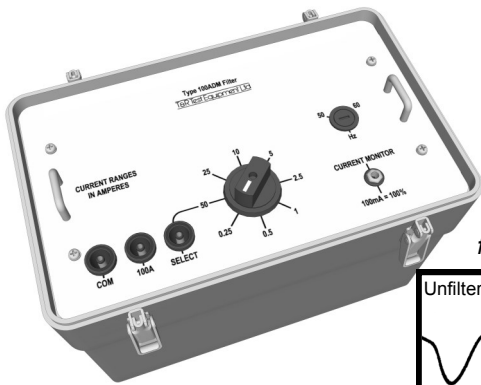
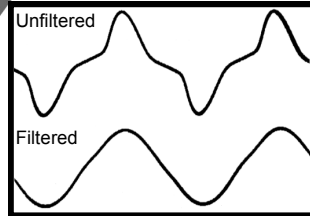


# 100ADM-F Current Filter Unit



Current waveforms for disc induction relay



## Features

- Forces test current to a sinusoid
- Improves timing accuracy when testing electromechanical relays
- 0.25A-100A ranges
- High overload capability
- 50/60Hz operating frequency
- High efficiency

The 100ADM-F filter unit reduces the level of current harmonics when testing electro-mechanical protection relays. It is designed for use with our range of secondary injection test sets.

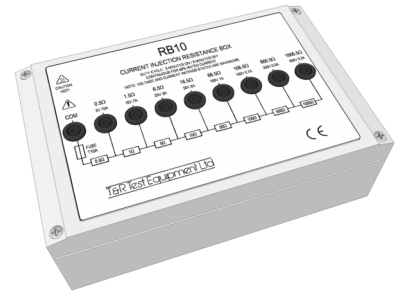
All electromechanical protection relays have iron cores that saturate and distort the test current under high overload test conditions. This distortion causes significant errors in the measured trip time of these relays during testing. Distortion of the waveform can be a particular problem with disc induction type over-current and sensitive earth fault relays.

For example, testing a CDG11 disc induction over-current relay without a filter causes significant timing errors. The results below show the errors for a 1.3s 1A CDG11 over-current relay on its 0.5A plug setting, tested at 5A.

	Current	THD	Trip time	Error
No Filter	5A	34.5%	1.54s	18.5%
With Filter	5A	6.12%	1.30s	0%

The 100ADM-F has nine current ranges covering 0.25A to 100A and is supplied in an insulated case complete with protective cover and carrying strap.

# RB10 Resistor Box



## Features

- Improves current control into low impedance loads
- Particularly suitable for solid state relays
- 0.5Ω—1666.5Ω in 8 steps
- Maximum current 0.2—10A
- Thermal cutout
- Compact & lightweight

The RB10 resistor box is used in conjunction with a current injection unit when testing low impedance relays and trips, allowing finer control of the current. The unit is designed for use with the 100ADM and 200ADM, but may be used with any suitable current source.

The unit has eight resistance ranges with a maximum power dissipation of 50W for any one resistor.

Range	Continuous current	Intermittent current*	Maximum voltage
0.5Ω	5A	10A	5V
1.5Ω	3.5A	7A	10V
6.5Ω	1.5A	3A	25V
16.5Ω	1A	2A	50V
66.5Ω	0.5A	1A	100V
166.5Ω	0.35A	0.7A	150V
666.5Ω	0.15A	0.3A	250V
1666.5Ω	0.1A	0.2A	250V

\*3 minutes on/8 minutes off

The RB10 is supplied in a robust aluminium case, and all connections are made by industry standard 4mm safety sockets.

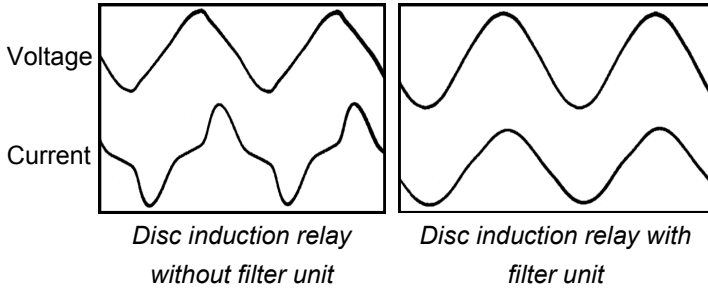
The RB10 has fuse and over-temperature protection.



## 100ADM-F Specification

### Current Waveforms

The waveforms below show the current and voltage for a disc induction type relay supplied from a 100ADM.



### Current Ranges and Ratings

Range	Continuous rating	5 min on/ 15 min off
0.25A	0.125A	0.25A
0.5A	0.25A	0.5A
1A	0.5A	1A
2.5A	1.25A	2.5A
5A	2.5A	5A
10A	5A	10A
25A	12.5A	25A
50A	25A	50A
100A	50A	100A

### Frequency

The unit may be used at either 50Hz or 60Hz, selectable by a switch on the front panel.

### Range Selection

The lower ranges (0.25A-50A) are selected by a switch, and the highest current range (100A) is selected by a terminal.

### Current Monitor

A current monitoring output is provided that gives an output of 0-100mA corresponding to the rated current for the range.

### Filter Unit Impedance

Range	Impedance ( $\Omega$ )			
	50Hz	150Hz	250Hz	350Hz
0.25A	880 $\Omega$	17.5k $\Omega$	30.4k $\Omega$	41.5k $\Omega$
0.5A	220 $\Omega$	4.38k $\Omega$	7.65k $\Omega$	10.3k $\Omega$
1A	47.7 $\Omega$	950 $\Omega$	1.65k $\Omega$	2.25k $\Omega$
2.5A	7.8 $\Omega$	150 $\Omega$	250 $\Omega$	360 $\Omega$
5A	1.94 $\Omega$	38 $\Omega$	65 $\Omega$	90 $\Omega$
10A	510m $\Omega$	9.5 $\Omega$	16.5 $\Omega$	22.5 $\Omega$
25A	85m $\Omega$	1.5 $\Omega$	2.5 $\Omega$	3.6 $\Omega$
50A	22m $\Omega$	380m $\Omega$	650m $\Omega$	900m $\Omega$
100A	5.5m $\Omega$	95m $\Omega$	165m $\Omega$	225m $\Omega$

### Temperature Range

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

### Dimensions

340mm x 230mm x 330mm

### Weight

15.6kg

### Accessories

Current monitor plug and lead

### Optional Accessories

100AL lead set

## RB10 Specification

### Resistance Ranges and Ratings

The RB10 has eight resistance ranges.

Range	Continuous current	Intermittent current*	Maximum voltage
0.5 $\Omega$	5A	10A	5V
1.5 $\Omega$	3.5A	7A	10V
6.5 $\Omega$	1.5A	3A	25V
16.5 $\Omega$	1A	2A	50V
66.5 $\Omega$	0.5A	1A	100V
166.5 $\Omega$	0.35A	0.7A	150V
666.5 $\Omega$	0.15A	0.3A	250V
1666.5 $\Omega$	0.1A	0.2A	250V

\*3 minutes on/8 minutes off

### Range Selection

The appropriate range is selected by 4mm safety sockets on the front panel of the unit.

### Temperature Range

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

### Protection

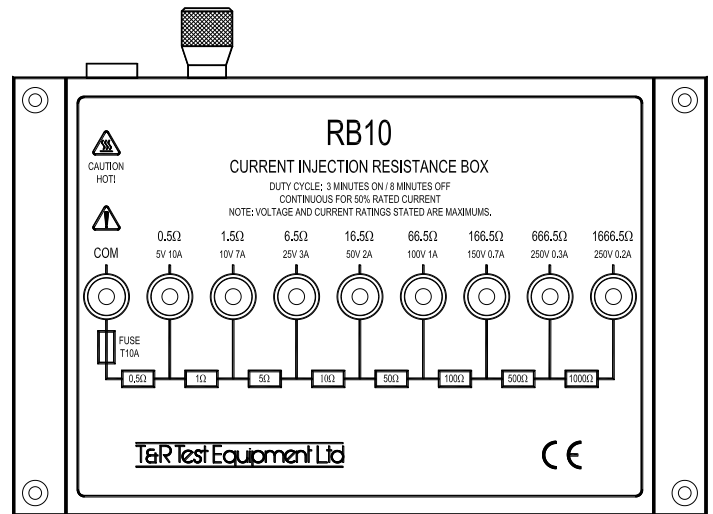
The unit has over-temperature protection and the common terminal is fused with a T10A fuse.

### Dimensions

220mm x 163mm x 72mm  
including earth terminal

### Optional Accessories

S000-0534 5m low current lead set



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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