

# MT-300/70

Earthing rail equipment for third rail configuration



99-12247\_00

## Operation and Maintenance Manual

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## Introduction

This equipment is designed to permit safe earthing and short-circuiting of railway systems with lateral current rail.

It allows the earthing of the lateral current rail when it is switch off.

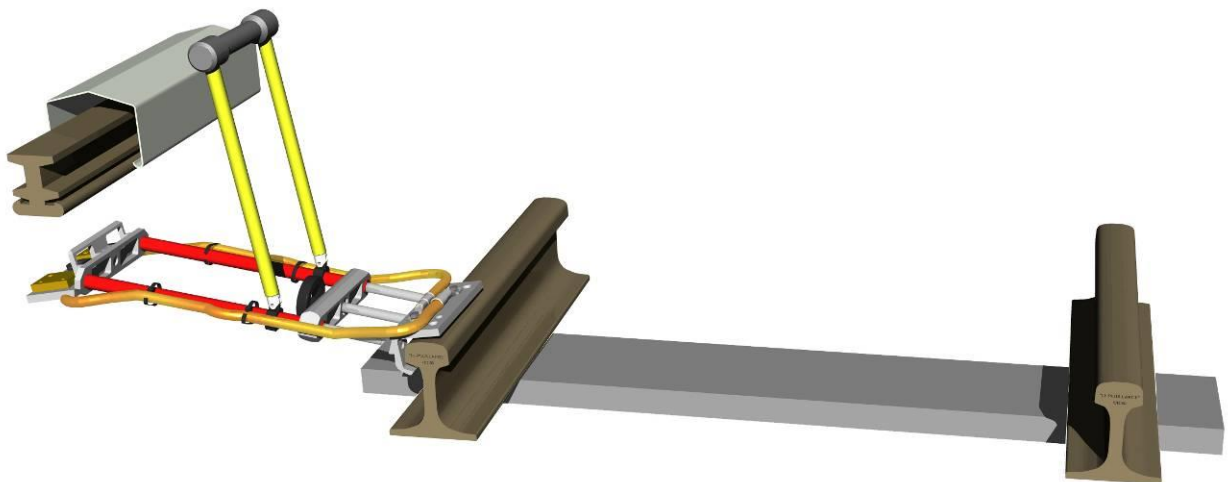
**BEFORE EACH USE, IT IS CRUCIAL TO CHECK THE ABSENCE OF VOLTAGE\***

\*To do this operation, it is recommended to use a DC voltage detector with the adequate level of voltage.

When the equipment is installed according to the instructions for use, it can withstand the earth and short-circuiting current of 106 kA during 39 msec (thus provide the draining of the fault current and safety to the operators).

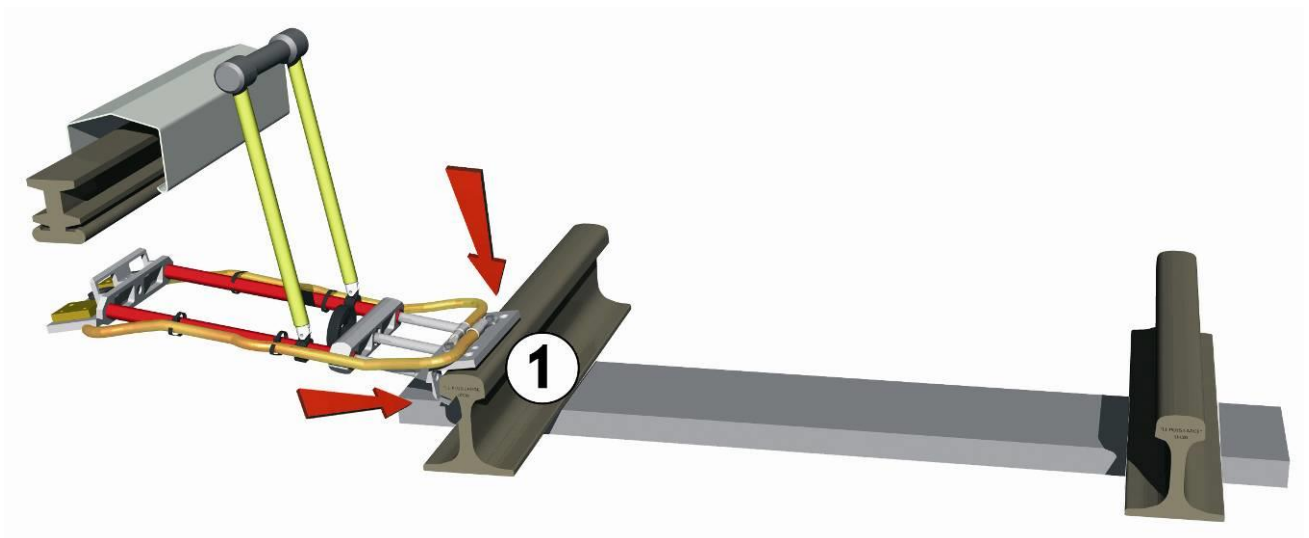
## Instruction for use

In the case of maintenance and repair work on railway networks, the MT-300/70 will earth the current rail by short-circuiting to the running rail.

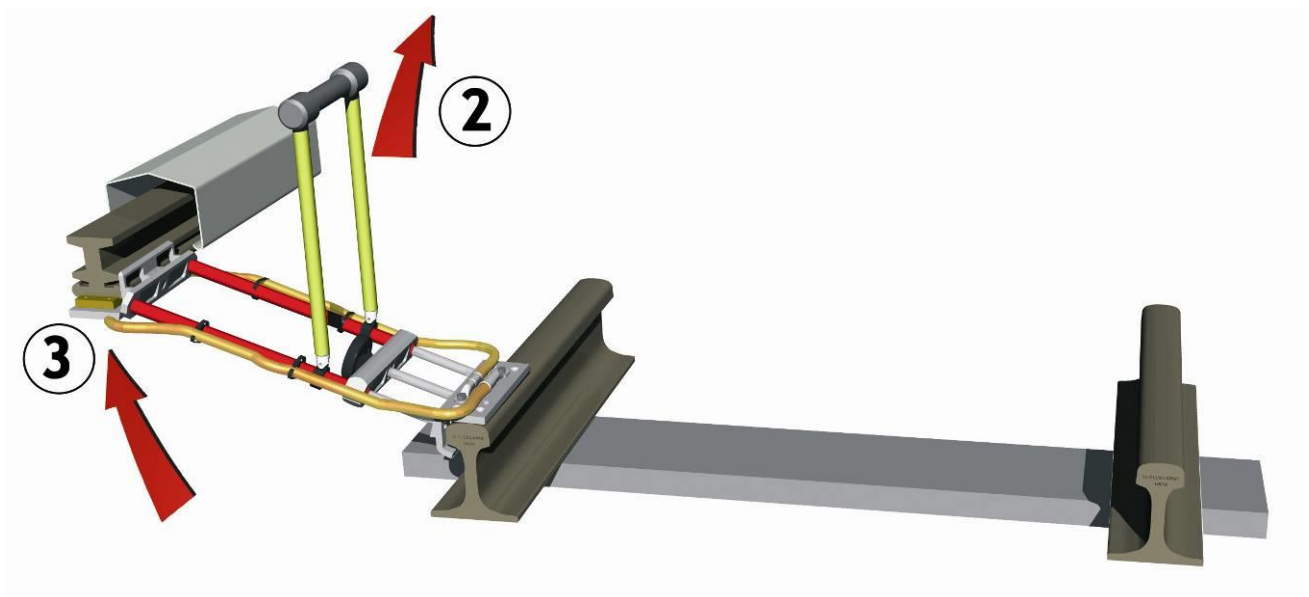


## Operating Instructions

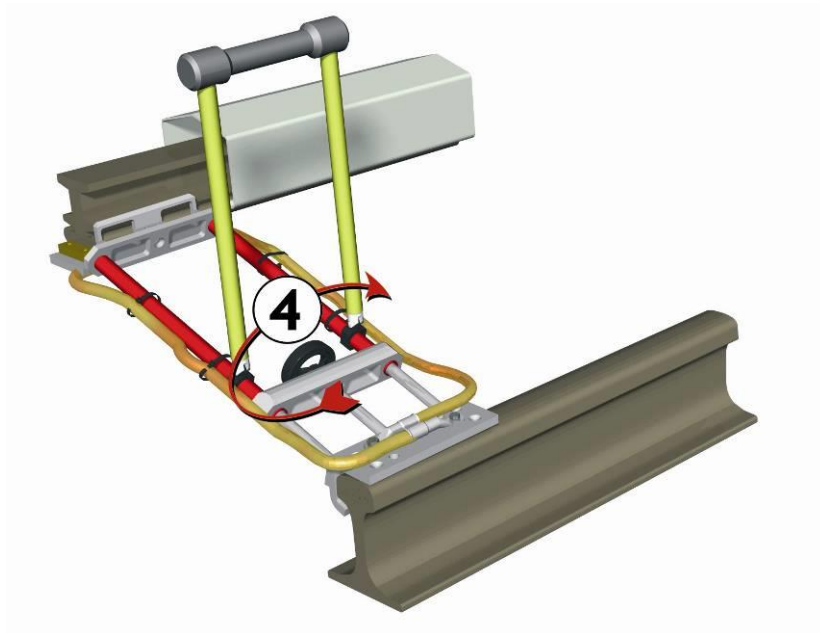
1. The operator should stand in between the running rails. Place the MT-300/70 on the running rail first (rail closest to the 3rd rail). The magnet will block the device on the rail (1).



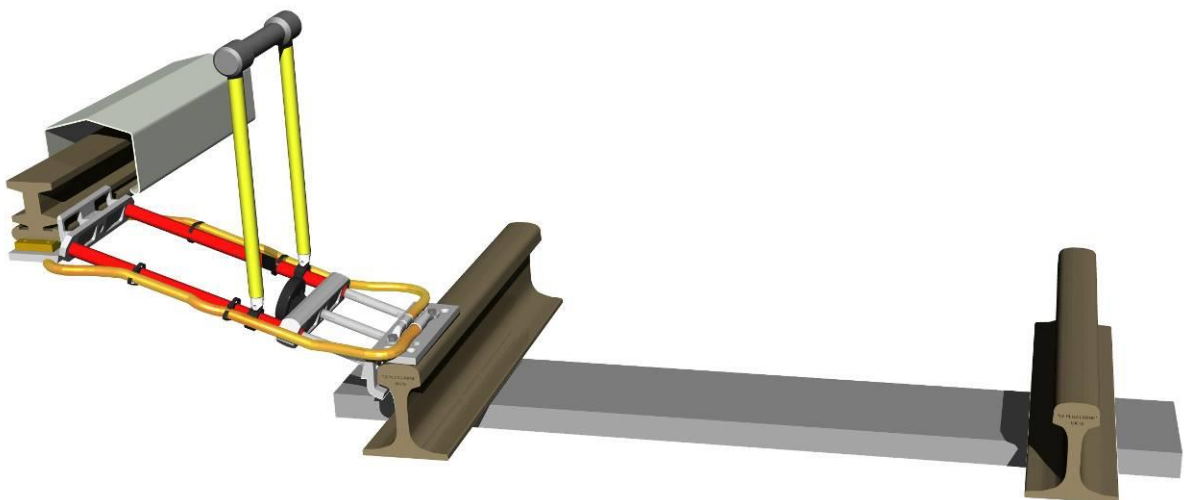
2. Pull up the MT-300/70 device by the handle (2) until the magnet contact blocks and fixes on the current rail (3).



3. Turn the knob in order to firmly fix and hold the earthing system (4) applied between both rails.



4. The earthing system is in place and work on railway can start under safe condition.





## Characteristics

Foldable handle 32 mm dia. foam filled tube

Approx: length: 550 mm

- Adjustable frame in 45 mm dia. insulated polyester glass fiber tube.
- Two extra flexible braided multi-strand copper cable - 95 mm<sup>2</sup> - with transparent Silicon sheath resistant to temperature variations (-40°C to +60°C) according to IEC 61138 standards.
- Aluminum contact block for running rail with guiding magnet and brass plate
- Aluminum contact block for current rail with guiding magnet and brass plate
- Knob for frame adjustment and running rail tightening
- Icc = 58,4 kA / 10 ms
- Total dimensions in flat position:
  - Length: 930 mm,
  - Width: 300 mm,
  - Height: 125 mm.
- Weight: 11 kg.



## Maintenance

There are two types of Maintenance:

Routine Maintenance & Maintenance of wearing parts.

### 1- Routine maintenance

According to the IEC 61230 standard (portable equipment for earthing or earthing and short-circuiting) on an informative annexe C:

#### 1.1 Verification before use

For safety reasons, earthing and short-circuiting equipment should be handled with great care. It should be thoroughly inspected visually before each use.

Visible damage to contacts, connections, cable insulation or the exposure of bare conductor should be regarded as serious defects and the equipment should be removed from use.

Before use, inspection of the surface contact should be done and the contact of the connection point should be cleaned by brushing all deposit remaining in order to obtain good electrical contact either for transit current or for short-circuit.

#### 1.2 Periodic inspection and in-service testing

The users should develop their own guidelines for proving the integrity of the device and define the according time interval for periodic inspection which may include the in-service testing of the equipment.

## 2- Maintenance of wearing parts

The exchange of cables and contacts must be carried out by an operator trained for this purpose.

The cable, knob, handle and contacts must be disassembled and reassembled according to their initial positions.

Maintenance videos are available.

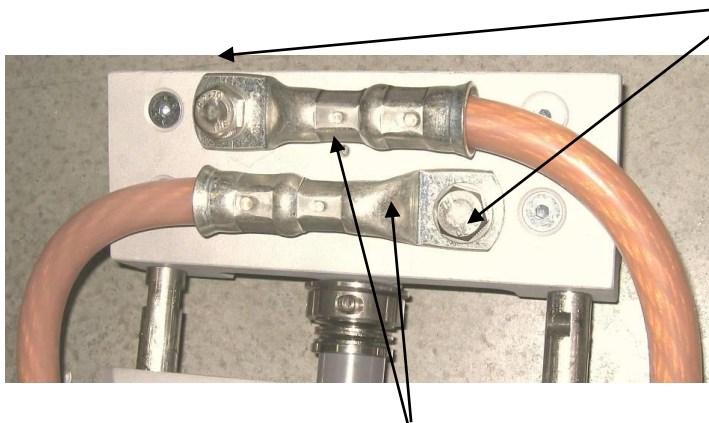
**CW-11617 The complete handle MT300**

**CW- 11618 Kit of two magnets and screws MT300**

**CW-11619 Knob kit MT300**

**M-62-656 Set of two contact pieces in brass with screws**

One cable equipped with end fitting and screws  
M12 Screws and washers



2 Cables with end fittings

The torque of screwing shall be:

M8 : 20N.m

M12 : 69N.m

### WARNING:

The equipment that has been exposed to short-circuit current should be disposed unless it is proved by thorough investigation, calculation and inspection, that the exposure has been too moderate to give any negative mechanical or thermal effects. If there is any doubt as to the perfect condition of the device, it should be disposed of.



## Packing

Before use, inspect the equipment for eventual transport damage. If visible damage appears on contact parts, connections or cables, the equipment should be removed from use and be repaired by special trained personnel, or return for repair to CATU.

After unpacking and checking, it is recommended to store the equipment on clean, dry environment and folded condition.

To transport the equipment along the rail it exist a reinforced bag.

This bag is especially made for this equipment and permits an easier transportation of it. Ref: CM-301







## Guarantee

This equipment follows our general sales conditions and is also applicable on the basis of the respect of this instruction for use, maintenance and storage.