

# 750ADM 750ADM-H

# Current Injection Systems



## Features

- Primary injection up to 750A
- 2.8V output (750ADM)\*  
4V output (750ADM-H)\*
- 16V 40A output for secondary injection
- True RMS digital metering
- Memory ammeter
- 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
- 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 and 750ADM-H are compact, rugged primary current injection systems with a 750A output capability. The 750ADM has a maximum no load output voltage of 3.5V and the 750ADM-H has a maximum voltage of 5V. The units are ideally suited to all low power primary injection tasks requiring up to 750A for short periods.

The units have 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. Industry standard connectors are used on all inputs and outputs for convenience, reliability and safety.

The 750ADM and 750ADM-H are 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 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.

| Unit type     | Max. power rating | Max. current |
|---------------|-------------------|--------------|
| 750ADM        | 2kVA              | 750A         |
| 750ADM-H      | 3kVA              | 750A         |
| PCU1/E+LU3000 | 7kVA              | 3000A        |
| PCU2/E+LU6000 | 20kVA             | 6000A        |

Where higher currents and powers are required for primary injection, 7kVA and 20kVA primary injection systems are available. 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

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## 750ADM/750ADM-H 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.

|                     | 750ADM               |      | 750ADM-H |      |      |
|---------------------|----------------------|------|----------|------|------|
|                     | 115V                 | 230V | 115V     | 230V |      |
| 750A Output         | Open circuit voltage | 2.5V | 3.5V     | 3.5V | 5.0V |
|                     | Voltage at 500A      | 1.9V | 2.8V     | 2.8V | 4V   |
|                     | Continuous current   | 125A | 125A     | 125A | 125A |
|                     | 5 min on             | 250A | 250A     | 250A | 250A |
|                     | 1 min on             | 500A | 500A     | 440A | 500A |
|                     | Max current          | 750A | 750A     | 500A | 750A |
| Max current on time | 10s                  | 30s  | 10s      | 20s  |      |
| 40A Output          | Open circuit voltage | 10V  | 16V      | 10V  | 16V  |
|                     | Full load voltage    | 7.5V | 10V      | 7.5V | 10V  |
|                     | Continuous current   | 10A  | 10A      | 10A  | 10A  |
|                     | 1 min on             | 40A  | 40A      | 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 current | Accuracy    |
|--------|------------|--------------|-------------|
| 20.00A | 0.01A      | 21A          | ±0.5%rdg+5d |
| 50.00A | 0.01A      | 53A          | ±0.5%rdg+5d |
| 200.0A | 0.1A       | 210A         | ±0.5%rdg+5d |
| 750A   | 1A         | 788A         | ±0.5%rdg+2d |

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   |
| Resolution | 1ms  |
| Accuracy   | ±0.01%rdg+2d (all modes except current operated)<br>±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.

### 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 750ADM and transfer them to a spreadsheet.

### T&R Link

The T&R Link allows a T&R DVS3 mk2 voltage source to phase lock to the 750ADM current.

### Supply Requirements

|                      | 750ADM     | 750ADM-H   |
|----------------------|------------|------------|
| 115V±10% 50/60Hz 1ph | 2000VA max | 1900VA max |
| 230V±10% 50/60Hz 1ph | 3000VA max | 3900VA max |

The correct voltage range is automatically selected by the unit.

### Temperature Range

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

### Dimensions

380mm x 314mm x 221mm

### Weight

21.5kg (750ADM) 23.5kg (750ADM-H)

### Accessories

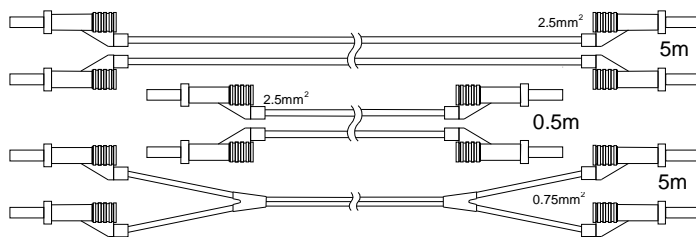
Operating manual, mains lead, spare fuse set and carrying strap.

### Optional 750ADM-AL Lead Set specifications

A range of output leads are available to complement the 750ADM. 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 also included with the lead set:



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

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

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