

# 4300C Programmable Digital Micro-Ohmmeter

## Highly Accurate, Built for Inductive Loads

The Model 4300C Programmable Digital Micro-Ohmmeter is perfect for tackling the ultra-low resistance testing requirements associated with motors, transformers, coils, and breakers. With a focus on rapid testing of inductive loads, this instrument covers 3 voltage ranges (20mV, 200mV, 2V) and 6 current ranges (.1mA, 1mA, 10mA, .1A, 1A, 10A). Multiple selectable modes allow for a better fit to your application, resulting in more accurate and agile data collection. Available measurement modes on the 4300C include Temperature Compensation, Hi-Lo Comparator, and Charging Inductor for reducing settling time by a factor of 5:1. A solid-state "Crowbar" design provides front end protection for up to 500 amps of induced current. Additionally, this unit offers remote controllability via RS-232, USB, and GPIB/IEEE ports on the rear of the unit.



### General Specifications

Display Type:	5 digit VFD Flashes
Overload Indication:	OVERLOAD
Conversion Rate:	45 readings per second
Terminal Configuration:	4-Wire Kelvin
Max Kick-Back Protection:	500A Peak Induced Current
Compl. Voltage (Normal Mode):	7.5VDC Nominal @ 10A resistive
Compl. Voltage (Charging Inductor Mode):	20VDC 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 ±10%
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### Temperature

Operating Temp. Range:	0°C to 50°C
Storage Temp. Range:	-40°C to 85°C
Humidity:	80% RH max @ 40°C (non-condensing)

### Physical Specifications

Width:	17in / 43cm
Depth:	11.5in / 29.5cm
Height:	4in / 10cm 20
Weight:	25 lbs / 9 kg

#	Range	Test Voltage	Full Scale	Resolution	Test Current <sup>1</sup>	Accuracy <sup>2</sup> (± % reading ± Ω)	Temperature Coefficient <sup>3</sup>	TCM Mode Accuracy <sup>4</sup> (± % reading ± % ΔT)
1	2mΩ	20mV	2.0000mΩ	100nΩ	10A	± .06 ± .0006m	±50ppm/°C	± .11 ± .0006m
2	20mΩ	20mV	20.000mΩ	1μΩ	1A	± .04 ± .006m	±50ppm/°C	± .09 ± .006m
3	200mΩ	20mV	200.00mΩ	10μΩ	0.1A	± .04 ± .06m	±50ppm/°C	± .09 ± .06m
4	2Ω	20mV	2.0000Ω	100μΩ	10mA	± .04 ± .0006	±50ppm/°C	± .09 ± .0006
5	20Ω	20mV	20.000Ω	1mΩ	1mA	± .04 ± .006	±50ppm/°C	± .09 ± .006
6	200Ω	20mV	200.00Ω	10mΩ	0.1mA	± .04 ± .06	±50ppm/°C	± .09 ± .06
7	20mΩ	200mV	20.000mΩ	1μΩ	10A	± .06 ± .003m	±50ppm/°C	± .11 ± .003m
8	200mΩ	200mV	200.00mΩ	10μΩ	1A	± .04 ± .03m	±50ppm/°C	± .09 ± .03m
9	2Ω	200mV	2.0000Ω	100μΩ	0.1A	± .04 ± .0003	±50ppm/°C	± .09 ± .0003
10	20Ω	200mV	20.000Ω	1mΩ	10mA	± .04 ± .003	±50ppm/°C	± .09 ± .003
11	200Ω	200mV	200.00Ω	10mΩ	1mA	± .04 ± .03	±50ppm/°C	± .09 ± .03
12	2kΩ	200mV	2.0000kΩ	100mΩ	0.1mA	± .04 ± .0003k	±50ppm/°C	± .09 ± .0003k
13	200mΩ	2V	200.00mΩ	10μΩ	10A	± .06 ± .03m	±50ppm/°C	± .11 ± .03m
14	2Ω	2V	2.0000Ω	100μΩ	1A	± .04 ± .0003	±50ppm/°C	± .09 ± .0003
15	20Ω	2V	20.000Ω	1mΩ	0.1A	± .04 ± .003	±50ppm/°C	± .09 ± .003
16	200Ω	2V	200.00Ω	10mΩ	10mA	± .04 ± .03	±50ppm/°C	± .09 ± .03
17	2kΩ	2V	2.0000kΩ	100mΩ	1mA	± .04 ± .0003k	±50ppm/°C	± .09 ± .0003k
18	20kΩ	2V	20.000kΩ	1Ω	0.1mA	± .04 ± .003k	±50ppm/°C	± .09 ± .003k

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