

500ADM Current Injection System



Features

- Primary injection up to 500A
- 0-4V 500A and 0-16V 40A outputs
- True RMS digital metering
- Memory ammeter
- Multi-function timing system
- Bright, clear LED displays
- Thermal and over-current protection
- Automatic switch-off at end of test
- Highly compact and portable
- Dual supply voltage operation
- Shoulder strap

T&R Test Equipment is a market leader in the field of current injection equipment. The range includes secondary injection units with 100A output capability up to 6000A primary injection systems. All have true RMS metering, a flexible timing system, and an easy to understand user interface.

The 500ADM is an extremely compact and portable primary current injection system with a 500A output capability. The unit is ideally suited to all low power primary injection tasks requiring up to 500A for 1 minute. Where higher currents and powers are required for primary injection, 6kVA and 20kVA primary injection systems are available. The features of each product line are shown below.

Unit type	Power rating	Max. current
500ADM	2kVA	500A
PCU1/E+LU3000	7kVA	3000A
PCU2/E+LU6000	20kVA	6000A

The PCU1/E and PCU2/E systems have separate control and loading units, allowing a wide range of load conditions to be covered with different loading units.

PCU1/E, LU500 and LU3000



The unit has two outputs, allowing injection of currents as low as a few hundred milliamps and up to 500A. Voltages up to 16V are available on the 40A output, allowing higher impedance trips to be tested. Four true RMS metering ranges are provided, allowing the full scale of the meter and trip level to be set independently of the selected output. Industry standard connectors are used on all inputs and outputs for convenience, reliability and safety.

The 500ADM is comprehensively protected by electronic overcurrent and thermal trips.

The timing system is very flexible without compromising ease of use, allowing trip times, reset times and reclose times to be quickly measured to a high degree of accuracy. Two contact inputs are provided, each of which may be triggered by a volt-free contact or a dc voltage. The contact inputs auto-sense for normally open or normally closed contacts.

The 500ADM can be used to test many devices including:

- Circuit breakers
- Primary injection of over-current relays
- Auto-reclosers
- MCB's

The unit can also be used for current transformer ratio testing and as a dual channel stand-alone timing system.



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500ADM Specification

Main Output

The main output on the unit has two taps, allowing the selection of output voltages up to 16V and output currents up to 500A.

Range	Continuous	5 minutes	1 minute
0-4V*	125A	250A	500A
0-16V	10A	20A	40A

*The output of the unit is restricted to 1kVA (2V at 500A or 4V at 250A) when operating from a 115V supply.

Metering

The output is metered by a digital true RMS system with a memory ammeter - whenever the output is switched off, the current reading is held on the display.

Range	Resolution	Trip current	Accuracy
20.00A	0.01A	24A	±0.6%rdg+6d
50.00A	0.01A	60A	±0.6%rdg+6d
200.0A	0.1A	240A	±0.6%rdg+6d
500.0A	0.1A	600A	±0.6%rdg+6d

A current trip is automatically set to 120% of full scale of the selected metering range to protect the device under test.

Timing System

Range	0-999.999s
Resolution	1ms
Accuracy	±0.01%rdg+1d

The contact circuit has an open circuit voltage of 24Vdc and a short circuit current of 100mA. Each contact circuit will auto-select for normally open or normally closed contacts. A DC voltage of 24-240Vdc may also be used to trigger either timer channel.

The following functions are provided:

Mode	Timer Start	Timer Stop
Off	Timer inactive	Timer inactive
Internal start	Press 'ON'	Contact 1 or 2
Single contact	Contact 1	Contact 1
Dual contact	Contact 1	Contact 2
Current 1 & 2**	Current > 20% of range	Current < 20% of range

**The output will only stay energised when the 'on' pushbutton is pressed in Current 1 mode if the load current is >20% of the selected metering range. In Current 2 mode, the output will stay energised regardless of the load current flowing.

The output is automatically switched off at the end of the test to safeguard the relay under test.

Protection and Safety

The unit is protected by electronic over current and thermal trips on the outputs, and fuses on the input and regulator. The contact inputs are fuse protected. An earth terminal is provided for connection to a local earth.

The unit is designed to comply with BSEN61010, and is CE marked.

Supply Requirements

115V -6% +10% 50/60Hz 1ph 1200VA max*
230V±10% 50/60Hz 1ph 2300VA max

*The output of the unit is restricted to 1kVA (500A at 2V or 250A at 4V) when operating from a 115V supply.

Temperature Range

Storage -20°C to 60°C
Operating 0°C to 45°C

Dimensions

340mm x 230mm x 230mm

Weight

20.0kg

Accessories

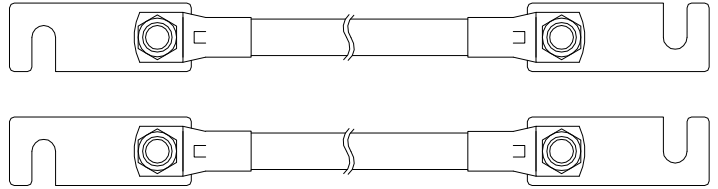
Operating manual, mains lead, spare fuse set and carrying strap.

Optional Accessories

Filter unit, 500ADM-AL Output lead set

Optional Lead Set specifications

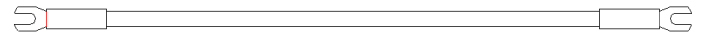
An optional lead set is available for the 500ADM in lengths between 1m and 5m. The leads consist of double insulated 70mm² welding cable terminated in copper bars at both ends.



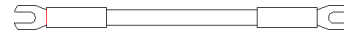
In addition, the 100AL lead set is also supplied with the 500ADM-AL, containing a range of leads for low current injection and timing. The 100AL includes the following parts supplied in a tough protective pouch:

100A Leads

2x5m FORK-FORK



1x0.5m FORK-FORK

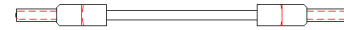


25A Leads

2x5m 4mm PLUG-4mm PLUG



2x0.5m 4mm PLUG-4mm PLUG



TIMER Lead

1x5m 2x4mm PLUG-2x4mm PLUG



Note: Due to the company's continuous research programme, the information above may change at any time without prior notification. Please check that you have the most recent data on the product.

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