



# ET3142

## OBD-II Breakout Box



- 1. Probe Socket
- 2. LCD Vrms Display Screen
- 3. PIN6&14/3&11 120Ω Built-in Resistor
- 4. OBD Male
- 5. 12-24V Input
- 6. OBD Female
- 7. Probes

## **1. Safety Warning:**

- 1.1 DO NOT use the tester in static electricity, or it may be damaged;
- 1.2 DO NOT use the tester in wet locations, or it may be damaged;
- 1.3 Before other diagnostic devices are connected to the OBD port, test the port for any abnormality.

## **2. Introduction:**

- 2.1 CAN Tester Box is a CAN Bus circuit tester compatible with 12 and 24 volt systems;
- 2.2 If there is a short circuit or reverse polarity, this can cause damage to the scan tool.
- 2.3 Real-time display of communication signals ( such as communication protocol signals ) on the allocated pins which can quickly locate faults and replace the voltage measurement function of digital multi-meter ;
- 2.4 Quickly connect 16 pins during vehicle maintenance diagnosis:
- 2.5 Monitor input voltage of OBD when testing the module, high and low voltage alarm;
- 2.6 The contact point can be inserted into the probes and measured without breaking wires;

### **3. Overview:**

A professional 12V / 24V circuit-test and signal-access tool for diagnostics, development, and bench testing. It exposes every OBD-II pin, monitors live voltages (true RMS), provides optional CAN termination, and supports safe, fast hookup of other diagnostic or programming devices.

### **4. Specifications:**

Input Voltage: 9.0-32.0VDC

Maximum Load: 2.0A

Resolution: 0.1V

Overload Protection: Yes, PTC Fuse (Self-Healing)

Reverse Polarity Protection: Yes

Protocol Standard: PWM(J1850), VPW(J1850),

ISO 9141-2, DIS/ISO 14230-4, CAN(J-2284)

Operating Temperature: 0°C-50°C, Humidity<70%

Probes Socket: 16P \* 2.0mm

OBD Cable Length: 70cm(27.5inch);

## 5. Features:

### 5.1 12 V / 24 V Compatible Circuit Tester:

Robust design for passenger cars and commercial vehicles.

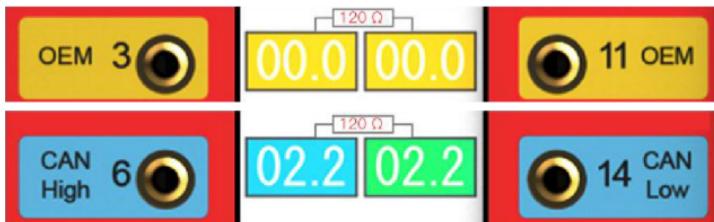
### 5.2 Real-time OBD-II Pin Voltage Monitor (VRMS / true RMS):

Power/ground integrity: e.g., pin 16 (+B) and pins 4/5 (grounds).

Bus activity on CAN / K-Line: checks whether static/dynamic levels looks reasonable; a green background indicates dynamic values.

Pin assignment sanity-check: quickly validates expected wiring on retrofits or suspect harnesses — replacing basic VPP voltage checks.

### 5.3 120 $\Omega$ CAN Termination Switches:



Applies a  $120\ \Omega$  resistance across the CAN pair to compensate for missing termination during single - ECU or small bench networks, improving signal integrity and reducing reflections.

HS-CAN: pins 6  $\leftrightarrow$  14 (standard).

OEM/MS-CAN (if present): pins 3  $\leftrightarrow$  11 (vehicle-dependent).

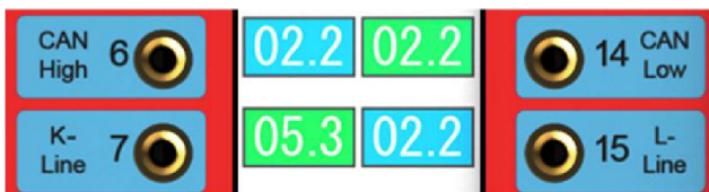
Use termination only for bench/missing-terminator scenarios; keep OFF during normal vehicle use to avoid over-termination.

#### 5.4 Bench Testing Support:

Provides convenient connectivity for IGN/START activation or external wake-up tools so ECUs can be powered and exercised on the bench.

#### 5.5 Signal Status:

Pin background flashing green = dynamic signal.



## 5.6 PIN 16 High/Low Voltage Audible Alarms:

Low-voltage (slow beep):

12 V systems: < 11.8 V

24 V systems: < 23.6 V

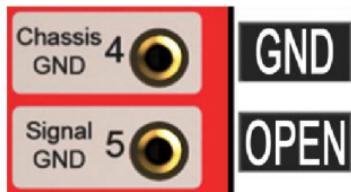
High-voltage (fast beep):

12 V systems: > 15.5 V

24 V systems: > 31 V

## 5.7 Ground Status Indication:

Pins 4 or 5 show OPEN when no ground is detected, and GND when a valid ground is present.



## 5.8 Quick Jumper Function (Technician Use Only):

Allows a trained technician to momentarily bridge selected OBD pins via current-limited paths for OEM-approved procedures (e.g., make-specific communication or synchronization tasks).

## 5.9 Battery Replacement Memory Saver:

Maintains vehicle power (12V / 24V) during battery changes so that vehicle settings are preserved.

## 5.10 Convenient Connectivity:

70 cm/27.5inch extension lead for rapid hookup to other diagnostic or programming tools.

External power input: 9–32 V DC, barrel 5.5 × 2.1 mm. Select 12 V or 24 V to match the vehicle battery or the module under test.

### **Important Safety Notes:**

For professional use. Incorrect pin bridging or inappropriate termination can damage ECUs or wiring.

Pins 3/11 are OEM-defined; only use the MS-CAN terminator when the vehicle actually implements CAN on these pins.

The real-time voltage view is a quick health check and does not replace an oscilloscope for waveform analysis.

**CE RoHS FCC**



**(CE):**2014/30/EU Electromagnetic compatibility, EN IEC 61326-1:2021

**(FCC) :** FCC PART 15B, ANSI C63.4:2014

**(ROHS):**

IEC 62321-3-1:2013, IEC 62321-5:2013,

IEC 62321-4:2013+AMD1:2017, IEC 62321-7-1:2015

IEC 62321-7-2:2017, IEC 62321-6:2015, IEC 62321-8:2017

### **Environmental Protection:**

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment.

When the product becomes completely unserviceable and requires disposal, drain off any fluids (if applicable) into approved containers and dispose of the product and the fluids according to local regulations.

### **WEEE Regulations:**

Dispose of this product at the end of its working life in compliance with the EU Directive on

Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

**WARRANTY:** Guarantee is 12 months from purchase date, proof of purchase which will be required for any claim.

## Information to Use

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**IMPORTANT:** Change or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.