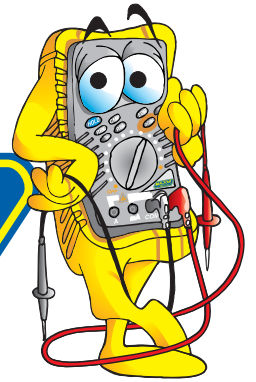


Automotive Meter



Technical Data



MT188

The new MT188 meter is designed to provide trouble shooting solutions to the most complicated problems encountered with today's sophisticated automotive electronic systems. This meter is supplied with an Inductive Pick-up which converts the magnetic field generated by the spark plug wire into a pulse that triggers the meter's RPM measurement for either 2 or 4 cycle automotive engines.

Features Include:

- RPM measurement for automotive engines with 2 to 10 cylinders using the inductive pick-up
- 14 Test functions including DCV, ACV, DCA, ACA, Resistance, RPM(Tach), Dwell Angle, Duty Cycle, Frequency, Temperature with IR Probe, Temperature with K-Type probe, Capacitance, Continuity and Diode Check
- Read Pulse Duty cycle and dwell angle for electronic fuel injection feedback, carburetors and ignition
- Millisecond Pulse Width function to test on-time of fuel injectors, idle air control motors, and electronic transmission controls
- Selectable between 2 and 4 stroke engines
- IR Temperature adaptor to 550°C
- Peak Hold function – measures Peak Max and Peak Min
- Data Hold
- 4000 count LCD with bargraph and backlight
- MIN/MAX Record
- Auto power off
- Fused current inputs and overload protection on all ranges
- IP67 Housing

General Specifications

Complies with	: IEC1010-1 EN61010-1
Insulation	: Class 2, Double insulation
Overvoltage Category	: CAT III 1000V / CAT IV 600V
Display	: 4000 counts LCD display with function indication
Polarity	: Automatic, (-) negative polarity indication
Overrange	: "OL" mark indication
Low Battery Indication	: The "BAT " is displayed when the battery voltage drops below the operating level.
Measurement rate	: 2 times per second, nominal
Auto Power Off	: Meter automatically shuts down after approx 30 minutes of inactivity.
Operating Environment	: 0°C to 50°C (32°F to 122°F) at < 70% relative humidity.
Storage Temperature	: -20°C to 60°C (-4°F to 140°F) at < 80% relative humidity.
For inside use, max height	: 2000m
Pollution Degree	: 2
Power	: One 9V battery, NEDA 1604, IEC 6F22.
Dimensions	: 182(H) x 82(W) x 55(D)mm
Weight	: Approx. 375g



Accuracy is given as \pm ([% of reading] + [number of least significant digits]) at 18°C to 28°C, with relative humidity up to 70%

Measurement	Range		Resolution	Accuracy	
RPM (Tach)	RPM 4	600 ~ 4000 RPM	1RPM	\pm 2% of rdg \pm 4 dgts	
		1000 ~ 12000 RPM (X10 RPM)	10RPM		
	RPM 2/DIS	300 ~ 4000 RPM	1RPM		
		1000 ~ 6000 RPM (X10 RPM)	10RPM		
Measurement	Cylinder	Range	Resolution	Accuracy	
Dwell Angle	4CYL	0 ~ 90.0°	0.1°	\pm 2.0% of rdg \pm 4 dgts	
	5CYL	0 ~ 72.0°			
	6CYL	0 ~ 60.0°			
	8CYL	0 ~ 45.0°			
Measurement	Range		Resolution	Accuracy	
DC Voltage	400.0mV		0.1mV	\pm 0.5% of rdg \pm 3 dgts	
	4.000V		1mV	\pm 1.5% of rdg \pm 2 digits	
	40.00V		10mV		
	400.0V		100mV		
600V		1V	\pm 1.8% of rdg \pm 2 dgts		
AC Voltage	400.0mV		0.1mV	\pm 1.5% of rdg \pm 5 dgts	
	4.000V		1mV	\pm 1.0% of rdg \pm 3 dgts	
	40.00V		10mV	\pm 1.5% of rdg \pm 3 dgts	
	400.0V		100mV		
	600V		1V	\pm 2.0% of rdg \pm 4 digits	
DC Current	40.00mA		10uA	\pm 1.5% of rdg \pm 3 dgts	
	400.0mA		100uA		
	20A		10mA	\pm 2.5% of rdg \pm 5 dgts	
AC Current	40.00mA		10uA	\pm 1.8% of rdg \pm 5 dgts	
	400.0mA		100uA		
	20A		10mA	\pm 3.0% of rdg \pm 7 dgts	
Resistance	400.0 Ω		0.1 Ω	\pm 1.2% of rdg \pm 4 dgts	
	4.000k Ω		1 Ω	\pm 1.0% of rdg \pm 2 dgts	
	40.00k Ω		10 Ω		
	400.0k Ω		100 Ω	\pm 1.2% of rdg \pm 2 dgts	
	4.000M Ω		1k Ω		
40.00M Ω		10k Ω	\pm 2.0% of rdg \pm 3 dgts		
Capacitance	4.000nF		1pF	\pm 5.0% of rdg \pm 50 dgts	
	40.00nF		10pF	\pm 5.0% of rdg \pm 7 dgts	
	400.0nF		0.1nF		
	4.000uF		1nF	\pm 3.0% of rdg \pm 5 dgts	
	40.00uF		10nF		
	400.0uF		0.1uF		
	4.000mF		0.001mF	\pm 10% of rdg \pm 10 dgts	
	40.00mF		10.00mF		
Measurement	Range		Resolution	Sensitivity	Accuracy
Frequency	4.000kHz		1Hz	>5V RMS	\pm 1.5% of rdg \pm 3 dgts
	40.00kHz		10Hz		
	400.0kHz		100Hz		
	4.000MHz		1000Hz		
	40.00MHz		1kHz	>15V RMS	\pm 2.0% of rdg \pm 4 dgts
Measurement	Range		Resolution	Accuracy	
Duty Cycle	0.5% ~ 99.0%		0.1%	\pm 2% of rdg \pm 5 dgts	
Pulse Width	1.0 ~ 20.0ms		0.1ms	\pm 2% of rdg \pm 20 dgts	

Infrared Thermometer Specifications

Range	: -30 to 550°C (-22 to 1022°F)
Output	: 1mV = 1°C or 1°F
Accuracy	: ± 2% of reading or ± 2°C (4°F) whichever is greater. Note: Accuracy is specified for the following ambient temperature range: 18 to 28°C (64 to 82°F)
Emissivity	: 0.95 fixed value
Field of View	: D/S = Approx, 8:1 ratio (D = distance, S = spot) (Has 90% encircled energy at the focal point)
Laser Power	: Less than 1 mW
Spectral Response	: 6 to 14 µm (wavelength)

Ordering Information

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