

# 100ADM Current Injection System mk3



## Features

- Clear and simple user interface
- 0-100A output current
- True RMS digital metering with memory ammeter
- Multi-function timing system
- Auxiliary DC output
- Auxiliary AC output
- Large back-lit liquid crystal display
- Thermal and over-current protection
- Compact and portable
- Automatic mains voltage selection
- Shoulder carry 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 100ADM mk3 provides commissioning and maintenance engineers with a flexible system for testing protective systems. It has an easy to understand panel layout and a simple user interface. The status of every function can be seen at a glance, and there are no complex menus to navigate.

*The back-lit display on the 100ADM mk3 is bright and clear with a wide viewing angle. The results of a test can be seen here as they appear on the display*

A stabilised DC supply is provided to power the relay under test, along with an independently switched and isolated 110V AC output.

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 timing channels are provided, allowing the timer to be used independently of the output.

The unit has a range of outputs allowing injection of currents as low as a few mA and as high as 100A. Voltages up to 240V are available on the main outputs, allowing high impedance current relays and voltage relays 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 safety connectors are used on all inputs and outputs for convenience, reliability and safety.

The 100ADM mk3 is comprehensively protected by overcurrent, duty cycle and thermal trips, and keeps the user fully informed of any trip condition.



The 100ADM mk3 can be used to test many types of single phase secondary protection including:

- Over and under current relays
- Earth fault relays
- IDMT relays
- Miniature circuit breakers
- Over and under voltage relays
- Power relays
- Auto-reclosers
- Tripping relays
- Time delay relays
- Thermal relays
- Voltage regulating relays

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# 100ADM mk3 Specification

## Main Output

The main output on the unit has four taps, allowing the selection of output voltages up to 240V and output currents up to 100A.

Range	Continuous	5 minutes	1 minute
10V	33A	67A	100A
35V	10A	20A	30A
100V	3A	6A	10A
240V	1A	2A	3A
240V DC	1A	2A	3A

The above intermittent on times must be followed by an off time of 15 minutes, and are based on an ambient temperature of 25°C.

## Auxiliary AC and DC Outputs

A switched, isolated auxiliary DC supply is available to power the relay under test. The output is current limited. The AC output is isolated, switched and fuse protected.

DC stabilised output	24V	1.0A
	48V	1.0A
	60V	1.0A
	110V	0.23A
	220V	0.23A
Fixed AC output	110Vac	300mA

## Optional Capacitor

An optional 10µF capacitor is available to allow basic phase shifting of the 110V ac output. This must be specified at the time of ordering.

## Metering

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

Range	Resolution	Trip current	Accuracy
2.000A	0.001A	2.2A	±0.5%rdg+5d
10.00A	0.01A	11A	±0.5%rdg+5d
20.00A	0.01A	22A	±0.5%rdg+5d
100.0A	0.1A	110A	±0.5%rdg+5d

A current trip is automatically set to 110% of full scale of the selected metering range to protect the device under test.

## Supply Requirements

115V±10% 50/60Hz 1ph 1100VA max

230V±10% 50/60Hz 1ph 1100VA max

The correct range is automatically selected by the unit.

## Temperature Range

Storage	-20°C to 60°C	Operating	0°C to 45°C
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## RS232

An RS232 port is provided to allow connection to a PC or a printer. ADMlog software is available as an optional extra to log results from the 100ADM mk3 and transfer them to a spreadsheet.

## T&R Link

The T&R Link output allows a T&R DVS3 mk2 voltage source to phase lock to the 100ADM mk3 current.

## Timing System

Range	0-999.999s
Resolution	1ms
Accuracy	0.01%rdg+2d (+4d current operated mode)

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

The following functions are provided:

Mode	Timer Start	Timer Stop
Internal start	Press 'ON'	Contact 1 or 2
Single contact	Contact 1	Contact 1
Dual contact	Contact 1	Contact 2
Current operated	Current > 10% of range	Current < 10% of range

Pulse mode is used for setting the current level in devices sensitive to heating..In this mode current is injected for 400ms and the current recorded.

## Protection and Safety

The unit is protected by electronic over current, duty cycle trips and thermal monitoring on the outputs. Fuses protect the input and regulator. The auxiliary AC output is fuse protected, and the stabilised DC output is protected by an electronic trip and fuse. An earth terminal is provided for connection to a local earth. The unit is designed to comply with BSEN61010 and is CE marked.

## Dimensions

380mm x 314mm x 221mm

Including handle and corner protectors

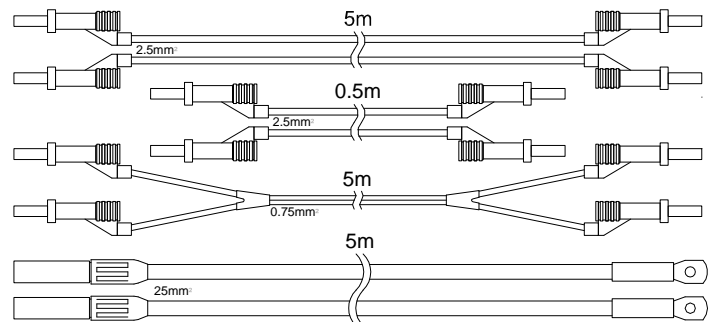
## Weight

20.0kg

## Lead Set specifications

The 100ADM mk3 is supplied with a lead set consisting of:

- 2 x 5m 25mm<sup>2</sup> 100A leads terminated in M10 ring crimps
- 2 x 5m 2.5mm<sup>2</sup> 25A leads terminated in 4mm plugs
- 2 x 0.5m 2.5mm<sup>2</sup> 25A leads terminated in 4mm plugs
- 1 x 5m 2 core auxiliary lead terminated in 4mm plugs



The lead set is supplied in a plastic carrying case. Lead set weight 5.3kg including case.

## Accessories

Operating manual, o/p lead set, mains lead, spare fuses

## Optional Accessories

Filter unit, RB10 resistor box, Printer, ADMlog software, pushbutton lead for runback timing on disc induction relays.

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