

Table 1-3. 8860A Specifications

DC VOLTS

Ranges ± 200 mV, 2V, 20V, 200V, 1000V
Ranging Fully automatic or manual
Polarity of Input Automatic polarity selection and display
Resolution (Max.) 0.0005% of full scale (1 μ V on 200 mV range) with 5-1/2 digit display.
Accuracy Using front panel zero, \pm (% input + no. of digits)

5-1/2 DIGIT DISPLAY*

RANGE	24 HR	90DAY	1 YR	NORMAL MODE REJECTION	
	23°C ±1°C	18°C - 28°C	18°C - 28°C	NO FILTER	FILTER
200 mV	(0.004 + 3)	(0.008 + 3)	(0.01 + 3)	>60 dB 50, 60 Hz	>100 dB 50, 60 Hz
2V-200V	(0.004 + 2)				
1000V					

4-1/2 DIGIT DISPLAY*

RANGE	90DAY 18°C - 28°C	1 YR 18°C - 28°C	NORMAL MODE REJECTION	
			NO FILTER	FILTER
All	(0.01 + 2)	(0.015 + 3)	>60 dB 50, 60 Hz	>100 dB 50, 60 Hz

*Settling Time: 30 ms to within .01% of input step size, with filter 300 ms.

3-1/2 DIGIT DISPLAY (Available with -004 or -005 options only)

RANGE	1 YR 18°C - 28°C	NORMAL MODE REJECTION	
		NO FILTER	FILTER
All	(0.1 + 1)	None	>40 dB 50, 60 Hz

Settling Time: 5 ms to within .1% of input step size, with filter 250 ms.

Common Mode Rejection

CONDITIONS Line frequency switch properly set.
 Line frequency at 50 or 60 Hz \pm 0.1%.
 One kilohm in either lead.

4-1/2 AND 5-1/2 DIGIT RATE

Normal Guard >130 dB
 External Guard (Driven) >150 dB

3-1/2 DIGIT RATE

Normal Guard >70 dB
 External Guard (Driven) >90 dB

DC, ALL READING RATES >160 dB

Input Resistance

200 mV, 2V RANGES >10,000 M Ω
 20V, 200V, 1000V RANGES 10 M Ω

Table 1-3. 8860A Specifications (cont)

Input Bias Current (@ 23°C) <100 pA

Zero Stability

(after 1 hour warmup) ± 10 μ V for 90 days

Maximum Input ± 1000 V Pk input HI to LO
 ± 500 V Pk input LO to Earth
 ± 30 V Pk input LO to Guard

AC VOLTS (True RMS, AC only or AC + DC)

Ranges 200 mV, 2V, 20V, 200V, 700V

Ranging Fully automatic or manual

Resolution (Max) 0.0005% F.S. (1 μ V on 200 mV range) with 5-1/2 digit display.

Accuracy \pm (% INPUT + DIGITS), 0.5% F.S. to F. S. AC only*

FREQUENCY	RANGE(S)	90 DAY 18°C-28°C			1 YR 18°C-28°C		
		% INPUT	DIGITS		% INPUT	DIGITS	
			5-1/2	4-1/2		5-1/2	4-1/2
20 Hz-50 Hz	All	0.25	70	10	0.25	100	13
50 Hz-10 kHz	All	0.15	70	10	0.15	100	13
10 kHz-50 kHz	2V-700V	0.4	150	18	0.4	300	33
	200 mV	0.7	150	18	0.7	300	33
50 kHz-100 kHz	2V-700V				1.0	350	38
	200 mV				2.5	350	38
100 kHz-300 kHz	All				8.0	700	73

*For AC + DC operation, add 0.1% of input +50 digits for 5-1/2 digit resolution.
 For AC + DC operation, add 0.1% of input + 5 digits for 4-1/2 digit resolution.

Bandwidth (typical) ≤ 3 dB @ 1 MHz

Crest Factor 3 at full range, increasing down range

Input Impedance 10 M Ω , ≤ 70 pF

Maximum Input 700V rms, 1000V Pk, or 2×10^7 volt/Hz, whichever is less.

OHMS (2-terminal or 4-terminal)

Ranges 200 Ω , 2 k Ω , 20 k Ω , 200 k Ω , 2 M Ω , 20 M Ω

Ranging Fully Automatic or Manual

Resolution (Max) 0.0005% F.S. (1 m Ω on 200 Ω range) with 5-1/2 digit display

Table 1-3. 8860A Specifications (cont)

Accuracy Using front panel zero, \pm (% of input + no. of digits)

5-1/2 DIGIT DISPLAY

RANGE	24 HR 23°C \pm 1°C	90 DAY 18°C - 28°C	1 YR 18°C - 28°C
200	(0.008 + 4)	(0.012 + 4)	(0.015 + 4)
2k-200 k Ω	(0.006 + 2)	(0.01 + 2)	(0.013 + 2)
2M	(0.01 + 3)	(0.014 + 3)	(0.017 + 3)
20M	(0.07 + 3)	(0.09 + 3)	(0.10 + 3)

4-1/2 DIGIT DISPLAY

RANGE	90 DAY 18°C - 28°C	1 YR 18°C - 28°C
200 - 2 M Ω	(0.01 + 2)	(0.02 + 3)
20 M Ω	(0.1 + 2)	(0.14 + 3)

3-1/2 DIGIT DISPLAY

RANGE	1 YR 18°C - 28°C
200 Ω - 2 M Ω	(0.1 + 1)
20 M Ω	(0.3 + 1)

INPUT CHARACTERISTICS

RANGE	CURRENT THRU RX	OPEN CIRCUIT VOLTAGE
200	1 mA	6.0V MAX
2 k Ω	1 mA	
20 k Ω	100 μ A	
200 k Ω	10 μ A	
2 M Ω	1 μ A	
20 M Ω	.1 μ A	

Maximum Input 300V DC or Peak AC**Ohms Settling Times**

RANGE	5-1/2 and 4-1/2 DIGIT (TO .01% OF STEP)		3-1/2 DIGIT (TO .1% OF STEP)	
	NO FILTER	FILTER	NO FILTER	FILTER
200 - 20 k Ω	100 ms	<300 ms	<15 ms	<300 ms
200 k Ω		<1.1s		<800 ms
2m		<650 ms		<500 ms
20m	<1.5s*	<6.8s	<600 ms*	<4.5s

*For these ranges the filter is recommended. This will reduce the effects of noise pick-up common to all high impedance measurements.