

# TiePie MM3000 Milli Ohm Meter





## TiePie MM3000

The MM3000 is a unique extension to your ATS Scope. MM3000 in combination with the high precision and low impedance enables an ATS Scope to measure in milli Ohms. An ordinary straight wire has an internal resistance, a resistance lower than any multimeter can detect on its lowest Ohm scale setting.

#### **MEASURE**

MM3000 is ideal for measuring individual stator coils, ignition coils, common rail injectors, fault finding in EV electric motors and other very low resistance components ( $< 2.5 \Omega$ ) such as Star Delta configurations.





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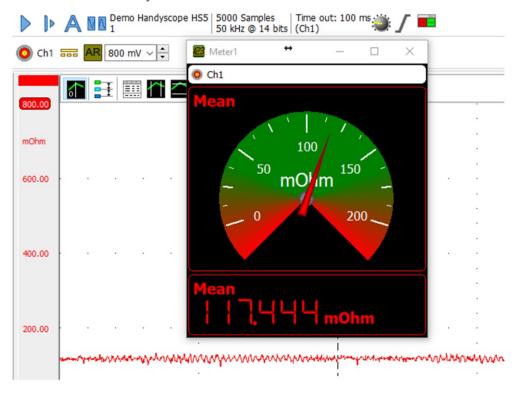
#### **HOW IT WORKS**

The MM 3000 determines resistance by running a current through a component and then measures the voltage across the component. Special Kelvin clips are used to perform a 4-wire sensing measurement. This is an electrical impedance measuring technique that uses separate pairs of current-carrying and voltage-sensing electrodes.

This allows to make more accurate measurements than the simpler and more usual 2-wire sensing measurement. The separation of the current and voltage electrodes eliminates the lead and contact resistance from the measurement. This is an advantage for precise measurement on low resistance components.

#### **FAULT FINDING**

Find poor connections in 12V wiring even when there is no load on the system.



#### **COMMON RAIL INJECTORS**

Checking a set of common rail Diesel injectors becomes a super precise. DMM on this injector read 0.7  $\Omega$ 



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#### **SUPPORT & ASSISTANCE**

At AECS we research tools like the MM-3000 thoroughly. We know what you can achieve with the tools and are able to assist you in diagnostics and tool setup.

Use with your favourite scope from the ATS range, it is the perfect addition.

Let us know how we can help you or if you need further infomation. Get in contact on sales@aecs.net or 06 874 9077.

#### **TECH SPECS: TIEPIE MM3000**

Input range	0 Ω - 2.5 Ω
Accuracy	1%
Output ratio	$1m\Omega = 1mV$
Output voltage scale	0V - 2.65V (use 4V scale on scope)
Power	1 x 9V battery
Weight	235 gram
Dimension	145 x 85 x 25 mm
Connectivity	
In (measurement leads)	2 x Kelvin clamps on 850mm leads
Out	2 x 4mm banana sockets