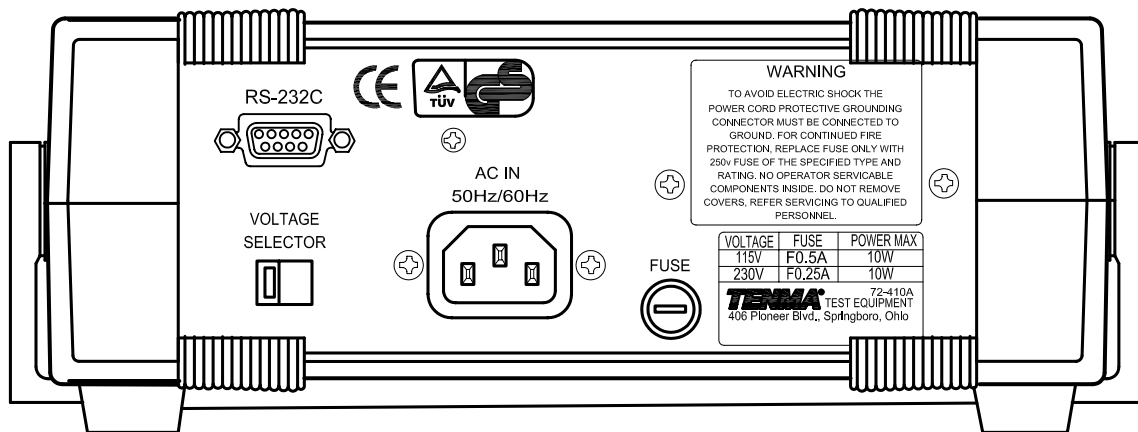
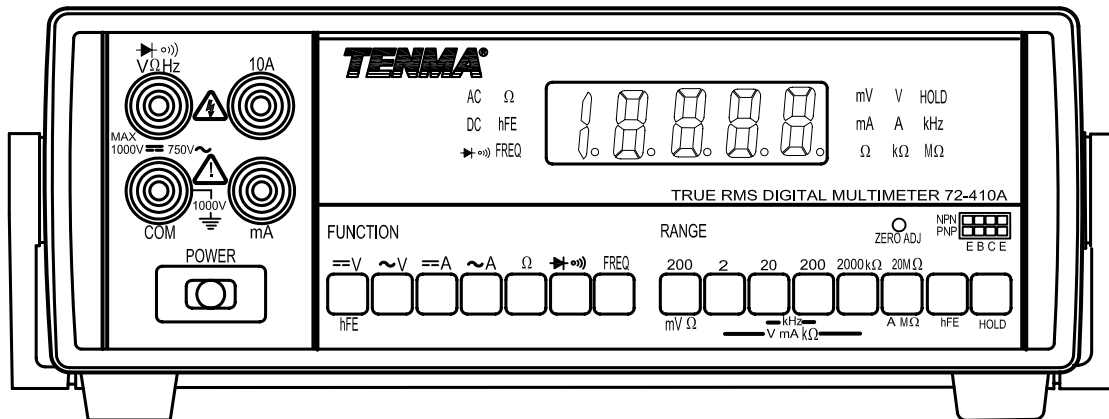




REVISIONS

DOC. NO. SPC-F004 * Effective: 7/8/02 * DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
430	A	RELEASED	JWM	11/27/01	HO	11/27/01	DJC	11/27/01
1739	B	Tolerances updated	JWM	6/15/04	JC	6/15/04	JC	6/15/04



General Specifications

- 4 $\frac{1}{2}$ Digit: 20,000 count LED
- Measurement Rate: 2.5 times/sec.
- Protection for input overload
- Dual slop integration A/D converter system
- Over range indication: Most-significant digit flickers
- Long-term calibration stability: one year
- Operating Temp: 0°C ~ 50°C (below 80%)
- Storage Temp: -20°C ~ 60°C (below 70%)
- Guaranteed Accuracy: 23°C \pm 5°C
- Line Voltage: 103V ~ 126V, 50Hz/60Hz
206V ~ 252V, 50Hz/60Hz
- Power Consumption: 10W maximum
- Dimensions: 25.0cm x 9.25cm x 25.1cm
- Weight: 1.5kg

SPC-F004.DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	Jeff McVicker	11/27/01	True RMS Benchtop Digital Multimeter			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	Hisham Odish	11/27/01	A	72-410A	91F2942.dwg	B
	APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: INCHES [mm]	SHEET: 1 OF 2
	Daniel Carey	11/27/01				

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Input Terminals and Limits

Function	Input Terminal		Minimum Display Reading	Maximum Display Reading	Maximum Input
V	V Ω Hz	COM	0.01mV	1000VDC, 750VAC	1000VDC, 750VAC
10A	10A	COM	0.001A	10A	10A/250V
mA	mA	COM	0.001mA	2000mA	2000mA/250V
Ω	V Ω Hz	COM	0.1 Ω	20M Ω	600VAC/DC (1 min.)
Hz	V Ω Hz	COM	1 Hz	200KHz	250VAC/DC
Continuity	V Ω Hz	COM			600VAC/DC
Diode	V Ω Hz	COM			600VAC/DC (1 min.)
hFE	Socket				

Resolution and Accuracy

Function	Range	Resolution	Accuracy*
DC Voltage	200mV	10 μ V	$\pm(0.05\% + 4\text{dgt})$
	2V	100 μ V	
	20V	1mV	
	200V	10mV	
	1000V	100mV	$\pm(0.15\% + 4\text{dgt})$
AC Voltage	200mV	10 μ V	$\pm(0.5\% + 20\text{dgt}) @ 45\text{Hz}\sim 1\text{KHz}$
			$\pm(0.8\% + 10\text{dgt}) @ 1\text{KHz}\sim 10\text{KHz}$
			$\pm(1.0\% + 10\text{dgt}) @ 10\text{KHz}\sim 20\text{KHz}$
			$\pm(3.0\% + 30\text{dgt}) @ 20\text{KHz}\sim 50\text{KHz}$
	2V	100 μ V	$\pm(0.5\% + 20\text{dgt}) @ 45\text{Hz}\sim 1\text{Hz}$
			$\pm(0.8\% + 10\text{dgt}) @ 1\text{Hz}\sim 10\text{KHz}$
			$\pm(1.0\% + 20\text{dgt}) @ 10\text{KHz}\sim 20\text{KHz}$
			$\pm(3.0\% + 30\text{dgt}) @ 20\text{KHz}\sim 50\text{KHz}$
	20V	1mV	$\pm(0.5\% + 20\text{dgt}) @ 45\text{Hz}\sim 1\text{KHz}$
			$\pm(1.5\% + 20\text{dgt}) @ 1\text{KHz}\sim 10\text{KHz}$
			$\pm(2.5\% + 20\text{dgt}) @ 10\text{KHz}\sim 20\text{KHz}$
			$\pm(5.0\% + 20\text{dgt}) @ 20\text{KHz}\sim 50\text{KHz}$
DC Current	2mA	0.1mA	$\pm(0.5\% + 1\text{dgt})$
	20mA	1 μ A	
	200mA	10 μ A	
	2000mA	100 μ A	
	10A	1mA	$\pm(0.75\% + 3\text{dgt})$
AC Current	2mA	0.1 μ A	$\pm(1.0\% + 10\text{dgt}) @ 45\text{Hz}\sim 10\text{KHz}$ $\pm(2.0\% + 20\text{dgt}) @ 10\text{KHz}\sim 20\text{KHz}$
	20mA	1 μ A	
	200mA	10 μ A	$\pm(1.0\% + 10\text{dgt}) @ 45\text{Hz}\sim 2\text{KHz}$
	2000mA	100 μ A	
	10A	1mA	
Resistance	200 Ω	0.01 Ω	$\pm(2.0\% + 5\text{dgt})$
	2 K Ω	0.1 Ω	$\pm(0.2\% + 2\text{dgt})$
	20 K Ω	1 Ω	
	200 K Ω	10 Ω	$\pm(0.5\% + 2\text{dgt})$
	2000 K Ω	100 Ω	
Frequency	20KHz	1Hz	$\pm(1.0\% + 3\text{dgt})$
	200KHz	10Hz	$\pm(2.0\% + 3\text{dgt})$
hFE	Base Current: 3.5 μ A, VCE: 4.5V Approx.		
Diode	Test Voltage: 4.5V Approx., Maximum test current: 1 mA		
Continuity	Threshold: 200 Ω or less		

Temperature coefficient: 0.15 x (spec. ass'y)/°C, [18 °C or] 28 °C

*Accuracy is given as \pm (% of reading + number of least significant digits) at 18 °C to 28 °C with relative humidity up to 80% for a period of one year after calibration.

Sources like small hand-held radio transceivers, fixed station radio and television transmitter, vehicle radio transmitters and cellular phones generate electromagnetic radiation that may induce voltages in the test leads of the multimeter. In such cases the accuracy of the multimeter cannot be guaranteed due to physical reasons.

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SPC-F004.DWG

SIZE DWG. NO.

A 72-410A

ELECTRONIC FILE

91F2942.dwg

REV

B