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Work in total confidence on your power networks



## Voltage Detector

# MTAG

User's manual

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**WARNING: read these instructions carefully before using this device.**

### 1. SAFETY INSTRUCTIONS

The device must be used in accordance with the safety rules relating to proving dead test on high voltage networks

- Use of regulatory Personal Protection Equipment: face shields, gloves, safety shoes and protective clothing for high voltage electricians.
- Use of insulating sticks to ensure insulation and the regulatory distance for the voltage level of the network being checked.
- The device must only be used for the range of voltages and frequencies indicated on the device.
- The device must be clean and dry. Use of a silicone cloth is recommended (Ref. TC53).



- Do not use the device if it shows any traces of shocks or cracks.
- The device must be tested BEFORE and AFTER each proving dead operation, using the built-in SELF-TEST function.
- The device is operational if the SELF-TEST finishes with the **GREEN** indication coming on (with or without orange light) and if the operator hears and sees the audible and visible indication during the SELF-TEST sequence.

Do not use if the devices has not tested OK or if the audible and visible indications are not correct.

The **GREEN** indication must be visible throughout the duration of the No nominal voltage ("VATn") check

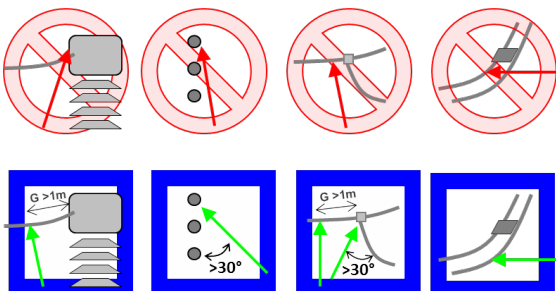
**⚠ DO NOT LOOK DIRECTLY AT THE HIGH-BRIGHTNESS DIODES WHEN HOLDING THE DEVICE**

**⚠ If the **GREEN** indication does not come on, do not use the device.**

If it is raining or snowing, the detector must not remain in contact with live installations for more than a minute.

Only use the accessories provided by the manufacturer with the detector: electrodes and stick adapters.

No-voltage checking must be done on cables or bars at points chosen according to certain rules: away from the angles formed by column tops (combined TP/TC bar holder circuit breakers) and the jumpers. Do not place the detector between two conductors.



## 2. SELF-TEST PROCEDURE

This check to ensure the device is working properly must be done before and after every no nominal voltage check.



Press briefly on the Test button (do not use a tool!) : the self-test cycle will begin.

The device is operational if the operator hears the audible signal and sees the GREEN and RED lights during the SELF-TEST sequence and if the SELF-TEST finishes with the GREEN light coming on (with or without orange light).



The green LED steady and ORANGE LED, at the end of the self-test, means a low battery level requiring a future replacement.

The GREEN indication stays on for about 1,5 minute indicating that the device is working properly.

**⚠ if the GREEN OK indication does not come on, do not use the device.**



At the end of the Self-test flashing ORANGE LED and no green light = change the battery.

Replace the battery with a new one. If after replacing the battery the test is still negative, return the device to the manufacturer.

At the end of the Self-test steady RED indication and no green light = return the device to the manufacturer,



NB: According to the standard, the voltage detector should be checked, if possible, on a service voltage before each proving dead operation.

## 3. OPERATING PROCEDURE

Before use, take care to wipe off any traces of frost or condensation.

After fastening the voltage detector onto the insulating stick and carrying the self-test procedure, put the detector's electrode in contact with the part of the installation to be tested within one minute and for at least 3 seconds.

**The GREEN indication must be visible throughout the duration of the proving dead operation.**

The detector then indicates the status of the installation tested.

**The presence of a nominal voltage is indicated by the RED indication flashing and an intermittent audible signal.**

If there is no nominal voltage after a period of about 1,5 minute, the device automatically goes into standby mode.

To carry out more checks, the test button must be pressed again and the self-test repeated. The MTAG is then immediately ready for use.

As long as detector detects voltage the standby mode is disabled.

**After making the proving dead check, the self-test procedure must be done again.**

## 4. CHARACTERISTICS

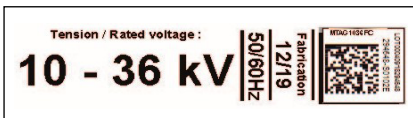
**CEI61243-1 VOLTAGE DETECTORS SPECIFICATION FOR CAPACITIVE TYPE TO BE USED FOR VOLTAGE EXCEEDING 1KV**

The device is designed to detect any nominal voltage present on networks or substation switchgear whose nominal voltage is equal to or greater than the voltage range specified on the detector.

The device must not detect induced voltages on networks with the voltages specified.

Calibration characteristics:  
see the Calibration label:

AC voltage range:  
can be adjusted from 1 to 72,5 kV  
Network frequency: 50 and 60 Hz



Type of installation: outdoor and Indoor.

Group: 3 = indication with active voltage present signal and standby mode.

Category: L = without electrode extension.

Climate class: N = can be used from -25°C to +55°C depending on the type of battery

Symbol	Meaning
	Device or equipment for live working
	CE compliance
	Recycling the product at end of life



Permanent standby mode.

**Self-test:** checks all the circuits, the reference detection level (threshold) and the battery voltage.

**Indicator :**

- Device operational, no nominal voltage => High-brightness green light
- Detection of a nominal voltage => Flashing high-brightness red light

Sequenced **audible signal** with a powerful buzzer => presence of the nominal voltage.

Electrodes fixed on by M8 thread

Fastened onto insulating sticks by a notched universal coupling, hexagonal 12 mm (APV fitting) or hexagonal 21 mm (EAM fitting).

Yellow polycarbonate casing

Power supply: 9 volt alkaline battery - CEI / IEC 6LR61

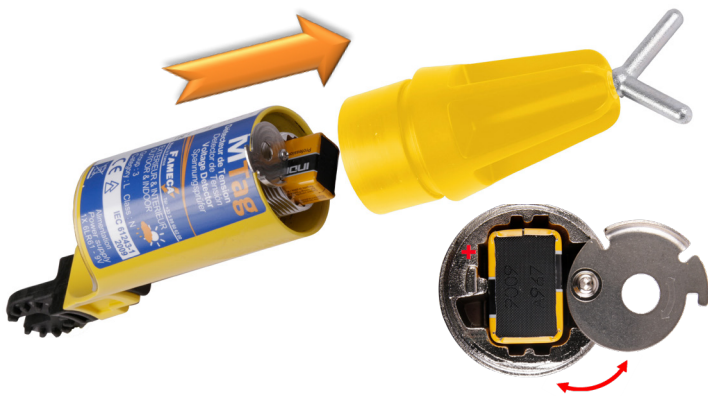
Dimensions: Ø 59 mm, L = 280 mm excluding electrode

Net weight: 0.390 kg.

## 5. REPLACING THE BATTERY (9V TYPE 6LR61)

This operation must be done in a clean, dry place to avoid contaminating the inside of the casing.

- Unscrew and remove the nut at the top of the body.
- Rotate the latch.
- Take out the spent battery (dispose of it in a special recycling container).
- Insert a new battery (9V alkaline, type 6LR61) making sure the polarity is correct, matching the “+” sign on the battery holder.
- Ensure that the O’ring of the nut is in good condition and correctly set (lubricated with silicone grease).
- Lubricate these seals exclusively with silicone grease.



- Screw the electrode holder nut back up without overtightening.
- Do not use the electrode (hook) to tighten nut.
- Check the detector is working properly with the self-test function and if possible at a real voltage as recommended by the standard.

## 6. TRANSPORT MAINTENANCE STORAGE

To guarantee the correct operation of the device and ensure it fulfils its essential safety role, it must be kept in good condition at all times:

- **Insulating stick and insulating detector case:**
  - store out of the light in a dry place
  - wipe before and after each use with a silicone cloth
  - check there are no scratches or traces of knocks

• **Detectors:**

Tightness and integrity of the contact antenna and electrode holder.

Check the battery level using the self-test function.

Check there is no condensation (wipe with a silicone cloth).



Use of silicone cloth: apply in a circular movement to be sure to break the film of damp

**Note:** do not stick on any labels (risks modifying the properties). When a customized label is required for identification, the label must be nonconductive, hydrophobic and positioned in the **authorized area** (Max dimensions: 20 x 40 mm).



• **Precautions to protect the integrity and tightness of the device:**

- Avoid violent knocks: transport in the case provided and avoid dropping.
- Do not use the device if it shows any traces of knocks or cracking.
- Check the O'rings when changing the battery and keep in a dry place.
- Do not use again if there is any sign of internal humidity or oxidation.

The detector, even if it has been kept in the stores, must be checked by the manufacturer after a maximum of 6 years.

## 7. PERIODICAL INSPECTION

The standards related to Voltage Detectors advice that no voltage detector, even those held in storage, should not be used unless re-tested with a maximum period of 6 years.

It is the responsibility of the user to elaborate a maintenance schedule based on national regulations, manufacturer instruction and use conditions.

As a manufacturer we can advise:

- A visual inspection and, annually battery replacement by the user in case of a regular use.
- At least after 6 years and then every 2 years, a test in a laboratory, by delegation of the manufacturer, to ascertain that their insulating and functioning performances remain within the specified limits.
- In case of intensive use, shock or drop, detectors should be tested more frequently by the manufacturer.

## 8. WARRANTY

Company FAMECA would know in no manner of engaging its responsibility on operation for the MTAG for use conditions different from those described in this document, and this in an exclusive way.

FAMECA will apply the legal warranty in line with the general sales condition.

In the event of failure turn it over to the factory.

FAMECA declines any responsibility in case of damage or foreign intervention on the device.

## 9. ENVIRONMENT

The electric products should not be put at the reject with household waste.

Thank you to recycle them in the points of collection envisaged for this purpose.

Address near the local authorities or of your retailer to obtain councils on recycling.



FAMECA now takes back your old detectors to recycle them.  
For more information, please contact us.

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