

# 750ADM Mk4

## Primary Current Injection Test Set



### Features

- Primary injection up to 750A
- 4V output\*
- 16V 40A output for secondary injection
- True RMS memory ammeter with single cycle capture
- Multi-function timing system
- Large back-lit liquid crystal display
- Thermal and over-current protection
- Automatic switch-off at end of test
- Compact and portable
- Data storage to USB memory key including waveform & harmonics
- USB keyboard/printer interface
- Automatic mains voltage selection\*

\*See specifications overleaf

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 750ADM Mk4 is a compact, rugged primary current injection system with a 750A output capability. The 750ADM Mk4 has a maximum no load output voltage of 5V. The unit is ideally suited to all low power primary injection tasks requiring up to 750A for short periods.

Unit type	Max. power	Max. current
750ADM Mk4	3kVA	750A
PCU1-SP Mk3 + NLU5000	11.5kVA	3kA 5min/5kA 40s
CU-Ps Mk2 + LU6000	20kVA	6kA

Where higher currents and powers are required for primary injection, 11kVA and 20kVA primary injection systems are available. The PCU1-SP 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-SP Mk3 and NLU5000

The unit has two outputs, allowing injection of currents as low as a few hundred milliamps and up to 750A. 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. The metering has a capture time of less than 20ms, allowing the rms of a single cycle to be accurately measured. Industry standard connectors are used on all inputs and outputs for convenience, reliability and safety.

The 750ADM Mk4 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 750ADM Mk4 can be used to test many devices including:

- Circuit breakers
- Primary injection of over-current relays
- Auto-reclosers
- MCB's
- CT ratio (with external meter for secondary current)

## 750ADM Mk4 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 750A. The unit operates at slightly reduced ratings when operating from a 115V supply.

	115V	230V	
750A Output	Open circuit voltage	3.5V	5.0V
	Voltage at 500A	2.8V	4V
	Continuous current	125A	125A
	5 min on	250A	250A
	1 min on	440A	500A
	Max current	500A	750A
40A Output	Max current on time	10s	20s
	Open circuit voltage	10V	16V
	Full load voltage	7.5V	10V
	Continuous current	10A	10A
	1 min on	40A	40A

### 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	Accuracy	Capture time
20.00A	0.01A	21A	$\pm 0.5\%rdg+5d$	20ms
50.00A	0.01A	53A	$\pm 0.5\%rdg+5d$	20ms
200.0A	0.1A	210A	$\pm 0.5\%rdg+5d$	20ms
750A	1A	788A	$\pm 0.5\%rdg+2d$	20ms

A current trip is automatically set to 105% of full scale of the selected metering range to protect the device under test.

### Timing System

Range	0-999.999s/9999.99s/99999.9s auto-ranging
Resolution	1ms/10ms/100ms
Accuracy	$\pm 0.01\%rdg+2d$ (except current mode) $\pm 0.01\%rdg+4d$ (current operated mode)

The contact circuits have an open circuit voltage of 24VDC and a short circuit current of 20mA. 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
Single contact	Contact 1	Contact 1
Dual contact	Contact 1	Contact 2
Current operated	Current > 20% of range	Current < 20% of range

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

### Storage of Results

All test results from the 750ADM Mk4 can be stored in a USB memory key. The unit has a real-time clock to time and date-stamp all results. To log the results, first enter a comment for your results using the optional keyboard, and then select AUTO STORE.

Whenever the timer stops, the time, current and all other parameters are added to a .csv file on the USB key. You can then view the current set of results on the display or take the USB key out and open the file on your PC. All results are stored in a folder on the USB key named with the test date in a file named with the time.

### Supply Requirements

Auto-selecting

115V $\pm 10\%$  50/60Hz 1ph 1900VA max

230V $\pm 10\%$  50/60Hz 1ph 3900VA max

### Temperature Range

Storage -20°C to 60°C

Operating 0°C to 45°C

### Dimensions

560 x 456 x 265mm

380 x 314 x 221mm

### Weight

27.4kg Pelican Case

23.5kg Metal Case

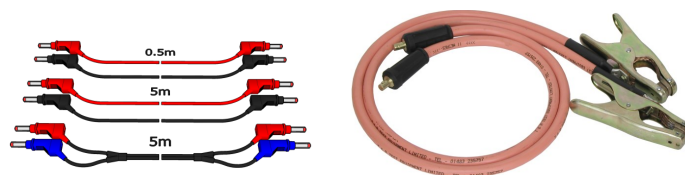
### Accessories

Operating manual, mains lead, and carrying strap.

### Optional 750ADM-AL Lead Set specifications

A range of output leads are available to complement the 750ADM Mk4. The standard 750ADM-AL lead set is 3m long, recommended for use with a 230V Supply. A 1.5m lead set is also available, and is recommended when operating from a 115V supply. The leads consist of double insulated 95mm<sup>2</sup> welding cable terminated in Dinse high current connectors at the 750ADM end and high current welding clamps at the load end.

Low current timer leads are included with the lead set:



The 3m lead set weighs 9.8kg including high current leads and timer leads.

### Protection and Safety

The unit is protected by electronic over current and thermal trips on the outputs, and circuit breakers on the input and power circuit. An earth terminal is provided for connection to a local earth when testing in a substation environment. The unit is designed to comply with BSEN61010, and is UKCA marked.

