



4.5 kilowatts Current Load Simulator  
-  
USER'S GUIDE



**MADE**

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## RÉPERTOIRE DES MODIFICATIONS

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# 1. SAFETY INFORMATION

## 1.1. Safety advice

Please read this manual carefully before unpacking, configuring or using this equipment. Note all indications of danger and other warnings. The failure to observe these recommendations could result in serious injury to the operator or could damage the equipment. To ensure that the protection provided by this equipment is appropriate, do not use or install it other than in accordance with the conditions indicated in this manual.

Do not dismantle the cases. This operation is limited exclusively to personnel qualified by MADE.

## 1.2. Using these security notes :



**DANGER** : Indicates a situation eminently or potentially dangerous that, if not avoided, would cause serious or deadly injuries.

**ATTENTION** : Indicates a potentially dangerous situation that could cause superficial or moderate injuries.

**Remark** : Information that merits attention.

## 1.3. Warning labels

Read all labels and wording affixed to the instrument. Bodily injuries or equipment damage could occur if these instructions are not respected.

	Symbol requiring reference to the instruction manual for instructions concerning operation or safety recommendations.
	Classe II – reinforced insulation without accessible metal part
<b>IP 22</b>	Sealing protection level - IP Standard
<b>IK 07</b>	Shocks protection level - IK Standard

## 2. Overview

The 4.5 kilowatts current load simulator aims to load the electrical network to help testing industrial electricity meters during installation. It helps to reduce the response time of operators.

## 3. Composition



Current load simulator case, equipped with fuse protected wires.



4 « crocodile » clamps



Earth wire + « crocodile » clamps



Option : 4 « Beromet » clamps, delivered in a bag.

## **4. Utilization**

### **4.1. Overview**

The 4.5 kilowatts current load simulator connects to the network on the 3 phases and neutral with the "crocodile" clamps (or "Beromet" clamps, as an option).

The load simulator automatically handles 12 minutes load cycles

A LED indicates that a cycle is in progress, another indicates the end of the cycle.

A switch on the front allows to select the load configuration: 1.5 kW on each phase, or: 1.5 / 3 / 4.5 KW on phase 1.


A digital indicator on the front displays the power consumption.

The simulator is protected to prevent any overheating.


The simulator is also protected against connection reversal.

The simulator is class 2 isolated.

## 4.2. Running the simulator

 **WARNING:** Make sure the air vents are not obstructed.



 **WARNING:** Air flow > 80°C at the rear of the case

- Turn the power switch **A** to "0".
- Set the switch "Power" **B** to "OFF".
- Untwist the cables **C** and connect the clamps on the metering installation in the following order:
  - Neutral - Phase 1 in single phase mode,
  - Neutral - Phase 1 - Phase 2 - Phase 3 in three phase mode. (Always connect the Neutral of the simulator to the neutral of the metering installation).
- Set the switch "Power" **B** to "ON". Fans must rotate, the display **D** must indicate a power <0.1 kW and the green light "Power Presence" **E** should illuminate. **IF THE FANS DO NOT ROTATE: TURN OFF THE UNIT AND CONTACT MADE SA FOR TROUBLESHOOTING.**
- Do not connect any load to the terminals **F**: Neutral, L1, L2, L3 (use only for connecting a voltmeter).
- Turn the power switch **A** on the desired load
- Press the green button **G** to launch a cycle: the test lasts 12 minutes.
- At the end of the test: turn the power switch **A** to "0" and let the fans run until the indicator **H** "Do not disconnect" is off.
- Turn the switch "Power" **B** to "OFF", disconnect the cables **C** and close the simulator.

### Remarks:

- The earth connection is not necessary.
- A load cycle will not start if:
  - the neutral wire is not connected to the neutral of the metering installation.
  - the yellow light "Temperature fault" **J** is on.
  - the red light "Do not disconnect" **H** is on.
- It is possible to interrupt an ongoing cycle with the red button "Stop" **I**.
- If the temperature is too high, a protection device opens the load circuit : the LED "Temperature Fault" **J** lights.

## 5. Technical characteristics

Power Supply	230 / 400 VAC
Dimensions	474 x 415 x 214 mm
Weight	10 kg
Shocks	IK07
Sealing	IP22
Max consumption	6,52 A / phase
Load technology	Resistive

## 6. Maintaining

Dismantling systems is forbidden. This operation is limited exclusively to personnel qualified by MADE.

Note : the break of the security seals void the guarantee.

An annual inspection can be carried out in our premises.

For cleaning the system use a soft, dry cloth.

Never use solvent, or a solvent-based product, to clean the system and / or its accessories.

### 6.1. Replacing the fuses

The power circuit of the simulator is protected by fuses. If necessary, the replacement of these fuses must meet the following characteristics:

Fuse	Characteristics
Power supply fuse 1A	Ceramics / fast blow 1A/500Vac 50KA (6.3x32)
L1 (brown)	Ceramics / delay fuse 25A/440Vac 1.5KA (6.3x32)
L2 (black)	Ceramics / fast blow 10A/500Vac 1.5KA (6.3x32)
L3 (red)	Ceramics / fast blow 10A/500Vac 1.5KA (6.3x32)

### 6.2. Replacing fuses integrated with cords

Cords incorporate a fuse protection at their ends. Their replacement must meet the following characteristics:

Fuse	Characteristics
L1 (brown)	Ceramics / delay fuse 25A/440Vac 1.5KA (6.3x32)
L2 (black)	Ceramics / fast blow 10A/500Vac 1.5KA (6.3x32)
L3 (red)	Ceramics / fast blow 10A/500Vac 1.5KA (6.3x32)
N (blue)	Ceramics / delay fuse 25A/440Vac 1.5KA (6.3x32)





## **7. Recycling**

In accordance with the decree n° 2005-829 of July 20, 2005 relating to the waste disposal of electrical equipment and electronic (WEEE), the user ensures and takes responsibility for the collection and the elimination of the WEEE under the conditions of the articles 21 and 22 of this decree.

## **8. Garantie**

MADE guarantees this product, to the initial purchaser, against all material or functional failure during a period of one year from the date of delivery, unless otherwise indicated in the product manual. If a defect is discovered during the period of the guarantee, MADE agrees, at its choice, to either repair or replace the deficient part, excluding the expenses of handling and of initial delivery. All parts repaired or replaced under the terms of this agreement will be guaranteed only for the remainder of the period of initial guarantee of the system.

### **8.1. Limitation**

This guarantee does not cover:

- Break of the security seals
- Damage caused by a "cause beyond control", natural disasters, strikes, wars (declared or not), terrorism, social conflicts or any acts under governmental jurisdiction
- Damage due to misuse, to carelessness, to any accident or an unsuitable application or installation
- Damage caused by a repair or an attempted repair not authorized by MADE
- Any product that is not used in accordance with the instructions provided by MADE
- Cost of transport back to MADE
- Cost of transport by express delivery of parts or products under guarantee
- Cost of travel for a repair on site under guarantee

This guarantee constitutes the unique explicit guarantee established by MADE for its products. All implied guarantees, including, but not limited to, guarantees on the commercial value of the product and its suitability for a particular use are positively rejected.

The present guarantee confers certain rights: the legislation of the country or jurisdiction can grant others. This guarantee constitutes the final declaration, complete and exclusive, of the terms of the guarantee and nobody is allowed to give other guarantees or promises on MADE's account.

### **8.2. Claims Limitations**

Claims having for object repair or replacement are the only allowable claims in case of the breaking of this guarantee. The MADE Company cannot be held responsible, whether on the basis of strict responsibility or any other legal basis, of any incidental or consecutive damage resulting from a violation of the guarantee or from carelessness.

## **9. Copyright**

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MADE declines all responsibility for mistakes or inaccuracies that the present document may contain.



## 10. ANNEXE

### 10.1. CE conformity declaration

The company :



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Declares by this document that the product described in this manual, that is:

#### 4,5 KW Current Load Simulator

Conforms to the following **CE**, including all applicable amendments:

:

Référence	Titre
73/23/CEE	Low Voltage Directive (LVD)
89/336/CEE	Electromagnetic Compatibility Directive (EMC)

And that the standards and/or technical specifications listed in the manual have been applied.

The designated product has been designed, manufactured and tested in the framework of a Quality Assurance System certified as conforming to the standard:

ISO 9001 : 2008

By the Association Française pour l'Assurance Qualité - AFAQ.

Certificate : QUAL / 2005 / 24473.3

Du : 26 / 06 / 2014

Directeur Général	Directeur Technique	Responsable Qualité
Marc Rivasseau 	Laurent Zomerg 	Jean Yves Creste 