

Programmable Digital Micro-Ohmmeter

Performance that Conquers any Resistance

- User Selectable Current up to 10Amps
- Boosted Compliance Voltage Mode for Rapid Charging of Motors and Transformers
- Safety Disconnect Status L.E.D.
- Test Current On/Off Switch
- Selectable Voltage Sensitivity: 1 μ V-10 μ V-100 μ V
- 18 Range Combinations for Optimal Meas. Conditions
- Automatic Temperature Compensation
- Internal HI-LO Comparator
- Run/Hold and Peak Detector
- Print/Log Function



The 4300C is the perfect instrument for tackling ultra-low resistance testing requirements associated with motors, transformers, fuses, connectors, breakers, bonding/weld resistance and many other applications. For rapid testing of inductive loads the 4300C's charge inductor mode provides in excess of 20V compliance. This model reduces settling time by a factor of 5:1 on inductive loads. The result is valid readings in minutes instead of hours when testing 400MW utility transformers. A solid-state "Crowbar" design provides front end protection for up to 500 amps of induced current.

#	Range	Test Voltage	Full Scale	Resolution	Test Current ¹	Accuracy ² (\pm % reading \pm Ω)	Temperature Coefficient ³	TCM Mode Accuracy ⁴ (\pm % reading \pm % Δ T)
1	2m Ω	20mV	2.0000m Ω	100n Ω	10A	\pm .06 \pm .0006m	\pm 50ppm/ $^{\circ}$ C	\pm .11 \pm .0006m
2	20m Ω	20mV	20.000m Ω	1 μ Ω	1A	\pm .04 \pm .006m	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .006m
3	200m Ω	20mV	200.00m Ω	10 μ Ω	0.1A	\pm .04 \pm .06m	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .06m
4	2 Ω	20mV	2.0000 Ω	100 μ Ω	10mA	\pm .04 \pm .0006	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .0006
5	20 Ω	20mV	20.000 Ω	1m Ω	1mA	\pm .04 \pm .006	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .006
6	200 Ω	20mV	200.00 Ω	10m Ω	0.1mA	\pm .04 \pm .06	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .06
7	20m Ω	200mV	20.000m Ω	1 μ Ω	10A	\pm .06 \pm .003m	\pm 50ppm/ $^{\circ}$ C	\pm .11 \pm .003m
8	200m Ω	200mV	200.00m Ω	10 μ Ω	1A	\pm .04 \pm .03m	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .03m
9	2 Ω	200mV	2.0000 Ω	100 μ Ω	0.1A	\pm .04 \pm .0003	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .0003
10	20 Ω	200mV	20.000 Ω	1m Ω	10mA	\pm .04 \pm .003	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .003
11	200 Ω	200mV	200.00 Ω	10m Ω	1mA	\pm .04 \pm .03	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .03
12	2k Ω	200mV	2.0000k Ω	100m Ω	0.1mA	\pm .04 \pm .0003k	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .0003k
13	200m Ω	2V	200.00m Ω	10 μ Ω	10A	\pm .06 \pm .03m	\pm 50ppm/ $^{\circ}$ C	\pm .11 \pm .03m
14	2 Ω	2V	2.0000 Ω	100 μ Ω	1A	\pm .04 \pm .0003	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .0003
15	20 Ω	2V	20.000 Ω	1m Ω	0.1A	\pm .04 \pm .003	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .003
16	200 Ω	2V	200.00 Ω	10m Ω	10mA	\pm .04 \pm .03	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .03
17	2k Ω	2V	2.0000k Ω	100m Ω	1mA	\pm .04 \pm .0003k	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .0003k
18	20k Ω	2V	20.000k Ω	1 Ω	0.1mA	\pm .04 \pm .003k	\pm 50ppm/ $^{\circ}$ C	\pm .09 \pm .003k

¹Current source is \pm 1% absolute accuracy
²Accuracy specs are valid following a 30 minute warm-up at an ambient temperature between 22 $^{\circ}$ C and 28 $^{\circ}$ C, and include the effects of line voltage variations within the allowed range.
³Temp. Coefficient specified for temp. ranges from 5 $^{\circ}$ C to 21 $^{\circ}$ C and 29 $^{\circ}$ C to 50 $^{\circ}$ C.
⁴Accuracy specifications valid following a 30 minute warm-up at an ambient temperature between 21 $^{\circ}$ C and 29 $^{\circ}$ C.

General Specifications

Display Type:	5 digit VFD
Overload Indication:	Flashes OVERLOAD
Conversion Rate:	45 readings per second
Terminal Configuration:	4-Wire Kelvin
Max Kick-Back Protection:	500A Peak Induced Current
Compl. Voltage (Normal Mode):	7.5 VDC Nominal @ 10A resistive
Compl. Voltage (Charging Inductor Mode):	20 VDC when indicator is on
Test Current Polarity:	Positive (flows High to Low)
Open Circuit Voltage (Test Current Off):	< 20mV

Power

Power Requirements: 115VAC or 230VAC \pm 10%

Temperature

Operating Temp. Range: 0 $^{\circ}$ C to 50 $^{\circ}$ C

Storage Temp. Range: -40 $^{\circ}$ C to 85 $^{\circ}$ C

Humidity: 80% RH max @ 40 $^{\circ}$ C (non-condensing)

Physical Specifications

Width | Depth | Height: 17" / 43cm | 11.5" / 29.5cm | 4" / 10cm

Weight: 20lbs / 9 kg net;

Accessories

OmnITC	Omni Compensator (Temperature Sensor)
RX-3	19" Rack Mount Adaptor
RS	Remote Foot Switch for Test Current

Options

USB	USB Interface
BCD	Binary Coded Decimal Interface
IEEE	GPIB Interface
JB-2	Rear Locking Connectors

As with all Valhalla Digital Ohmmeters and Igniter Testers, the 4300C is available with a host of 4-wire probes and cable sets.