µ-TEK

AC MILLIVOLT METER

TVT-321 / TVT-322

FEATURES

This is a dual-channel (TVT-322), signal-channel (TVT-321) electronic voltmeter sets having the function of AC millivolt meter in a single cabinet. Two-pointer meter allows easy dual measurements and inter channel comparisons.
This is a wideband, high sensitive voltmeter for use anywhere voltage measurements are made. The easy-to-use voltmeter provides frequency response as wide as 5Hz to 1MHz (TVT-322), 10Hz to 1MHz (TVT-321), measurable range from 300µV to 100V, and input impedance of 1MΩ.

- Small-Sized compact construction is easy to carry and large-sized two-pointer meter is easy to read.
- Four-scale dial plate and red and black pointers allow quick, and accurate voltage reading.
- Precise amplifiers are precisely calculated in open loop gains and are negative feedback through meta film resistors as accurate as 1%
- Amplifier characteristics therefore are from secular change.
- Input impedance is as high as 1MΩ on all ranges and its parallel capacitance less than 45pF.
- Indirect attenuator switching by relay and FET (field-effect transistor) switch provides higher reliability, signal-to-noise ratio, and inter-channel crosstalk than most previous direct method of rotary switch.
- Two channel range setting can be made either individually or together (in interlocked manner) (TVT-322)

SPECIFICATIONS

FUNCTIONS		MODEL	
		TVT-321	TVT-322
METER SECTION	MEASURING VOLTAGES	300µv~100v IN 12 ranges: 300µV, 1mV, 3mV, 10mV, 100mV, 300mV, 1V, 3V, 10V, 30V, 100V, and full scales.	300µv~100v IN 12 ranges: 300µV, 1mV, 3mV, 10mV, 100mV, 300mV, 1V, 3V, 10V, 30V, 100V, and full scales.
	CHANNEL	Single	Dual
	dB	-70~+40dB(0dB=1V)	-70~+40dB(0dB=1V)
	dBm	70~+42dBm (0dBm=0.755V, 600Ω)	-70~+42dBm (0dBm=1mW, 600Ω)
	ERROR	Within ±3% of full scale at 1kHz	Within ±3% of full scale at 1kHz
	FREQUENCY RESPONSE	±10% at 10Hz~1MHz ±5% at 10Hz~500kHz ±3% at 20Hz~200kHz as referred to 1kHz response	±10% at 5Hz~1MHz ±5% at 10Hz~500kHz ±3% at 20Hz~200kHz as referred to 1kHz response
	INPUT IMPEDANCE	Within ±3% of full scale at 1kHz	1MΩ±5%, with less than 45pF parallel capacitance
	DURABLE INPUT VOLTAGE	500V (DC+AC peak) at 1V~100V range 100V (DC+AC peak) at 300µV~100mV range	500V (DC+AC peak) at 1V~100V range 100V (DC+AC peak) at 300µV~100mV range
	STABILITY	Within ±0.5% of full scale for ±10% line voltage fluctuation	Within ±0.5% of full scale for ±10% line voltage fluctuation
	RESIDUAL VOLTAGE	Within 2% of full scale by shorting input	Within 2% of full scale by shorting input
AMPLIFIER SECTION	GAIN	Approx. 60dB	Approx. 60dB
	OUTPUT VOLTAGE	0.1Vrms (Full scale) ±20%	0.1Vrms (Full scale) ±20%
	OUTPUT IMPEDANCE	600Ω±20%	600Ω±20%
	DISTORTION	Less than 1% at full scale (Rated by signal-to-noise ratio in 1mV and 0.1V ranges)	Less than 1% at full scale (Rated by signal-to-noise ratio in 1mV and 0.1V ranges)
	BANDWIDTH	+3% 20Hz~200kHz +5% 10Hz~500kHz +10% 5Hz~1MHz	+3% 20Hz~200kHz +5% 10Hz~500kHz +10% 10Hz~1MHz
	TEMPERATURE	10℃~40℃	10℃~40℃
	RELATIVE HUMIDITY	Less than 80%	Less than 80%
POWER SUPPLY SECTION	LINE VOLTAGE	110V/220V AC±10% 50/60Hz	110V/220V AC±10% 50/60Hz
	POWER CONSUMPTION	Approx. 5VA	Approx. 6VA
ACCESSORIES		Power cable, BNC cord X2, Instruction Manual	