugs on each end  
Qty. 4, 100A rated leads 1m long with terminal lugs on each end, 1 pair marked with red ends and 1 pair marked with black ends

**66233** 100A Power Supply

### GENERAL SPECIFICATIONS

**Environment:** Operating +18 °C to +28 °C, < 70% RH  
Storage -20 °C to +60 °C, 15 to 80% RH

**Power Requirements** 60 VA Maximum

**Voltage** 90 to 135V AC 50, 60 Hz  
180 to 270V AC 50, 60 Hz

**Dimensions** 134 H x 440 W x 500 D mm  
(5.3 H x 17.3 W x 19.6 D in)

**Weight** 14 kg (31 lbs)

### GUILDLINE IS DISTRIBUTED BY:

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