

## Analog Multimeter

DE-960TRN/961TRN/965TRN



DE-960TRN

DE-965TRN

### FEATURES :

- Total Protection-patented design(perfectly fit for use of production line, work shop, DIY at home, education, amateur of hobby)
- Big shiny scale
- Stand Rack Attached For Reading Easily
- **Taut Band Movement** with unique feature to absorb vibration and non-friction to avoid the distortion of accuracy and a long-term life time.

### TEMPERATURE / HUMIDITY:

- **Operation:** 0°C~40°C(32°F~104°F) / below 80% R.H. (no condensation)
- **Storage:** -10°C~50°C(14°F ~ 122°F) / below 80% R.H. (no condensation)

### ACCESSORIES:

- Battery 1.5V(UM-3,AA).....1
- Battery 9V(006P,6F22).....2
- Instruction Manual..... 1
- Test Leads (red+black).....1
- Spare Fuse Fast Fuse-0.5A/250V (∅5x20mm) put interior of multimeter.....1

### DIMENSION & WEIGHT:

- 152(L)x100(W)x38(H)mm (5.98"x3.93"x1.5")
- DE-960TRN Approx. 235g(0.52 lbs)
- DE-961TRN Approx. 240g(0.53 lbs)
- DE-965TRN Approx. 265g(0.58 lbs) (excluding Batteries)

### SPECIFICATION: (23°C ± 5°C, 80% R.H. MAX.)

\* arc:the angle of deflection

Measurement	Range	Accuracy			Remark
		DE-960TRN	DE-961TRN	DE-965TRN	
Movement		Taut Band	Taut Band	Taut Band	Taut Band : vibration resistance
DCV	0.1V	Within ± 3% F.S.	Within ± 3% F.S.	Within ± 3% F.S.	Input impedance 20kΩ/V
	0.5V				
	2.5V				
	10V				
	50V				
	250V				
DCV NULL meter	0~ ± 5V		Within ± 3% F.S.		0-centering meter type
	0~ ± 25V				input impedance 40kΩ/V
ACV	10V	Within ± 4% F.S.	Within ± 4% F.S.	Within ± 4% F.S.	Input impedance 9kΩ/V
	50V				
	250V				
	1000V				
DCmA	50μA	Within ± 3% F.S.	Within ± 3% F.S.	Within ± 3% F.S.	Voltage drop 250mV (100mV for 50μA)
	2.5mA				
	25mA				
	250mA				
DCA ACA	10A		Within ± 3% F.S.	Within ± 3% F.S.	
	10A			Within ± 5% F.S.	
Buzzer	Conduct indicator (Buzzer is emitted at about 20Ω or less)	✓	✓	✓	Power consumption approx. 150mA same as Ωx1 range
Resistance (Ω)	X1 :0~ 2kΩ Center 20Ω	Within ± 3% of arc	Within ± 3% of arc	Within ± 3% of arc	Batteries UM-3 (1.5V) X2 006P ( 9V) X1
	X10 :0~ 20kΩ Center 200Ω				
	X100 :0~ 200kΩ Center 2kΩ				
	X1K :0~ 2MΩ Center 20kΩ				
	X10K :0~ 20MΩ Center 200kΩ				
Battery Test (BATT.)	0~1.5V GOOD-?-BAD Color-coded scale	Within ± 5% of arc	Within ± 5% of arc		Load current 1.5V 250mA 9V 25mA
	0~ 9V GOOD-?-BAD Color-coded scale	Within ± 5% of arc			
dB	-10dB~+22dB(FOR 10VAC)~+62dB 0dB/0.775V (1mW through 600Ω )	Within ± 4% F.S.	Within ± 4% F.S.	Within ± 4% F.S.	9kΩ /V
Leakage current (I <sub>ceo</sub> ) (LI)	0~ 150μA at x 1K range	Within ± 5% of arc	Within ± 5% of arc	Within ± 5% of arc	Current across terminal
	0~ 1.5mA at x 100 range				
	0~ 15mA at x 10 range				
	0~ 150mA at x 1 range				
Terminal to Voltage (LV)	Common to each Ω range 3V-0V (Reverse of LI scale)	Within ± 5% of arc	Within ± 5% of arc	Within ± 5% of arc	Voltage applied across terminal
DC Current amplification factor (hFE)	Transistor hFE : 0-1000 (in x 10Ω range) $\frac{I_C}{I_B}$	Within ± 3% of arc	Within ± 3% of arc	Within ± 3% of arc	Insert hFE pin (on scale) directly
LED	in x 10Ω range	✓	✓	✓	Insert ± LED pin (on scale) directly