Notes On Oscilloscope Extension Accessory Kit

6-way Breakout Leads

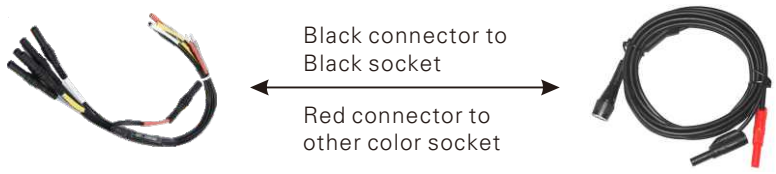
Applications:

Allows the oscilloscope to test most of the sensors and actuators on all makes and models of vehicle, including MAP, temperature, throttle position and airflow sensors, fuel pumps, primary ignition circuits and fuel injectors, without having to strip or pierce any insulation and with no risk of damage to connectors.

Each lead has 6 blades wired to 6 sockets, allowing you to insert it between a plug and socket pair, other ends are 6 "banana" (4mm) sockets.

Connection:

It needs to work with the BNC to 4mm Test Leads.



COP (Coil-on-Plug) Extension Cord

Applications:

Coil-on-Plug extension cord (including earth cord) allows you to take accurate secondary ignition measurements on secondary-direct (Coil-on-Plug) ignition systems. It can be applied in the condition that there are no, or limited access to any spark plug leads.

Generally it needs to work with the secondary ignition pick-up.

COP (Coil-on-Plug) and Signal Probe

Applications:

The COP coil-on plug and signal probe can catch the ignition waveform of automobile engine easily. The ignition waveform is a window, through which we can see what happened in the engine combustion chambers. It can be applied in the following situations:

1. Check whether the ignition plug needs to be replaced or clean.
2. Check whether fuel injector in electronic fuel injection system woks well.
3. Check whether there is any problem in the leakproofness of air cylinder.
4. Check whether the gap between ignition plugs gets larger.
5. Check whether the electrode shape of ignition plug becomes sharp.
6. Check whether there is too much oil pollution or carbon deposition on the ignition plugs.
7. Check whether the insulating property of ignition plug gets worse.
8. Check whether there is any problem in the power supply system of storage battery.

Specifications:

Attenuation: 1:5000

Operating temperature: 0°C ~ 50°C, 70% R.H.

Storage temperature: -20°C~+70°C, 80% R.H.

Warning:

- To avoid injury, keep the probe away from moving parts, such as the alternator drive belt and cooling fans.
- To present electric shock do not use if the probe's sensor plate's insulation shows signs of damage.

AC/DC Current Clamp (CC-650 & CC-65)

Applications:

Enables the oscilloscope to measure the current waveforms.

Its current transducer is composed by perm alloy and hall element, which linearly transform the AC or DC current to AC or DC current voltage.

CC-650:

AC/DC frequency range: Up to 400Hz

Effective Measurement Range: 20mA to 650A DC

CC-65:

AC/DC frequency range: Up to 20Hz

Effective Measurement Range: 20mA to 65A DC

Notes:

*1. Set the power switch from “OFF” to “ON” position, that is to set the range to 1mV/100mA or 1mV/10mA. Then the power LED will light up, indicating that the clamp is switched on.

- When the CC-650 current clamp range is set to 1mV/1A, the actual current is one thousand times of the measured current whose unit is mA. For example, the measured current is 5mV and the actual current of the current-carrying conductor is 5X1000=5000mA.
- When the CC-650/CC-65 current clamp range is set to 1mV/100mA, the actual current is one hundred times of the measured current whose unit is mA. For example, the measured current is 5mV and the actual current of the current-carrying conductor is 5X100=500mA.
- When the CC-65 current clamp range is set to 1mV/10mA, the actual current is ten times of the measured current whose unit is mA. For example, the measured current is 10mV and the actual current of the current-carrying conductor is 10X10=100mA.

*2. When the low battery LED illuminates red, it indicates the battery is fully discharged. Please replace the battery in time.

*3. By default, no battery is included with the clamp. Before installing/replacing the battery, please use the Phillips screwdriver to open the battery compartment.

*4. Before measuring the DC current, it is necessary to turn the zero adjustment knobs on the clamp until the current channel marker restores to the reference point. Also set the couple mode to DC to measure the DC current.

Connection:

Connect the BNC connector to the CH1/CH2/CH3/CH4 of the oscilloscope, and then clamp the jaws around the current-carrying conductor.

Warning:

It is forbidden to measure the conductor whose insulation has break down or wear down, in order to avoid doing harm to you.

Specifications:

Captured conductor diameter size: 30mm maximum (for CC-650) / 9mm maximum (for CC-65)

Operating temperature: 0°C ~ 50°C, 70% R.H.

Storage temperature: -20°C~+70°C, 80% R.H.

Battery type: 9V DC, NEDA 1604, 6F22, 006P

Battery life: 100 hours typical with carbon-zinc

Output: coil cable with BNC connector

Safety Information:

The instrument complies with Class II, overvoltage CAT II of the EN 61010-1, and EN 61010-2-032 standards. The pollution of current clamp is degree 2 in accordance with IEC 664 indoor use. If the equipment is used in a manner not specified, the protection provided by the equipment may be impaired.

This product complies with the requirements of the following European Community Directives: 89/336/EEC (Electromagnetic Compatibility) and 73/23/EEC (Low voltage) as amended by 93/68/EEC (CE marking).