

Table 1-1. 8000A OPTIONS AND LINE POWER COMPATIBILITY

OPTION	DESCRIPTION	AC LINE POWER VERSION		
		100	115	230
-01	Battery Pack	x	x	x
-02	Digital Printer Output	x	x	x
-05	10A Current Range	—	x	x
-06	Low Ohms Ranges (2 and 20 Ω)	—	x	x

x = Compatible
— = Incompatible

Table 1-2. OPTION COMPATIBILITY

OPTION	-01	-02	-05	-06
-01	■	—	x	●
-02	—	■	x	—
-05	x	x	■	—
-06	●	—	—	■

● = Compatible, if ordered at the same time
x = Compatible
— = Incompatible
■ = Not Applicable

Table 1-3. 8000A ACCESSORIES

ACCESSORY MODEL NO.	DESCRIPTION
C80	Carrying Case, Vinyl (7" x 9½")
C86	Carrying Case, Molded Plastic (8½" x 11")
M00-100-714	Front Panel Dust Cover
M00-200-611	Rack Mounting Kit, Center
M00-200-612	Rack Mounting Kit, Left/Right
M00-200-613	Rack Mounting Kit, Side-By-Side
A80	Deluxe Test Lead Kit
80I-600	AC High Current Probe, Clamp-On (2A–600A)
80K-40	High Voltage Probe
80RF-1	High Frequency Probe (100 kHz to 600 MHz)
81RF	High Frequency Probe (100 kHz to 100 MHz)

1-9. SPECIFICATIONS

DC Voltage

Ranges	± 199.9 mV, ± 1.999 V, ± 19.99 V, ± 199.9 V, ± 1199 V
Accuracy: 1 year, 15°C to 35°C	$\pm(0.1\%$ of reading +1 digit)
Input Impedance	10 Megohms, all ranges
Normal Mode Rejection	Greater than 60 dB @ 50 Hz, 60 Hz
Common Mode Rejection (1 k Ω unbalance)	Greater than 120 dB @ dc and 50 Hz, 60 Hz
Response Time	500 ms
Maximum Input Voltage	1200V dc or 1200V rms (sinusoidal)

AC Voltage

Ranges	199.9mV, 1.999V, 19.99V 1199V
Accuracy: 1 year, 15°C to 35°C	45 Hz to 10 kHz $\pm(0.5\%$ +2 digits) 10 kHz to 20 kHz $\pm(1\%$ +2 digits)
Input Impedance	10 megohms in parallel with 100 pf
Common Mode Rejection (1 k Ω unbalance)	Greater than 60 dB @ 50 Hz, 60 Hz
Response Time (within one range)	3 seconds, worst case
Maximum Input Voltage	1200V rms (sinusoidal), not to exceed 10^7 volts - Hz product on 20, 200, 1200V ranges, 500V rms (sinusoid- al) on 200mV and 2V ranges

Direct Current

Ranges	± 199.9 μ A, ± 1.999 mA, ± 19.99 mA, ± 199.9 mA, ± 1999 mA
Accuracy: 1 year, 15°C to 35°C	$\pm(0.3\%$ of reading +1 digit)
Voltage Burden	0.3V maximum on all ranges except 0.6V on 2000mA range
Response Time	500 ms
Maximum Input	2 Amps rms (fuse protected)

Alternating Current

Ranges	199.9 μ A, 1.999mA, 19.99mA, 199.9mA, 1999mA
Accuracy: 1 year, 15°C to 35°C	45 Hz to 10 kHz \pm (1.0% of reading +2 digits) except 2000 mA range 45 Hz to 3 kHz \pm (1.0% of reading +2 digits) on 2000 mA
Voltage Burden	0.25V maximum on all ranges except 0.5V on 2000 mA range
Response Time (within one range)	3 seconds
Maximum Input	2 Amps rms (fuse protected)

Resistance

Ranges	199.9 Ω , 1.999k Ω , 19.99k Ω , 199.9k Ω , 1999k Ω , 19.99M Ω
Accuracy: 1 year, 15°C to 35°C	200 Ω , 2k Ω , 20k Ω , 200k Ω , 2000k Ω ranges \pm (0.2% of reading +1 digit) 20M Ω range \pm (0.5% of reading +1 digit)
Response Time	200 Ω , 2k Ω , 20k Ω , 200k Ω , 2000k Ω ranges: 500 ms 20M Ω range: 4 seconds
Current through Unknown	200 Ω Range 1mA 2k Ω Range 1mA 20k Ω Range 100 μ A 200k Ω Range 1 μ A 200k Ω Range 1 μ A 20M Ω Range 0.1 μ A
Maximum Input Voltage	200 Ω and 2k Ω 130V rms Ranges 20k Ω thru 20M Ω 250V rms Ranges

Temperature Coefficients

(-10°C to 15°C and 35°C to 55°C)

DC V	\pm (0.01% reading/ $^{\circ}$ C + 0.005% F.S./ $^{\circ}$ C)
DC MA	\pm (0.015% reading/ $^{\circ}$ C + 0.005% F.S./ $^{\circ}$ C)
K Ω	\pm (0.015% reading/ $^{\circ}$ C + 0.005% F.S./ $^{\circ}$ C)
10 Meg	\pm (0.02% reading/ $^{\circ}$ C + 0.005% F.S./ $^{\circ}$ C)
AC V	\pm (0.01% reading/ $^{\circ}$ C + 0.005% F.S./ $^{\circ}$ C)
AC MA	\pm (0.015% reading/ $^{\circ}$ C + 0.005% F.S./ $^{\circ}$ C)

Environmental

Operating Temp. Range	-10°C to +50°C
Storage Temp. Range	-40°C to +70°C (-40°C to +60°C with Option -01)
Humidity Range	0 to 80% RH
Shock and Vibration	Meets requirements of MIL-T- 21200K and MIL-E-16400F

General

Maximum Common Mode Voltage	1200V peak
Display	7-segment LED, 0.25" character height
Size (inches)	2.52 high x 8.55 wide x 9.9 deep (see outline drawing Figure 1-1)
Weight	2 $\frac{3}{4}$ lbs. (1,2Kg) without batteries, 4 lbs. (1,8Kg) with Option -01)
Power	100-115-230V ac, 50 to 400 Hz, 2 watts

Battery Pack, Option -01

Continuous Operation	8 hours minimum
Charge Time	\approx 13 hours
Battery Life	300 to 500 charge-discharge cycles

Digital Printer Output Unit, Option -02

Data Available	Polarity, Overload, Digits and Overrange Bit
Flag	Busy (modifiable to Ready)
Control Inputs	Continuous Update and Data Update
Output Logic Levels	Logic 1 = 4.3 to 5.7 volts thru 15 k Ω pullup (modifiable to 15 volts maximum) Logic 0 = 0 to 0.4 volts, will sink 10mA
Printer Reference	5 volts thru 15 k Ω for refer- ence high
Miscellaneous	TTL compatible and buffered outputs

10 Ampere Current Range, Option -05

DIRECT CURRENT	
Ranges	\pm 10.00A (1 min. operation from 10A to 20A)
Accuracy (1 year, 15°C to 35°C)	\pm (0.5% of reading +1 digit)
Voltage Burden	0.5V 0.5V @ 10A plus I \cdot R drop of test leads
Response Time	500 ms

8000A

Maximum Input 20A (not fused)
 Operating Time 10A and below, continuous
 Above 10A, 1 minute Max
 (Duty cycle 25%)

Accuracy (1 year, 15°C to 35°C) ±(0.2% of reading +1 digit)
 all ranges except: ±(0.5% of reading +2 digits) on 20Ω range and ±(1% of reading +2 digits) on 2Ω range, 2Ω and 20Ω
 accuracy assumes lead resistance zeroed with front panel control

ALTERNATING CURRENT

Ranges 10.00A (1 min. operation from 10A to 20A)
 Accuracy (1 year, 15°C to 35°C) 45 Hz to 3 kHz ±(1% of reading +2 digits)
 Voltage Burden 0.5V maximum up to 10A
 Response Time 3 seconds, worst case
 Maximum Input 20A (not fused)
 Operating Time 10A and below continuous
 Above 10A, 1 minute max.
 (Duty cycle 25%)

Response Time 500ms, all ranges
 Current Through Unknown 2Ω range, 10 mA - 20Ω range, 10 mA

Low Ohms Ranges, Option -06

Ranges 1.999Ω, 19.99Ω, 199.9Ω, 1.999kΩ, 19.99kΩ, 199.9kΩ, 1999kΩ, (Note: the 19.99MΩ range has been removed to provide 2Ω and 20Ω function selection.)

Maximum Input Voltage 2Ω through 2 kΩ ranges 130V rms (Note: Separate input for 2Ω and 20Ω ranges)
 20 kΩ through 2000K ranges 250V rms.
 Temperature Coefficient ±0.03/°C of input (assumes lead resistance zeroed with front panel control)
 Max. Common Mode Voltage 500V peak

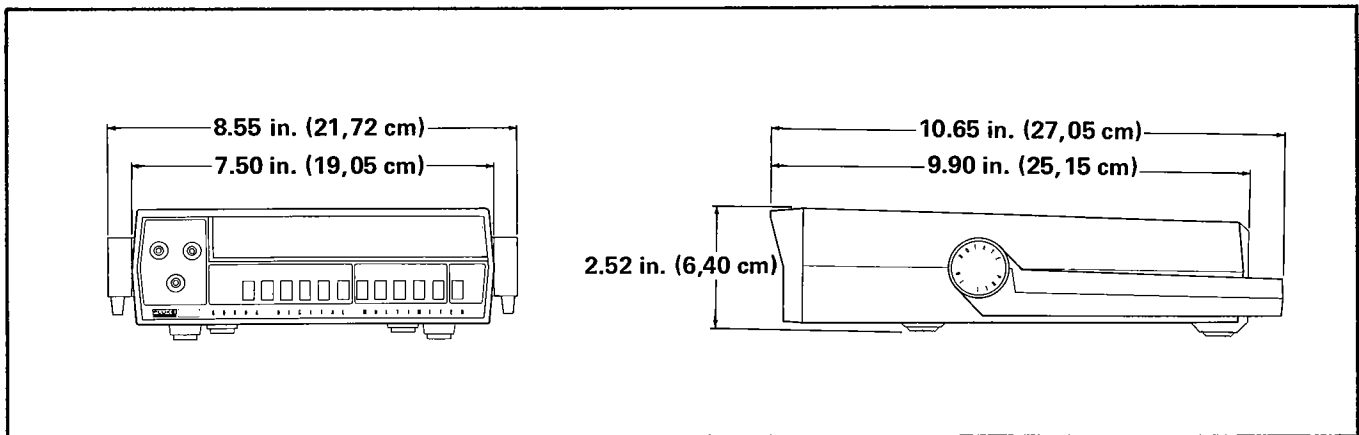


Figure 1-1. 8000A OUTLINE DRAWING