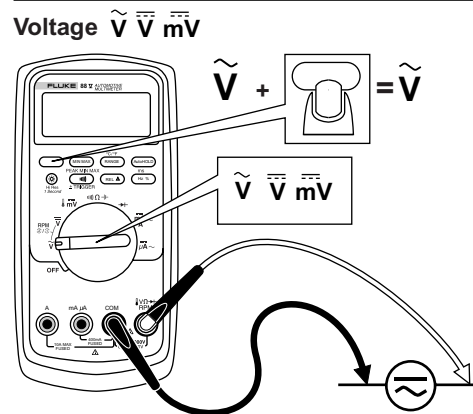
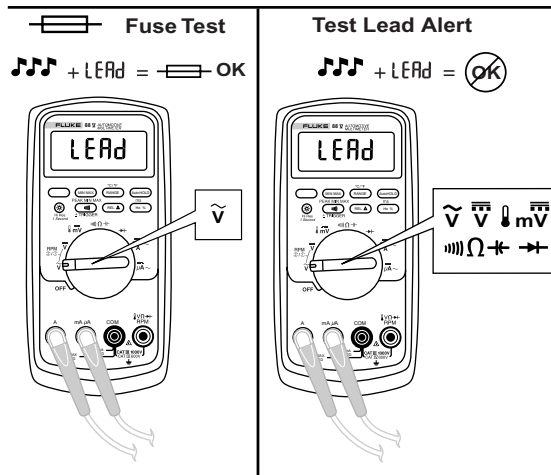


FLUKE®

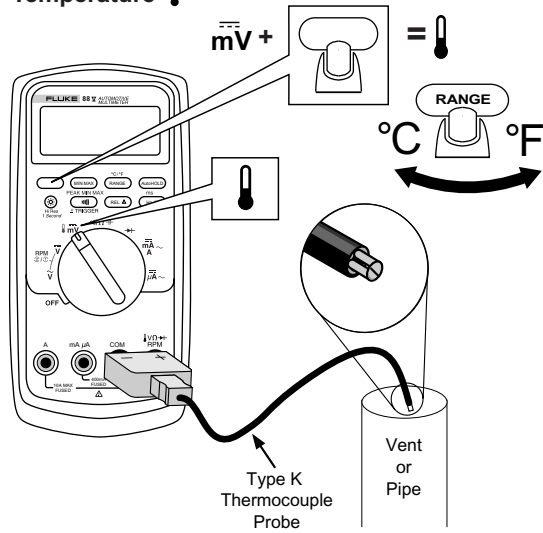
Model 88 V Automotive Multimeter Quick Reference Guide

⚠ See *Users Manual* for "Safety Information" and complete operating information.

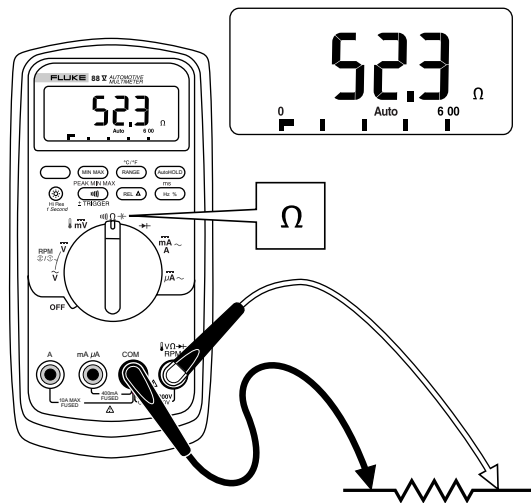


PN 2279006 August 2004
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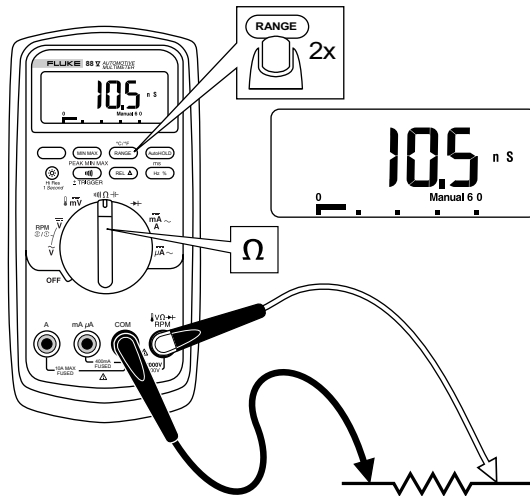
Temperature °



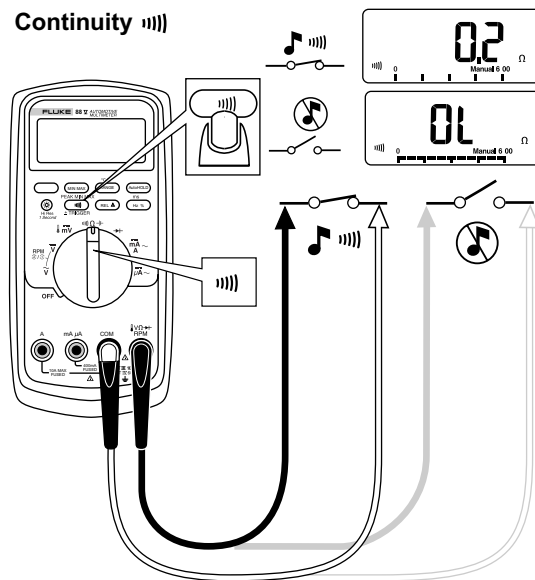
Resistance Ω



Conductance nS



Continuity



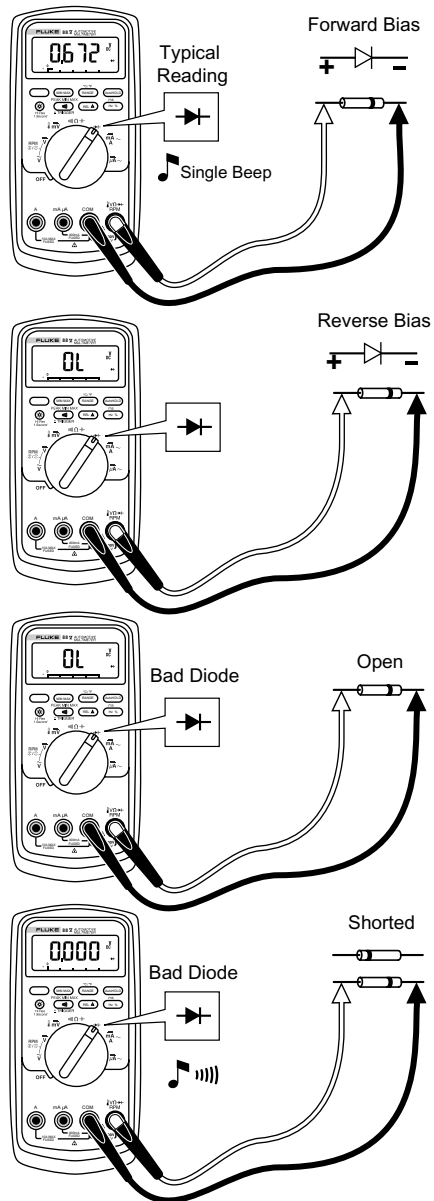
The diagram shows a Fluke 85 V digital multimeter. A callout box labeled 'RANGE' points to the '5---' on the LCD display. Another callout box points to the range/selector knob, which is set to the 200 mV range. Below the knob, the input terminals are labeled: A (mA, μ A), COM, and V (V, Ω , kHz , MHz). The bottom of the meter has four input terminals: A (mA, μ A), COM, V (V, Ω , kHz , MHz), and a fourth terminal labeled 'GND' with a ground symbol.

Diagram illustrating the connection of a digital multimeter (PILUXIE 88 V) for current measurement. The multimeter is set to the DC current mode (200mA) and the AC current mode (200μA). The red probe is connected to the mA/μA port, and the black probe is connected to the COM port. The circuit diagram shows a DC source connected to a switch and a resistor, with the multimeter in series to measure the current.

DC measurement formula: $\overline{\overline{mA}} \sim + \text{[DCmA]} = \overline{\overline{mA}} \sim$

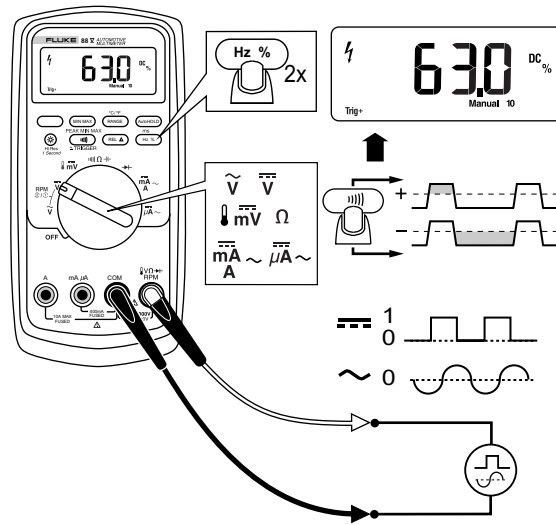
AC measurement formula: $\overline{\overline{\mu A}} \sim + \text{[AC}\mu A] = \overline{\overline{\mu A}} \sim$

Diode Test →

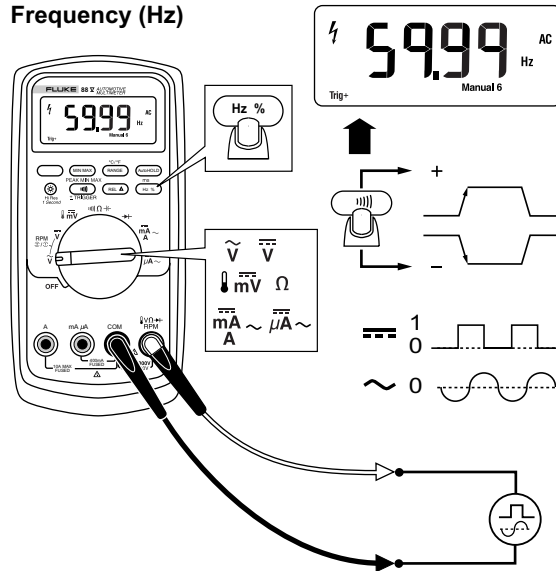


DUTY CYCLE (%)	DWELL (NO. OF CYLINDERS)					DUTY CYCLE (%)	DWELL (NO. OF CYLINDERS)				
	3	4	5	6	8		3	4	5	6	8
0	0.0	0.0	0.0	0.0	0.0	50	60.0	45.0	36.0	30.0	22.5
1	1.2	0.9	0.7	0.6	0.5	51	61.2	45.9	36.7	30.6	23.0
2	2.4	1.8	1.4	1.2	0.9	52	62.4	46.8	37.4	31.2	23.4
3	3.6	2.7	2.2	1.8	1.4	53	63.6	47.7	38.2	31.8	23.9
4	4.8	3.6	2.9	2.4	1.8	54	64.8	48.6	38.9	32.4	24.3
5	6.0	4.5	3.6	3.0	2.3	55	66.0	49.5	39.6	33.0	24.8
6	7.2	5.4	4.3	3.6	2.7	56	67.2	50.4	40.3	33.6	25.2
7	8.4	6.3	5.0	4.2	3.2	57	68.4	51.3	41.0	34.2	25.7
8	9.6	7.2	5.8	4.8	3.6	58	69.6	52.2	41.8	34.8	26.1
9	10.8	8.1	6.5	5.4	4.1	59	70.8	53.1	42.5	35.4	26.6
10	12.0	9.0	7.2	6.0	4.5	60	72.0	54.0	43.2	36.0	27.0
11	13.2	9.9	7.9	6.6	5.0	61	73.2	54.9	43.9	36.6	27.5
12	14.4	10.8	8.6	7.2	5.4	62	74.4	55.8	44.6	37.2	27.9
13	15.6	11.7	9.4	7.8	5.9	63	75.6	56.7	45.4	37.8	28.4
14	16.8	12.6	10.1	8.4	6.3	64	76.8	57.6	46.1	38.4	28.8
15	18.0	13.5	10.8	9.0	6.8	65	78.0	58.5	46.8	39.0	29.3
16	19.2	14.4	11.5	9.6	7.2	66	79.2	59.4	47.5	39.6	29.7
17	20.4	15.3	12.2	10.2	7.7	67	80.4	60.3	48.2	40.2	30.2
18	21.6	16.2	13.0	10.8	8.1	68	81.6	61.2	49.0	40.8	30.6
19	22.8	17.1	13.7	11.4	8.6	69	82.8	62.1	49.7	41.4	31.1
20	24.0	18.0	14.4	12.0	9.0	70	84.0	63.0	50.4	42.0	31.5
21	25.2	18.9	15.1	12.6	9.5	71	85.2	63.9	51.1	42.6	32.0
22	26.4	19.8	15.8	13.2	9.9	72	86.4	64.8	51.8	43.2	32.4
23	27.6	20.7	16.6	13.8	10.4	73	87.6	65.7	52.6	43.8	32.9
24	28.8	21.6	17.3	14.4	10.8	74	88.8	66.6	53.3	44.4	33.3
25	30.0	22.5	18.0	15.0	11.3	75	90.0	67.5	54.0	45.0	33.8
26	31.2	23.4	18.7	15.6	11.7	76	91.2	68.4	54.7	45.6	34.2
27	32.4	24.3	19.4	16.2	12.2	77	92.4	69.3	55.4	46.2	34.7
28	33.6	25.2	20.2	16.8	12.6	78	93.6	70.2	56.2	46.8	35.1
29	34.8	26.1	20.9	17.4	13.1	79	94.8	71.1	56.9	47.4	35.6
30	36.0	27.0	21.6	18.0	13.5	80	96.0	72.0	57.6	48.0	36.0
31	37.2	27.9	22.3	18.6	14.0	81	97.2	72.9	58.3	48.6	36.5
32	38.4	28.8	23.0	19.2	14.4	82	98.4	73.8	59.0	49.2	36.9
33	39.6	29.7	23.8	19.8	14.9	83	99.6	74.7	59.8	49.8	37.4
34	40.8	30.6	24.5	20.4	15.3	84	100.8	75.6	60.5	50.4	37.8
35	42.0	31.5	25.2	21.0	15.8	85	102.0	76.5	61.2	51.0	38.3
36	43.2	32.4	25.9	21.6	16.2	86	103.2	77.4	61.9	51.6	38.7
37	44.4	33.3	26.6	22.2	16.7	87	104.4	78.3	62.6	52.2	39.2
38	45.6	34.2	27.4	22.8	17.1	88	105.6	79.2	63.4	52.8	39.6
39	46.8	35.1	28.1	23.4	17.6	89	106.8	80.1	64.1	53.4	40.1
40	48.0	36.0	28.8	24.0	18.0	90	108.0	81.0	64.8	54.0	40.5
41	49.2	36.9	29.5	24.6	18.5	91	109.2	81.9	65.5	54.6	41.0
42	50.4	37.8	30.2	25.2	18.9	92	110.4	82.8	66.2	55.2	41.4
43	51.6	38.7	31.0	25.8	19.4	93	111.6	83.7	67.0	55.8	41.9
44	52.8	39.6	31.7	26.4	19.8	94	112.8	84.6	67.7	56.4	42.3
45	54.0	40.5	32.4	27.0	20.3	95	114.0	85.5	68.4	57.0	42.8
46	55.2	41.4	33.1	27.6	20.7	96	115.2	86.4	69.1	57.6	43.2
47	56.4	42.3	33.8	28.2	21.2	97	116.4	87.3	69.8	58.2	43.7
48	57.6	43.2	34.6	28.8	21.6	98	117.6	88.2	70.6	58.8	44.1
49	58.8	44.1	35.3	29.4	22.1	99	118.8	89.1	71.3	59.4	44.6

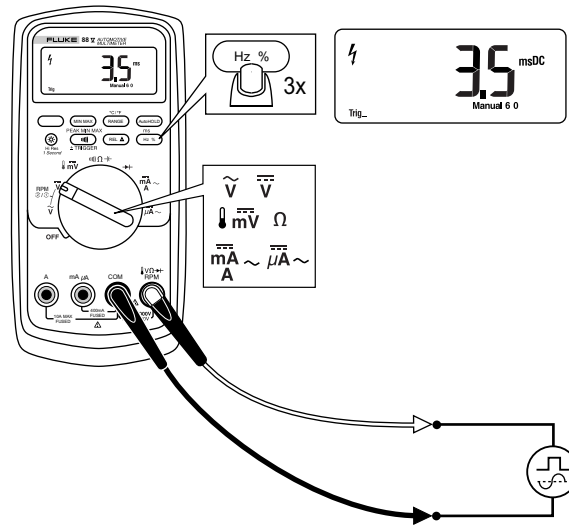
Duty Cycle %/Dwell



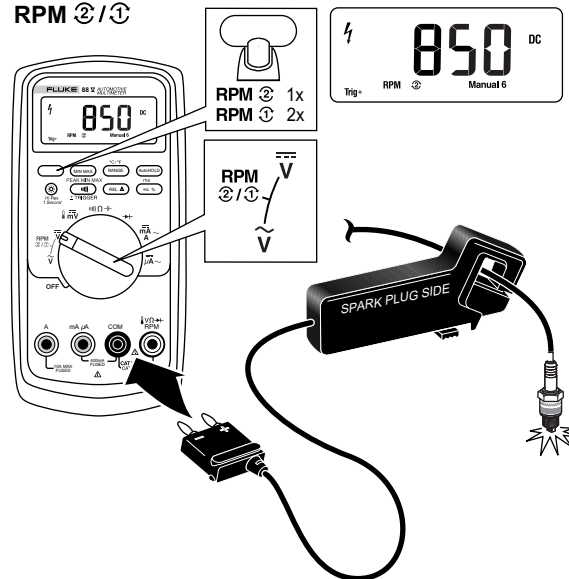
Frequency (Hz)



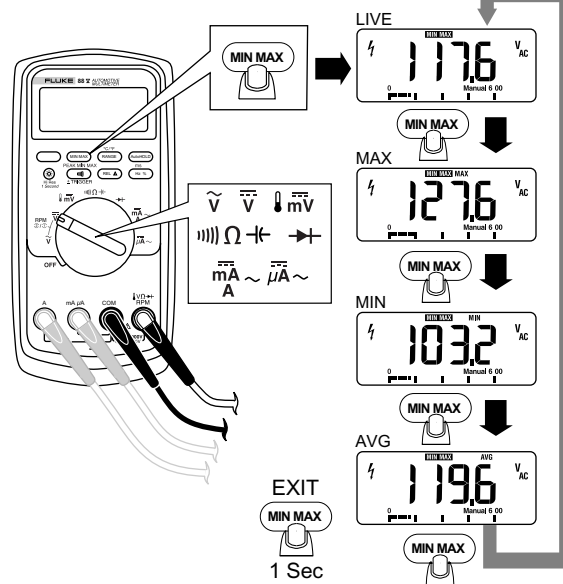
Pulse Width (ms)



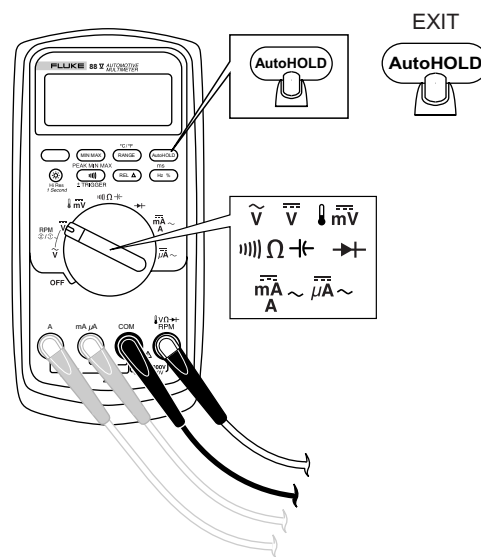
RPM $\text{③}/\text{①}$



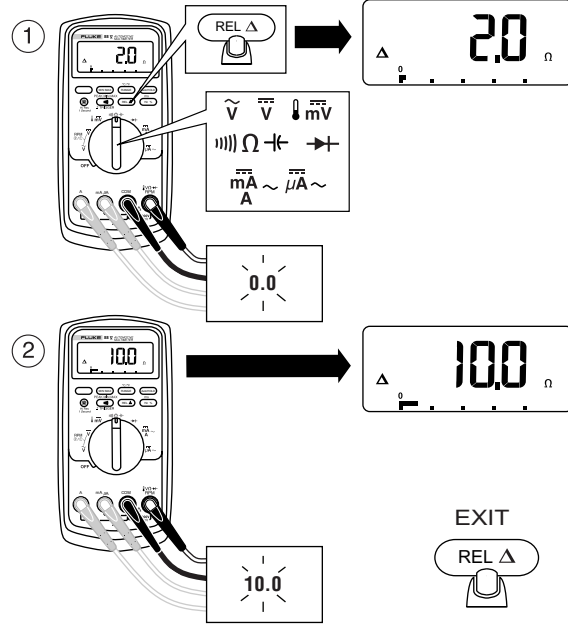
Min, Max, Average **MIN MAX**



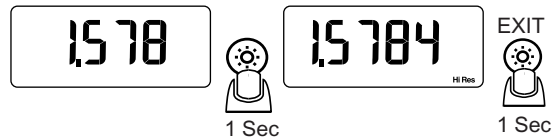
AutoHOLD **HOLD**



Relative Δ (Zero)



Hi Res Mode



ToolPak

