



### SPECIFICATIONS

#### User interface:

Numeric keypad to enter resistance value with digital display.

**Accuracy:**  $\pm(70 \text{ ppm} + 1 \text{ m}\Omega)$  2 and 4 Terminal at 23°C  $\pm 5^\circ\text{C}$

**Minimum setting:** 0.1  $\Omega$

**Resolution:** 1  $\mu\Omega$

**Range:** 0.1  $\Omega$ - 20 M $\Omega$

**Stability:**  $\pm 50$  ppm/year

**Thermal emf:**  $< 15 \mu\text{V}$

**Maximum Load:** 2 A, 200 V (peak), 0.5 W whichever applies first

**Resistors:** Precision wire-wound and metal foil

#### RTD Tables:

9 RTD tables can be entered into memory to allow user selection of temperature and the correct value of resistance will automatically be programmed.

PT-100 and PT-1000 tables for both Fahrenheit and Celsius are pre-programmed into memory locations 1 to 4.

#### Adjustment:

Automatic adjustment procedure utilizing a high precision DMM eliminates the requirement for manual trimming of resistors.

#### AC Frequency Response:

Residual Capacitance Terminals to GND:  $< 850 \text{ pF}$

Resistance	Typical ac/dc difference @ 1 kHz
0.1 $\Omega$ - 10 k $\Omega$	$< 100$ ppm
10 - 100 k $\Omega$	$< 200$ ppm
100 k $\Omega$ - 1 M $\Omega$	$< 1\%$
1 - 20 M $\Omega$	$< 20\%$

#### Terminals:

Four low-emf, gold-plated, tellurium-copper 5-way binding posts are used for **HI** and **LO** terminal pairs for **CURRENT** and **SENSE**. **GND** binding post is connected to the case, to the chassis ground and to the earth ground.

**Switching time:**  $< 1$  second per change

#### Power requirements:

90 - 264 Vac , 47 - 63 Hz., 30 Watts Max.

#### Environmental conditions:

**Operating:** 10°C to 40°C;  $< 80\%$  RH

**Storage:** -40°C to 70°C

#### Dimensions:

Bench model: 43 cm W x 8.9 cm H x 33 cm D (17" x 3.5" x 13") *in front of panel:* 3.8 cm (1.5").

#### Weight:

Bench model: 5.5 kg (12 lb) weight specifications are nominal.

#### Remote Control:

**USB:** USB Type B connector standard on rear panel

#### Remote Control Options:

#### IEEE:

GPIB standard 24 pin connector, conforms to IEEE-488.2; SCPI 1994.0 command set; Hardware or software configurable addressing range of 1 to 30.

#### Ethernet:

IEEE 802.3 compliant, Speeds 10 BaseT (10 Mb/s) and 100 BaseT (100 Mb/s), IP Address Static or DHCP, Factory setting 192.168.0.254 static

### ORDERING INFORMATION

#### STANDARD MODELS

**PRS-300** Programmable Resistance Substituter  
Includes: Instruction Manual  
Calibration Certificate Traceable to SI

#### INTERFACE OPTIONS

**PRS-300-ieee-ethernet** IEEE/Ethernet Interface

#### OTHER OPTIONS

**PRS-300-RM** Rack mount ears

