

TQ-1006 Oscilloscope with OBD II



TQ-1006

Automotive Scope/GMM/OBD-II Code Reader

- A 25 Mega-sample/Second (one channel minimum) sample rate for rapid data updates.
- Lab scope signal patterns.
- True RMS Graphing Multimeter (GMM) measurements and graphs.
- OBD II Code Reader function.
- A unique "Glitch Snare" mode which captures displays and optionally saves abnormal signal patterns in the Scope mode of the COMPONENT TESTS only when they occur.
- Preset tests that enable the user to check the majority of automotive sensors, actuators and systems easily and quickly.
- Powerful built-in reference information for each preset test which includes a test procedure showing how to connect to the circuit, a normal reference signal pattern, theory of operation and troubleshooting tips.
- Menu-driven interface has automatic configurations for most of non-preset tests, so you will find that the instrument is easy-to-use.
- The Secondary Ignition Single function displays the waveform along with the spark voltage, RPM, burn time and burn voltage.
- The Diesel function allows you to set injection pump timing and RPM using the optional Diesel accessories.
- USB interface supports updates for code and data.

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Automotive OscilloScope/GMM/OBD-II Code Reader

Automotive On-board diagnostic systems of these days have gone a long way toward helping you locate a problem. But those systems aren't perfect and they don't cover everything (most glitches and intermittents). So the real challenge that befuddles most automotive technicians is diagnosing "no-code" trouble. On-board diagnostic systems are engineered with fairly wide set limits for sensors, actuators, connectors and terminals. When a component exceeds its limit consistently, a trouble code is generated. But to keep warranty costs in line, tolerances aren't set to catch all transients, even though they can cause some of your worst headaches. As a result, technicians are finding more and more uses for the oscilloscope - next to the multimeter, the most common troubleshooting tool.

The 1006 Automotive Scope/GMM/OBD II Code Reader represents the most powerful and versatile tool available for troubleshooting automotive electronics since we can track down elusive no-code driveability problems as well as diagnose OBD II sensors and components.

TQ-1006 is much more than a ordinary hand held oscilloscope.

Type no.	TQ-1006 Hand held oscilloscope with OBD II code reader
Article no.	061 006



<u>GMM</u>	
DC Voltage Measurement: 500 mV, 5 V, 50 V, 500 V, 600 V	
AC Voltage Measurement: 500 mV, 5 V, 50 V, 500 V, 600 V	
(AC+DC) Voltage Measurement: 500 mV, 5 V, 50 V, 500 V, 600 V	
AC/DC Ampere Measurement: 30 mA to 60 A with current probe (optional)	
Ohm Measurement: 500 Ω , 5 k Ω , 50 k Ω , 500 k Ω , 5 M Ω , 30 M Ω	
Frequency Measurement: 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz, 5 MHz	
RPM Measurement: 120 to 20000 (4-cyl) 60 to 10000 (2-cyl)	
DWELL:	3,6 ° to 356,4 °
Pulse Width:	2 μ s – 450 ms
Duty cycle:	2,0 % - 98 %
Diode Test:	2,0 V
Continuity Test:	1,2 V tests voltage
Temperature Measurement:	-50 °C to 1300 °C

<u>DSO</u>	
Horizontal	
Sample rate:	25 Mega sample/second
Record length:	1000 Points
Update rate:	Real time, Roll
Accuracy:	\pm (0.1% + 1 pixel)
Sweep rate:	1 μ s to 50 sec in a 1, 2, 5 sequence (Scope mode) 5 s to 24 Hours in a 1, 2, 5 sequence (GMM mode)
Vertical	
Band width:	DC to 5 MHz ; -3 Db
Resolution:	8 bit
Channel:	2 Channel
Coupling:	AC, DC, GND
Input Imp.:	1 M Ω / 70 pF
Max. Input Volt:	300 V
Volt/Division:	50 mV to 100 V in a 1, 2, 5 sequence
Accuracy:	\pm 3 %

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<u>DSO (cont.)</u>		<u>General specifications</u>	
Trigger		Size (H x W x D):	230 x 120 x 50 mm
Trigger Source:	CH A, CH B, TRIGGER (External trigger)	Weight:	~860 g
Sensitivity (CH A):	< 1.0 div to 5 MHz	Operation temperature:	0 °C to +40 °C
Sensitivity (Trigger):	0.2 V p-p	Storage temperature:	-20 °C till +60 °C
Modes:	Single shot, Normal, Auto	Relative humidity:	0 % to 80 % at 0 °C to +35 °C
Coupling:	AC, DC		0 % to 70 % at 0 °C to +55 °C
Slope:	Rising and falling edge		
Others		Max voltage between any input and ground (GND):	600 V
Glitch Snare:	SCOPE Mode (Component Test only)	Max input voltage:	300 V
Acquire Mode:	SCOPE Mode	LCD Display:	280 x 240 pixels
Setup memory:	8 Waveform & Setup	PC interface:	USB 1.1
Reference waveform:	51 Waveform and Setup	Power:	Rechargeable NiMH
Cursor:	Time and Volt	Battery lifetime:	4 h with backlight off
Instrument Setup:	Contrast, Graticule	Safety and design:	Kat. II 300 V per IEC1010-1, UL3111-1 and C22.2 No.1010-1

TQ-1006 standard accessories:

- User manual
- AC to DC Power Adaptor/Battery Charger.
- Two shielded test leads (red and yellow)
- Two shielded ground leads (black)
- Three alligator clips (red, yellow and black)
- Three back probe pins (red, yellow and black)
- Threet 2 mm adaptors (red, yellow and black)
- Secondary (capacitive) RPM Pick-Up
- Inductive Pick-Up
- OBD II code reader cable

TQ-1006 optional accessories::

- USB cable and software
- Current probe CA-113OS/AT
- Diesel probe set
- Temperature probe