

A Well Trained Meter ... That Works In A Professional Way !



BM318
AUTOMOTIVE METER

CE

BRYMEN[®]
BRIGHT PEOPLE'S CHOICE
<http://www.brymen.com.tw>

Innovative Functions & Features

4 DIGITS 9999 COUNTS

UP TO 5 TIMES THE RESOLUTION OF TRADITIONAL DIGITAL MULTIMETERS

FULLY AUTORANGING FEATURE

SHORTENS THE TIME TO TEST AND INCREASES THE EASE OF USE

AUTO POWER OFF (APO)

TO EXTEND BATTERY LIFE

ANALOG BARGRAPH

UPDATES 20 TIMES / SECOND TO WATCH SIGNAL TREND

DIRECT DWELL READINGS

FOR 1, 2, 3, 4, 5, 6, 8, 10, & 12 CYLINDER ENGINES

ms FUEL INJECTION DETECTOR

FOR TESTING ON TIME OF BOTH TBI & PFI SYSTEMS

DIODE TEST

FOR CHECKING DIODES AND ALTERNATOR RECTIFIERS

K-TYPE TEMPERATURE

°C AND °F MEASUREMENTS

FREQUENCY

WITH 4 SELECTABLE SENSITIVITIES FOR CHECKING SENSORS IN NOISY AUTOMOTIVE APPLICATIONS

DUTY CYCLE % (ON-OFF RATIO)

FOR MEASURING FEEDBACK CARBURETORS AND ELECTRONIC EGR VALVES

SPLASH PROOF CASE

FOR HARSH ENVIRONMENT

PROTECTIVE HOLSTER

INCREASES PRODUCT DURABILITY

0.3% HIGH BASIC ACCURACY
FOR ACCURATE MEASUREMENTS

EMC

MEETS EN55011 & EN50082-1

DATA UPDATES 4 TIMES / SECOND

FOR FAST MEASUREMENTS

50ms RECORD

CAPTURES FAST CHANGING VOLTAGE (LIKE OXYGEN SENSOR) MAX, MIN, MAX-MIN, & AVG READINGS

DATA HOLD

FREEZES THE DISPLAYING READING FOR LATER VIEW

RELATIVE ZERO MODE

FOR CONVENIENT READINGS COMPARISON BETWEEN CYLINDERS ETC

AUDIBLE CONTINUITY

FOR QUICK OPEN-SHORT TESTS ON SWITCHES, FUSES, AND WIRES

INDUCTIVE RPM

FOR DIS, 2-STROKE WASTE IGNITION, AND CONVENTIONAL 4-STROKE & 2-STROKE ENGINES

LVD

MEETS EN61010-1 CAT II

FIRE RETARDED CASE

FOR TOUGH SAFETY STANDARDS



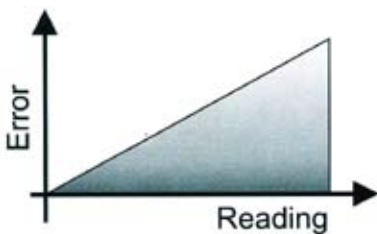
Superior Performance

1999 Counts **Competition**

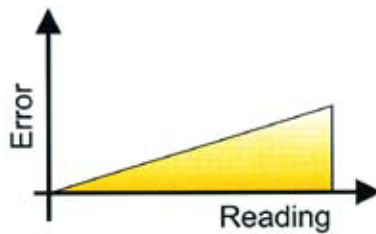
3999 Counts **Competition**

9999 Counts **BM318**

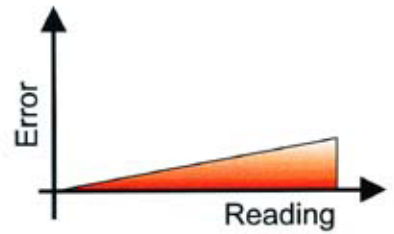
Higher Resolution



Competition
0.9% Accuracy

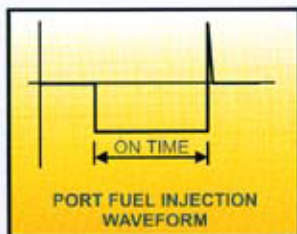


Competition
0.5% Accuracy

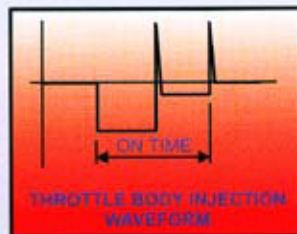
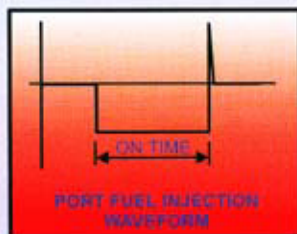


BM318
0.3% Accuracy

More Accurate



Competition measures PFI on time or none



BM318 measures both PFI & TBI on times

ms Fuel Injection Detector

BM318 GENERAL SPECIFICATIONS

Display : 4 digits 9999 counts LCD

Polarity : Automatic

Update Rate :

Data : 4 per second nominal;

42 Segments Bar graph : 20 per second max

Low Battery: Low battery indicator appears when the battery voltage drops below approx. 7.2VDC

Operating Temperature : 0°C to 35°C, 0-80% R.H.; 35°C to 40°C, 0-70% R.H.

Storage Temperature : -20°C to 55°C, 0-80% R.H. (with battery removed)

APD Timing : Idle for 4 minutes

APD Consumption : 30 μ A Typical

Power Supply : Single 9V battery; NEDA1604, JIS006P or IEC6F22

Power Consumption : 3.5 mA Typical

Temperature Coefficient : Nominal 0.15 x (specified accuracy)/°C @ 0°C to 18°C or 28°C to 40°C

Safety : Designed to EN61010-1 (IEC1010-1), UL3111-1 installation category II for 600V, pollution degree 1

E.M.C. : Meets EN55011 and EN50082-1

Overload Protections :

mA & A : 10A/250V Fast Acting Fuse

Others : 600VDC/VAC rms

Dimension : L150mm X W75mm X H34mm; L160mm X W82mm X H48mm (with holster)

Weight : Approx. 252 gm; approx. 345 gm (with holster)

Accessories : RPM inductive pick up, test leads (pair), battery (installed), and user's manual

BM318 ELECTRICAL SPECIFICATIONS

ACCURACY IS \pm (% OF READING DIGITS + NUMBER OF DIGITS) OR OTHERWISE SPECIFIED, AT 23°C \pm 5°C & LESS THAN 75% R.H.

DC Voltage

Range	Accuracy
999.9 mV,	
9.999 V,	0.3% + 3d
99.99 V	
600.0 V	0.3% + 5d

NMRR : > 50dB @ 50/60Hz

CMRR : > 100dB @ DC, 50/60Hz, Rs=1k Ω

Input Impedance: 10M Ω , 30pF nominal (16M Ω nominal for 999.9mV range)

AC Voltage

Range	Accuracy
50Hz - 200Hz	
999.9mV	2.5% + 5d
50Hz - 500Hz	
9.999V,	
99.99V,	2.5% + 5d
600.0V	

CMRR : > 60dB @ DC to 60Hz, Rs=1k Ω

Input Impedance : 10M Ω , 30pF nominal (16M Ω nominal for 999.9mV range)

DC Current

Range	Accuracy
4000mA	1.2% + 6d
10.00A*	0.8% + 4d

Burden Voltage : 0.03V/A

*10A Continuous; 20A for 30 Second Max with 5 minutes cool down interval

AC Current

Range	Accuracy
50Hz - 500Hz	
4000mA	2.5% + 10d
10.00A*	1.2% + 3d

Burden Voltage : 0.03V/A

*10A Continuous; 20A for 30 Second Max with 5 minutes cool down interval

Ohms

Range	Accuracy
999.9 Ω	0.5% + 6d
9.999k Ω , 99.99k Ω	0.5% + 2d
999.9k Ω , 4.000M Ω	0.8% + 2d
40.00M Ω	1.5% + 5d

Open Circuit Voltage : Typical 1.3VDC (2.7VDC @ 999.9 Ω Range)

Frequency

Range	Accuracy
9.999Hz	
99.99Hz, 999.9Hz,	0.01% + 2d
9.999kHz, 20.00kHz	

Selectable Sensitivities : 1Vrms, 2Vrms, 20Vrms, & 200Vrms (by RANGE button)

Input Signal : Sine wave, or Square wave with duty cycle >40% & <70%

Diode Tester

Range	Test Current (Typical)	Open Circuit Voltage
9.999V	0.2mA	< 3.5 VDC

Temperature

Range	Accuracy
-20°C to 300°C / 0°F to 572°F	\pm (3°C+1d) / \pm (6°F+2d)
301°C to 500°C / 573°F to 932°F	\pm (2%+1d) / \pm (2%+2d)

Sensor : "K" Type Thermocouple, sensor accuracy not included

Audible Continuity Tester

Audible Threshold : The beeper sound if the measured voltage is lower than 100 Ω , and turns off when greater than 700 Ω . Response time < 500 ms
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RPM

	RANGE	Accuracy
RPM 4	120 -20000 RPM	2 RPM
RPM 2	60 -10000 RPM	2 RPM
RPM 2 M	30 -5000 RPM	2 RPM

Dwell

RANGE*	Accuracy
0.0° - 360.0°	1.2° /krpm + 1d
0.0% - 100.0%	0.04% /krpm/cyl + 2d

9 selectable number of cylinders 1, 2, 3, 4, 5, 6, 8, 10, & 12

*Specified ranges depend on \pm trigger slopes, engine rpm and number of cylinders (cyl)

Fuel Injection Detector (Both TBI & PFI)

RANGE*	Accuracy
Multi-Point-Injection	
0.05ms - 250.0ms	0.05ms + 1d
0.0% - 100.0%	0.04% /krpm + 2d
Single-Point-Injection	
0.05ms - 250.0ms	0.05ms + 1d
0.0% - 100.0%	0.04% /krpm/cyl + 2d

selectable \pm trigger slopes

*Specified ranges depend on \pm trigger slopes, engine rpm and number of cylinders (cyl)

Special Features

Record : High speed 50ms Autoranging Max, Min, Max-Min, Avg readings

Relative : Autoranging Relative zero readings

Trigger : Selectable positive & negative trigger slopes

Cylinder : 9 Selectable number of cylinders in Dwell function

Hold : Freezes the display data for later view

Range : Manual / Auto ranging selection

RPM 4 : RPM of 4-stroke engines (1 ignition per 4 strokes)

RPM 2 : RPM of 4-stroke DIS & 2-stroke engines (1 ignition per 2 strokes)

RPM 2 M : RPM of 2-stroke DIS waste ignition engines (1 ignition per 1 stroke)

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