



™ 16-PIN 12V/24V OBD BREAKOUT BOX - CAR, MOTORCYCLE, TRUCK, BOAT, VAN
MODEL NO: VS8813

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear eye protection

1. SAFETY

- ❑ **WARNING!** To prevent personal injury or damage to vehicles and/or the tool, read this instruction manual first and observe the following safety precautions.
- ✓ Always perform automotive testing in a safe environment.
- ✓ Wear safety eye protection.
- ✓ Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- ✓ Operate the vehicle in a well ventilated work area. Exhaust gases are poisonous.
- ✓ Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- ✓ Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- ✓ Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- ✓ Keep a fire extinguisher suitable for petrol/chemical/electrical fires nearby.
- ✗ **DO NOT** connect or disconnect any test equipment while the ignition is on or the engine is running.
- ✗ **DO NOT** use the tester in the presence of static electricity.
- ✓ Keep tester dry, **DO NOT** use in wet locations.

2. INTRODUCTION

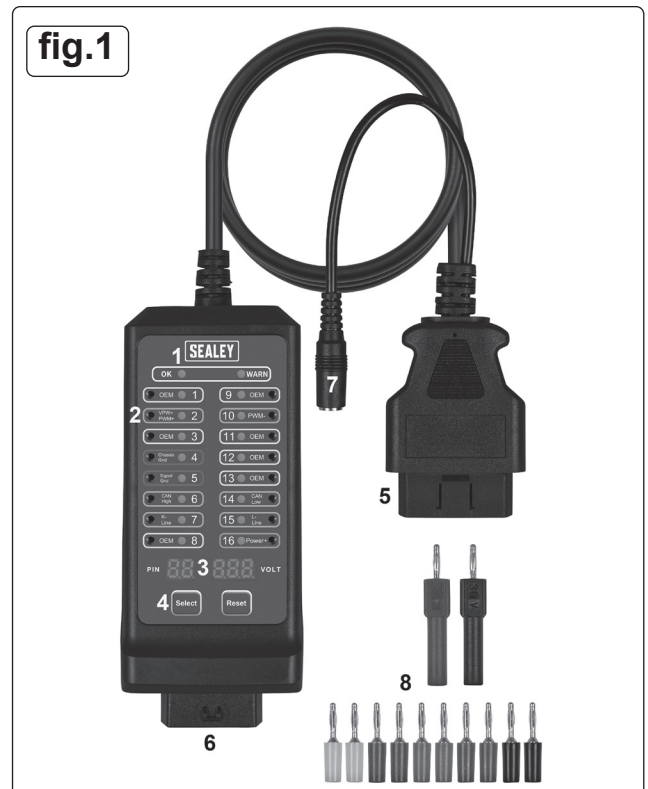
Test the onboard diagnostics port for any faults before connecting other diagnostic devices to the DLC. The breakout box is designed to be connected in series with 16-pin OBDII/EOBDII diagnostic equipment. It can also be connected to multimeters and oscilloscopes. Compatible with 12 and 24V systems. The selectable pin voltage indicator shows the real-time voltage of the selected pin. Communication Protocol Indicator - Pin 6 = CAN H, Pin 14 = CAN L, Pin 2 = VPW+, PWM+, Pin 10 = PWM-, Pin 7 = K_LINE and Pin 15 = L_LINE. Overload protection protects any connected diagnostic equipment from damage.

3. SPECIFICATION

Model No: VS8813
 Weight:..... 0.24kg
 Input Voltage DC:..... 9-32V
 Maximum Load: 2.0A
 Resolution:.....: 0.1V
 Overload Protection: Yes
 Reverse Polarity Protection:..... Yes
 Operating Temperature: 0°-50°C
 Cable Length:..... 700mm

4. FEATURES

1. Signal LED
2. Probe socket
3. Pin and volt display screen
4. Select and reset buttons
5. OBD male
6. OBD female
7. 12-24v input
8. Probes



5. OPERATION

5.1. ALARM (16 pin power pins only)

SLOW ALARM SOUND:

12V system - if voltage is lower than 11.8V denotes low voltage present

24V system - if voltage is lower than 23.6V denotes low voltage present

URGENT ALARM SOUND:

12V system - if voltage is higher than 15.5V denotes high voltage present

24V system - if voltage is higher than 31V denotes high voltage present

5.2. SIGNAL LED fig1.2



OK light on (green): all normal no short circuit, no reverse polarity, no constant voltage on pins 3, 8, 9, 11, 12, 13, voltage on pins 1, 2, 6, 7, 10, 14, 15, (whether constant voltage or pulse signal).



Warning light on (yellow): There is constant voltage on pins: 3, 8, 9, 11, 12, 13, or CAN bus polarity error VCANH<VCANL.

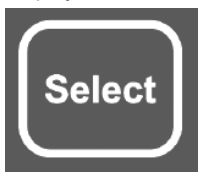
5.3. BUTTONS

5.3.1. RESET BUTTON: To restore default settings, the default pin is 16.



5.3.2. SELECT BUTTON: Used to select the pin for testing voltage.

Press the SELECT button, the pin number will switch to the next pin, and display the current voltage value.



5.3.3. STATUS INDICATING LED Fig.2

VS8813 is suitable for 12V and 24V systems. Once the DLC is inserted, it will begin to check whether there is voltage at the pin.

If voltage is detected the corresponding LED lights will show:

Protocol indicator light 2, 6, 7, 10, 14, 15--green/red LED

Green: Indicates protocol communication (pulse) signal is normal.

Red: Indicates voltage is constant.

According to the communication protocol: Pin6: CANH; Pin14: CANL

Pin 2: VPW+PWM+; Pin10: PWM-

Pin7: K_LINE

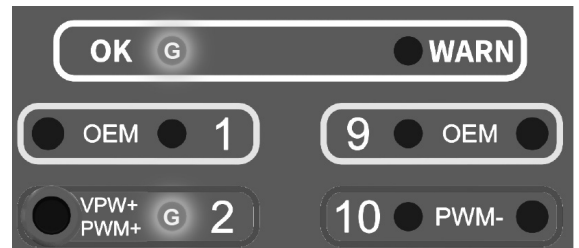
Pin15: L_LINE

When the signal voltage changes is detected, the green LED will flash accordingly.

If the voltage detected by the unit on pins is constant, LED will remain and turn red.



Fig.3: Pin 2 has a pulse signal and a green flashing LED.



5.3.4. **USER DEFINED COMMUNICATION INDICATOR LED**

User-defined communication indicator light 1, 3, 8, 9, 11, 12, 13-- yellow/red LED

Yellow: communication (pulse) signal normal.

Red: Indicates voltage is constant.

If pulse voltage is detected on pins 1, 3, 8, 9, 11, 12, 13, their respective LED turn flickering yellow.

If the voltage on pins is constant, LED will remain red.

Pin 11 has a constant voltage signal, the red LED is permanently on.



Note 1 : Due to the fluctuation of voltage readings in pulse voltage, this unit only displays the peak-to-peak voltage (VPP) of the pulse.

Note 2 : Pin 1 whether pulse or constant voltage, the OK LED is on.

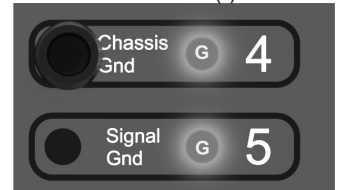
5.3.5. **POWER INDICATOR LED**

Power indicator light PINs 4/5: green/red LED, PIN 16: green LED.

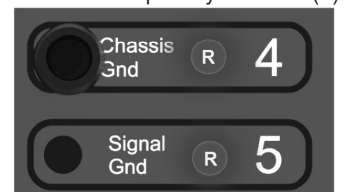
When the breakout box is inserted into the vehicle DLC and reverse polarity is detected at pins 4 and 5, the LED turns red, indicating that the polarity is incorrect.


When the polarity is correct 16 PIN is lit green, otherwise it will not be lit.


Green: correct earth (-)



Red: reverse polarity detected (+)



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.

ENVIRONMENT 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 any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.
Important: No Liability is accepted for incorrect use of this product.
Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

