

UNICORDER

pantos[®]

“UNICORDER” PORTABLE RECORDER

U-212-1P-00 : 1 CHANNEL

U-212-2P-00 : 2 CHANNEL

- A user friendly, general purpose, portable, AC powered strip chart recorder.
- Ideal for real time recording in the field, in laboratories, on test vehicles and diversified locations.



GENERAL

UNICORDER U-212 is a portable recorder designed to be compact in size and light in weight. The space saving portable recorder provides versatility of chart recording in the field, in laboratories, on test vehicles and diversified locations. It's an ideal tool for real time chart recording.

FEATURES

1. Effective recording width is 120mm which is convenient for practical application.
2. A pulse motor is adopted in the chart drive by which driving speed can be selected freely from abundant menu of 24 steps and 23 speed. At the same time, chart drive in proportion to the frequency of the external signal source is made possible. Further, a tuning fork oscillator is used in the reference oscillator by which stable driving speed is obtained.
3. A superimposed event marker is included as a standard feature by which a mark can be put at arbitrary position on the recording line.
4. A calibration power supply is provided by which confirmation and calibration of full span voltage accuracy can be executed with ease.
5. Recorder reliability has been enhanced by employing torque reduction circuit by which, in the event of over deflection, the pen mechanism and the motor are protected.

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SPECIFICATIONS OF UNICORDER U-212

Model	U-212-1P-00	U-212-2P-00
Item		
Number of Channels	1	2
Measuring system	Null balance, potentiometric, DC servo system	
Effective recording width	120mm	
Writing speed	Approx. 0.3 sec full scale	
Reference point	Right end of chart paper	
Zero adjustment	+100% from reference point	
Measuring range	10, 50, 100, 500mV, 1, 5, 10, 50V (8 ranges), Fine adjuster "VERNIER" ($\times 1 \sim \times 2.5$)	
Input method	Non-balancing Floating	
Input impedance	1M Ω on all ranges	
Signal source impedance	10K Ω maximum on all ranges	
Linearity	$\pm 0.4\%$	
Dead band	$\pm 0.2\%$	
Accuracy	$\pm 0.6\%$ of full span (fixed ranges) at 23 $^{\circ}\text{C}$	
Error between ranges	$\pm 0.4\%$ (23 $^{\circ}\text{C}$)	
Chart Speed	10, 15, 20, 30, 40, 60mm/min, cm/min, mm/h, cm/h, (23 rates through 24 steps) Chart speed by external signal : Chart Speed ; 1mm/min at 1Hz, 600Hz max. Input impedance ; over 4.7k Ω Voltage ; operable at TTL level High level +2V \sim +20V, Low level +0.8V \sim -20V Signal waveform ; pulse, sine wave, square wave, triangular wave, etc. (pulse width over 50 μ sec)	
Chart Paper	Folded chart paper No.12002Z40 (16m long)	
Recording Pen	Cartridge type fiber-tip pen, red for channel 1 and green for channel 2	
Color of recording pen	Red	Red, Green
Pen lift	Manual pen lift separately provided for each channel	
Calibration voltage	Provided, Voltage : 10mV Accuracy : $\pm 0.4\%$ (23 $^{\circ}\text{C}$)	
Torque reducing	Provided	
Event marker	Superimposing, Amplitude : $\pm 3.5 \pm 1$ graduation, Time : 0.2 \sim 0.4sec	
Operating condition	0 \sim 45 $^{\circ}\text{C}$, 45 \sim 85%RH	
Power supply	AC 100, 115, 220, 240V 50/60Hz (to be specified at the time of order)	
Power consumption	Balanced approx. 18VA, Maximum approx. 23.6VA	Balanced approx. 19VA, Maximum approx. 32.6VA
Insulation resistance	AC power supply — chassis (GND) : More than 50M Ω (500V DC megger) Input terminal — chassis (GND) : More than 100M Ω (500V DC megger)	
Noise rejection	CMRR : DC More than 120dB, AC(50/60Hz) : More than 120dB NMRR : AC More than 40dB	
Withstanding voltage	AC power supply — chassis (GND) : 1000V AC (for 1 min) Input terminal — chassis (GND) : 500V AC (for 1 min)	
Dimension	W280 \times H150 \times D200mm (the dimension of protrusion is not included.)	
Mass	Approx. 4.6kg	Approx. 5.0kg
Accessories	Chart Paper (No.12002Z40) \cdots 1, Recording pen (each color) \cdots 1, Fuse (1A) \cdots 1, Power cord \cdots 1, Grounding adapter \cdots 1, Instruction manual \cdots 1	

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