

## ***TR470 Tripod Turnstile***

# **INSTALLATION MANUAL**

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## 1. INTRODUCTION

We thank you for choosing the TR470 electrical tripod turnstile designed and manufactured by Automatic Systems. We are confident that your purchase will fully meet your requirements. However, in order to obtain maximum satisfaction from this equipment for a maximum period of time, we strongly advise you to read this manual carefully before installing the equipment.

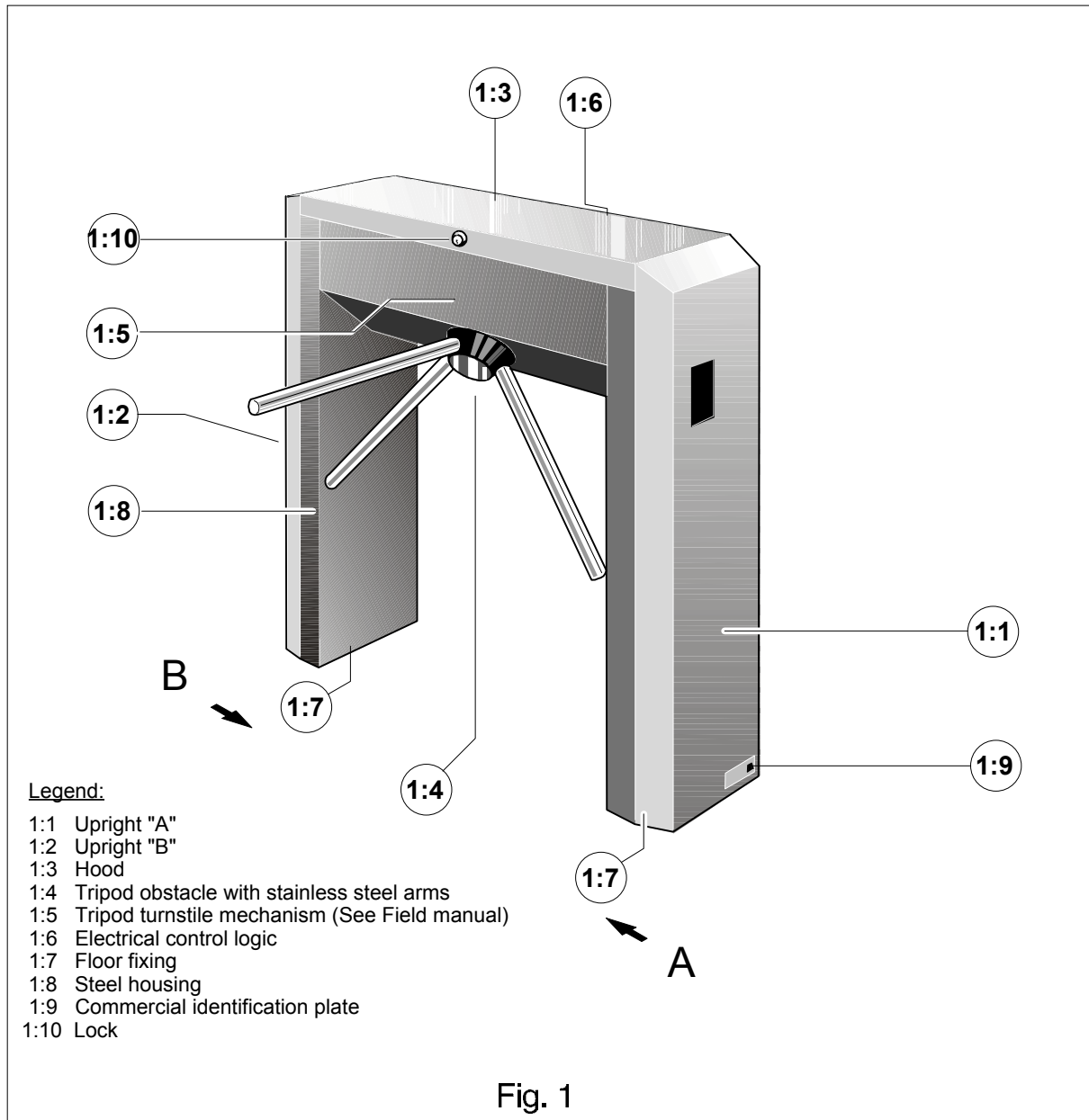
Although this manual has been prepared with great care, some information may seem erroneous or unclear to you. In this case, please do not hesitate to contact us with your remarks or questions.

### **WARNING:**

YOUR TR470 TRIPOD TURNSTILE COMPRISES A MECHANISM AND VARIOUS ELECTRICAL COMPONENTS. ANY NEGLIGENCE DURING AN INTERVENTION IN THE MACHINE MAY SERIOUSLY ENDANGER YOUR SAFETY. AS SOON AS YOU OPEN THE HOUSING, PUT OFF THE MAIN SWITCH **(2:1)** ON THE ELECTRICAL CONTROL LOGIC **(2:2)**, LOCATED UNDER THE HOOD. BE CAREFUL IN HANDLING ANY INTERNAL ELEMENT WHICH MIGHT BE UNDER POWER OR COULD BE SET IN MOTION.

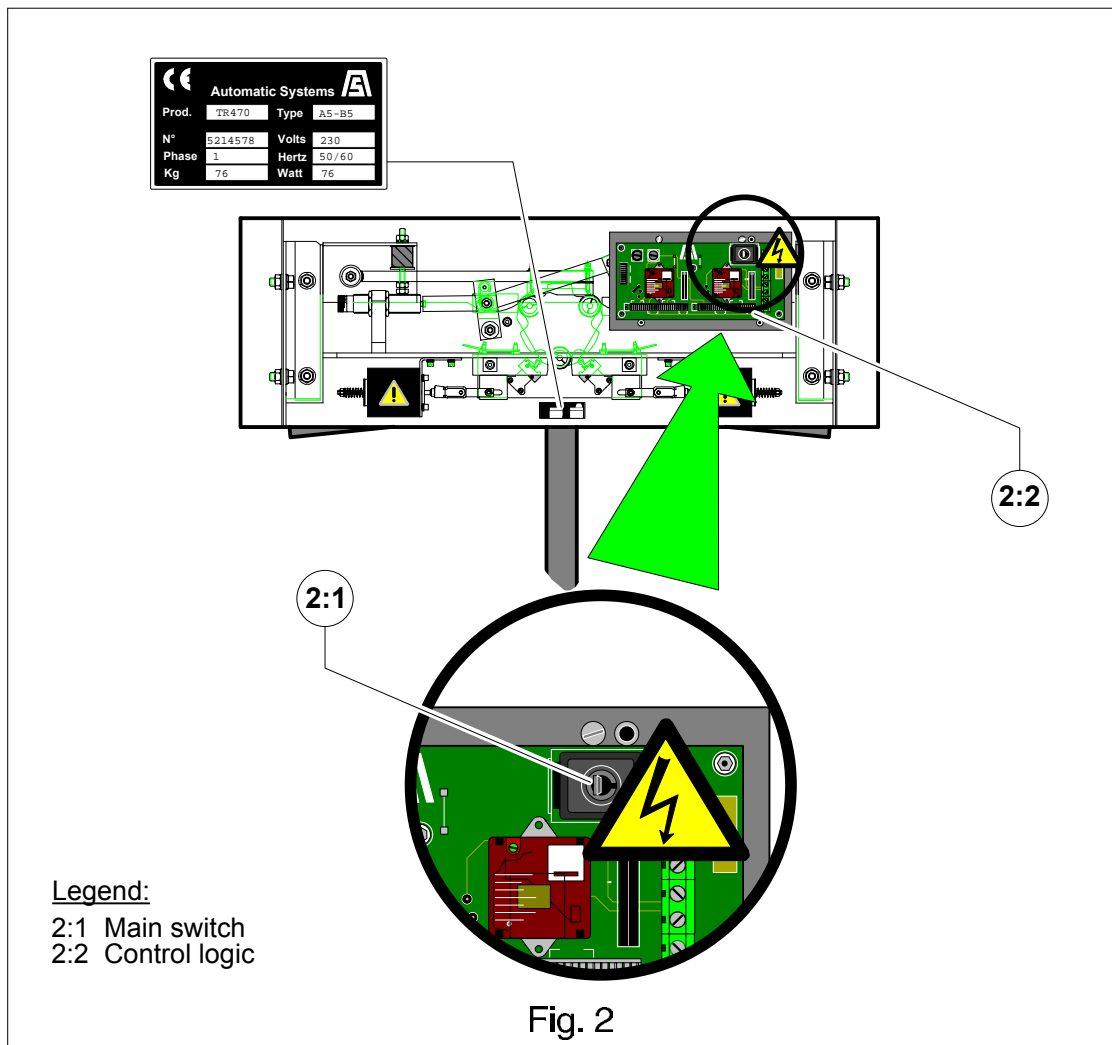
## 2. GENERAL

### 2.1. General view



**Note:** Conventionally and as a general rule, the user will be considered in direction "A" when the turnstile is at his right-hand side, in direction "B" when the turnstile is at his left-hand side.

## 2.2. Switching off the equipment



- As soon as you open the housing, put off the main switch (2:1) on the electrical control logic (2:2), located under the hood.

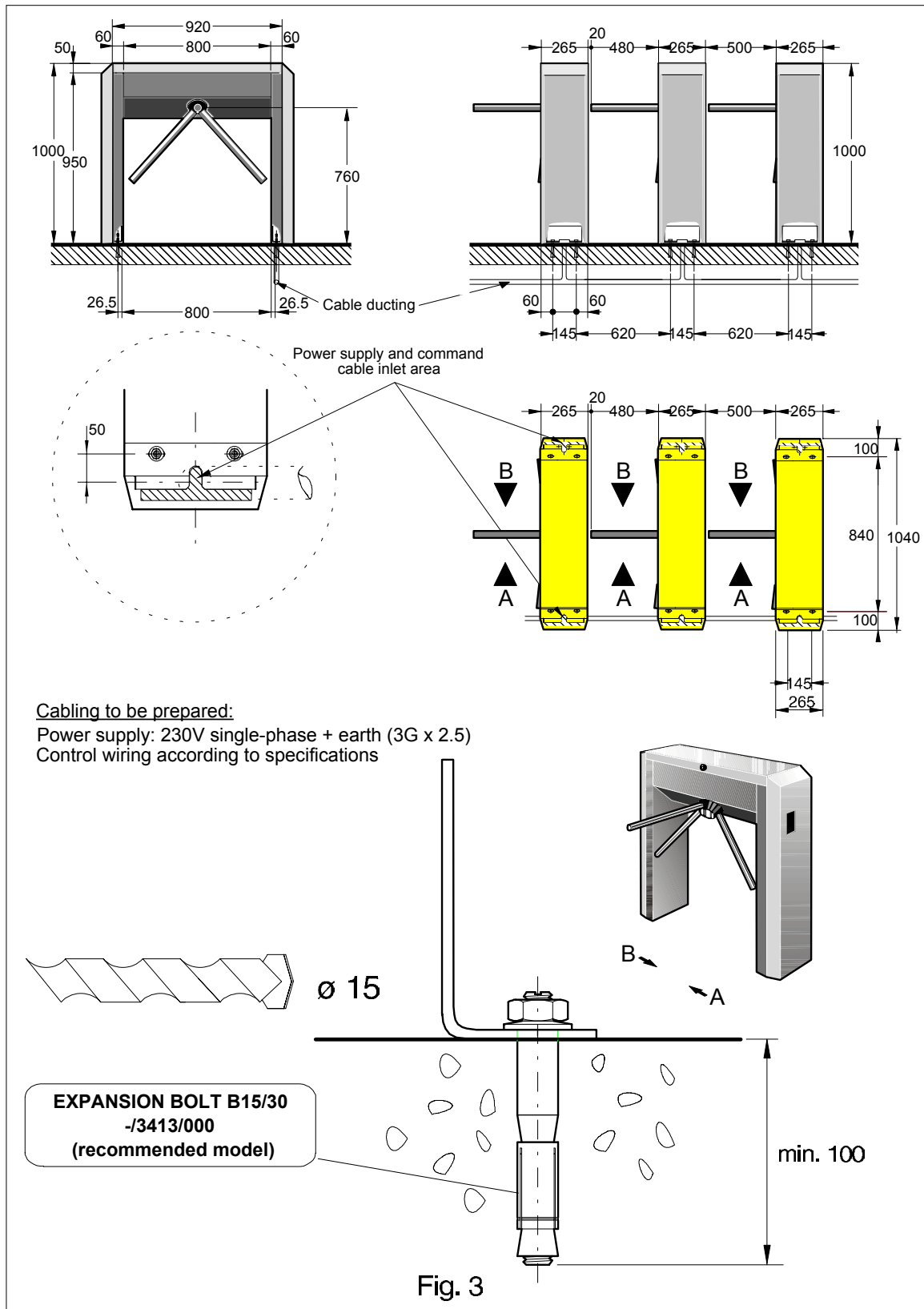
## 2.3. General conditions of use

- Your TR470 tripod turnstile has been designed to operate in any climatic environment, from -20°C to +60°C, with up to 90% of relative humidity

## 2.4. In case of power failure

- Depending on which control mode the tripod is set up for, the TR470 tripod turnstile can release the mechanism in either direction or in both, when the electrical power supply is interrupted. This unlocking principle in an emergency situation is called the "anti-panic" device. Refer to *paragraph [3.2. Principle of operation]* in the Field manual for more information.

## 2.5. Overall dimensions and installation plan



### 3.1. First step



- p. 7/11

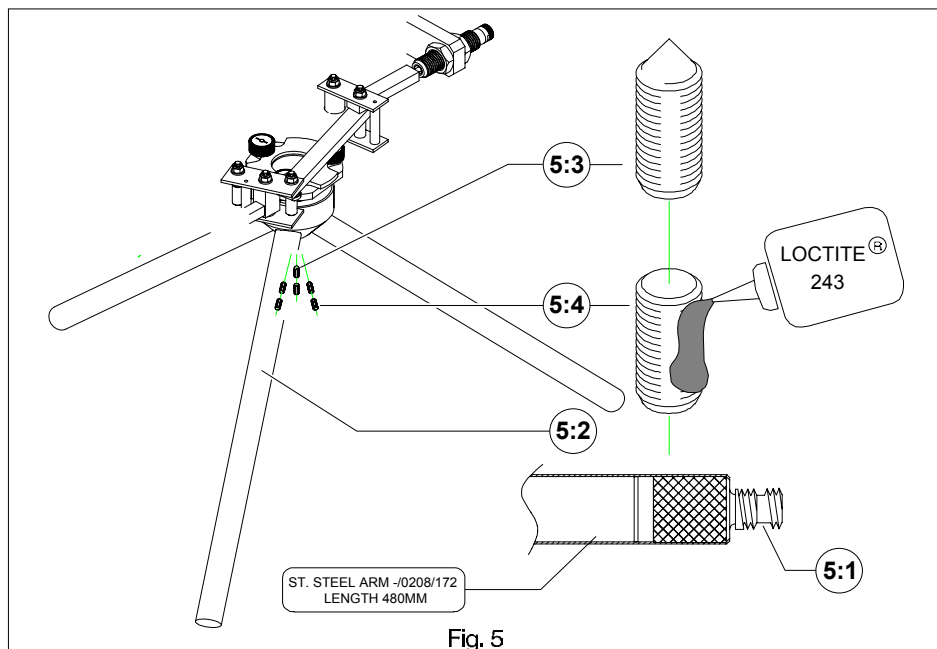
### 3.2. Preliminary work on site

- This is basically the following:
  - ◆ Check the positioning and location of the equipment according to the site's general lay-out.
  - ◆ Drill holes in the ground as in Fig. 3 (page 6/11). Make sure to drill holes with the diameter adapted to the expansion bolts that will be used (recommended type: model B15/30, ref. -/3413/000)..
  - ◆ Make sure that cables come out at a distance of 50 mm of the fixing holes.
  - ◆ Prepare power supply wiring (230V single-phase + earth, 3Gx2.5) and control cabling (not supplied). All cables must have a 2 meter tail.

### 3.3. Installing the tripod turnstile

- Position the turnstile on site precisely.
- Tighten the expansible bolts in order to fix the turnstile on the ground. Make sure that cables are not trapped.
- When the turnstiles are fitted in rows of more than 1 unit, attention should be given to the linear, vertical and horizontal alignment. Packing shims can be used.

### 3.4. Mounting the tripod arms



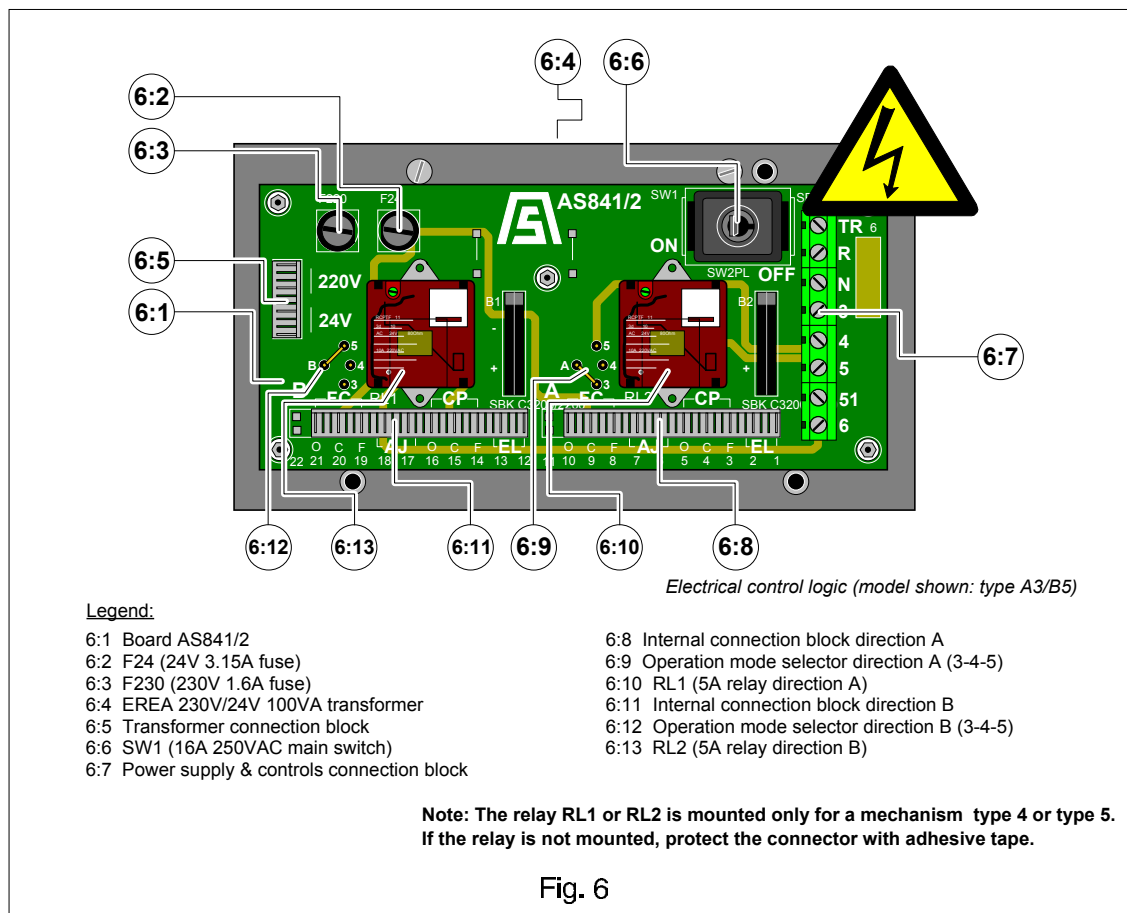
- Remove the grease from the thread (5:1) of the arms (5:2) with trichlorethylene (care must be taken when using any substance or chemical that can be harmful, refer to the manufacturer's information and/or a Health & Safety "Risk Assessment") and apply some Loctite® 243 (blue) or an equivalent industrial bonding adhesive on the thread.



- Screw the arms into the central hub, turn them clockwise and tighten them firmly with the help of a strap tube-wrench.
- For each of the arms, fix the conic-end screw (5:3) and tighten it firmly. The screws are supplied as accessories in a separate bag.
- Apply a drop of Loctite® 243 (blue) on the thread of the flat-end screw (5:4) and tighten this firmly to lock the conic-end screw (5:3).

### 3.5. Electrical connections and initial power-up

- The electrical connections must be made according to the diagram affixed inside the housing (diagram Automatic Systems 2TR4A5B5).



- ⇒ Make sure that the power supply cables are not live. All internal connections are factory-made.
- ⇒ If necessary, cut off the excess cable length. Connect the 230V single-phase power supply wires to the R and N terminals on the connection block (6:7), and the earth wire to the TR terminal. Make sure the equipment is correctly earthed (housing and associated metalwork).
- ⇒ Proceed with all other electrical connections depending on the equipment specifications (control wiring, etc.).
- ⇒ Route all cables via the cable entry holes and secure them in the cable fastenings provided, ensuring that they are held clear of the turnstile mechanism's moving parts.
- ⇒ Check the state of the 230V 1.6A (6:3) and 24V 3.15A (6:2) fuses on the control logic.
- ⇒ Power up the equipment by putting the main switch (6:6) to the ON position.

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### 3.6. Check-list

- ☐ Before commissioning the tripod turnstile, proceed with the various mechanical tests as described in the Field manual *paragraph [2.1. First service at 50,000 cycles]*, then the electrical ones (proper operation of the optional readers, pictograms, etc.). In case of a mechanical problem, please refer to the corresponding paragraph.
- ☐ Check if all wires are firmly connected to their respective terminal blocks.
- ☐ Check if the tripod arms can be pushed freely if the equipment is powered off, in case a mechanism type 3 or type 5 is installed (anti-panic device).
- ☐ Check if all screws and nuts have been tightened firmly.
- ☐ Inspect the inside of the turnstile to ensure no tools remain, to cause equipment failures.
- ☐ Remove any foreign body from the inside of the gate (packing, debris, etc.), and clean it.
- ☐ Replace and lock the hood (4:1).

-- The tripod turnstile is now operational. Although all adjustments have been carried out in our factory, a final adjustment may be required, following transportation and installation of the equipment. In this case, refer to the Field manual.

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### 3.7. Temporary dismantling

- If the equipment has to be temporarily dismantled, e.g. if you need to change its location, follow the procedure below.

#### 3.7.1. Disconnecting the equipment

- Unlock and remove the hood (4:1).
- Make sure that the power supply cables are not live.
- Put off the main switch (6:6) on the electrical control logic.
- Disconnect the power supply and earth wires from the connection block (6:4).
- Disconnect any other cabling (control wires, etc.).

#### 3.7.2. Dismounting the tripod arms (if required)

- Remove the flat-end screw (5:4) and the conic-end screw (5:3) from the arms (5:2).
- With the help of a strap tube-wrench, turn the arms counter-clockwise to unscrew them.

### 3.7.3. Removing the unit

- Loosen the four fixing screws.
- Free the turnstile.
- Loosen the four expansion bolts.
- Using manual handling or fork-lift truck, remove the tripod turnstile.

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## 3.8. Scrapping the equipment

- When the equipment is withdrawn from use, proceed with the dismantling procedure as described in *paragraph [3.7. Temporary dismantling]*. Ensure that the various components of the equipment (metals, electrical components, plastics, etc.) are handled, recycled, or disposed of in the appropriate method, to comply with regulations and codes of practice in the country where the unit is to be scrapped.