

TA010 20:1 Attenuator



Description

The TA010 has been designed to allow fuel injector and primary ignition waveforms to be measured using Pico Oscilloscope products.

The TA010 is a passive 20:1 attenuator. This means that a 20 V signal at its input will appear as a 1 V signal on the output. As the signal is attenuated, the TA010 allows voltages higher than the ± 20 V input range of the Pico oscilloscope to be measured (but see safety precautions below).

The TA010, when used with Pico oscilloscopes, provides increased input protection against overloads when working with inductive signals such as injectors and primary ignition.

Under no circumstances attempt to use this attenuator to measure secondary ignition (HT) waveforms.

How to use

The TA010 connects in series between the oscilloscope and the test lead (photograph on right). The TA010 is only suitable for use with input channel A or B. It is not suitable for use with the external trigger input.

PicoScope can be configured to work with a 20:1 attenuator probe by selecting first the **Settings** menu and then the **Probes** menu. Select 20:1 attenuation for the channel the TA010 is plugged into.

Safety precautions

The TA010 is designed for measuring automotive signals such as fuel injector and primary ignition voltages (nominally 6, 12 or 24 volts). This attenuator must not be used to measure mains voltages or other hazardous voltages.

Fuel injector and primary ignition signals contain short-duration high-voltage spikes, or "inductive kicks". We therefore recommend the use of two ground connections between the oscilloscope and the vehicle under test. One ground connection is made using the measurement test lead. A second ground lead should be connected between one of the BNC connectors on the oscilloscope and a secure ground point on the vehicle such as the negative terminal of the battery. Misuse or failure to follow these warnings may cause damage to the product and computer and could cause injury to yourself and others.

TA010 specifications

Attenuation	20:1
Input impedance	1.053 M Ω
Input capacitance	11 pF
Bandwidth	100 MHz (-3 dB)
Max input	300 V



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