TELEDYNE
OLDHAM SIMTRONICS
Everywhereyoulook™

USER MANUAL

TLU 600/610

REMOTE CONTROLLER

NOSP 14540 Revision: 13

User Manuals in other languages are available on Website https://teledynegasandflamedetection.com

All of the information that is provided in this document is accurate to the best of our knowledge.

As a result of continuous research and development, the specifications of this product may be changed without prior notice.

TELEDYNE OLDHAM SIMTRONICS S.A.S.

Rue Orfila

Z.I. Est – CS 20417

62027 ARRAS Cedex

Tel.: +33 (0)3 21 60 80 80

Thank you for choosing this TELEDYNE OLDHAM SIMTRONICS instrument.

All of the necessary actions have been taken in order to ensure your complete satisfaction with this equipment.

It is important that you read this entire manual carefully and thoroughly.

Limitation of Liability

The Company TELEDYNE OLDHAM SIMTRONICS A.S., hereinafter referred to as "TELEDYNE OLDHAM SIMTRONICS" throughout this document, shall not be held responsible for any damage to the equipment or for any physical injury or death resulting in whole or in part from the inappropriate use or installation of the equipment, non-compliance with any and all instructions, warnings, standards and/or regulations in force.

No business, person or legal entity may assume responsibility on behalf of TELEDYNE OLDHAM SIMTRONICS, even though they may be involved in the sale of TELEDYNE OLDHAM SIMTRONICS products.

TELEDYNE OLDHAM SIMTRONICS shall not be responsible for any direct or indirect damage, or any direct or indirect consequence, resulting from the sale and use of any of its products **UNLESS SUCH PRODUCTS HAVE BEEN SELECTED BY TELEDYNE OLDHAM SIMTRONICS ACCORDING TO THE APPLICATION.**

Ownership clauses

The drawings, specifications, and information herein contain confidential information that is the property of TELEDYNE OLDHAM SIMTRONICS.

This information shall not, either in whole or in part, by physical, electronic, or any other means whatsoever, be reproduced, copied, divulged, translated, or used as the basis for the manufacture or sale of TELEDYNE OLDHAM SIMTRONICS equipment, or for any other reason without the prior consent of TELEDYNE OLDHAM SIMTRONICS.

Warning

This is not a contractual document. In the best interest of its customers and with the aim of improving performance, TELEDYNE OLDHAM SIMTRONICS reserves the right to alter the technical features of its equipment without prior notice.

READ THESE INSTRUCTIONS CAREFULLY BEFORE THE FIRST USAGE: these instructions should be read by all persons who have or will have responsibility for the use, maintenance, or repair of the instrument.

This instrument shall only be deemed to be in conformance with the published performance if used, maintained, and repaired in accordance with the instructions of TELEDYNE OLDHAM

SIMTRONICS by TELEDYNE OLDHAM SIMTRONICS personnel or by personnel authorized by TELEDYNE OLDHAM SIMTRONICS.

Important Information

The modification of the material and the use of parts of an unspecified origin shall entail the cancellation of any form of warranty.

The use of the unit has been projected for the applications specified in the technical characteristics. Exceeding the indicated values cannot in any case be authorized.

Warranty

Under normal conditions of use and on return to the factory, Remote controller TLU carry a 1-year warranty, excluding accessories such as tilt mount, weather protection, etc .

Waste Electrical and Electronic Equipment (WEEE directive)

European Union (and EEA) only. This symbol indicates that, in conformity with directive DEEE (2002/96/CE) and according to local regulations, this product may not be discarded together with household waste.

It must be disposed of in a collection area that is set aside for this purpose, for example at a site that is officially designated for the recycling of electrical and electronic equipment (EEE) or a point of exchange for authorized products in the event of the acquisition of a new product of the same type as before.

Table des matières

1 Introduction

The TLU 600/610 remote controller is a portable terminal communicating with the TELEDYNE OLDHAM SIMTRONICS DM and DMi aluminum detectors also SS DF, DG and DGi detectors.

The remote controller is intrinsically safe for use in explosive areas.

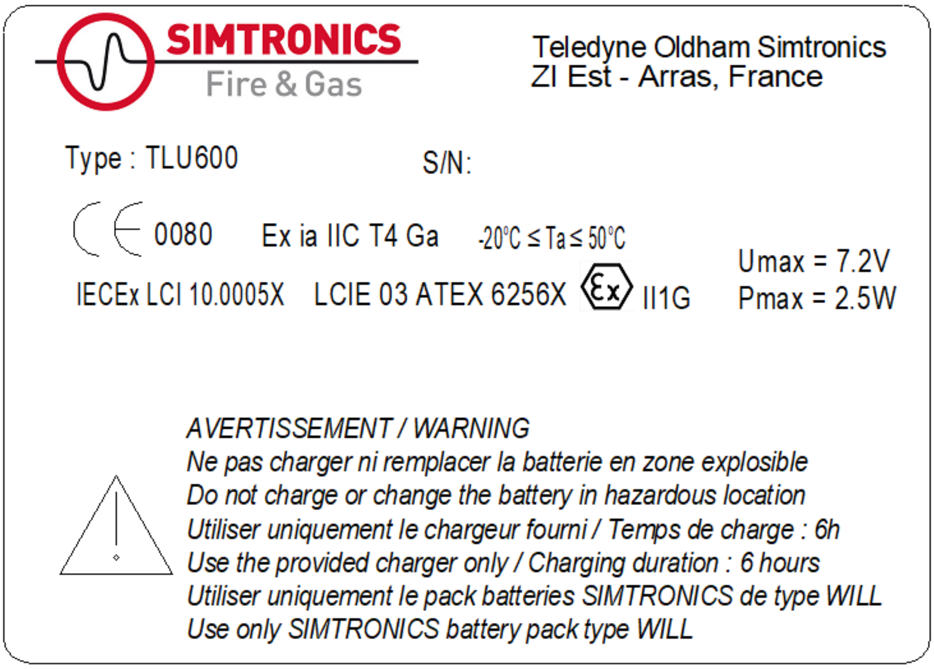
1.1 Identification et marking

Model TLU 600 displays European (ASCII) characters, whilst model TLU 610 displays the Cyrillic alphabet.

The manufacturer's label, located at the back of the battery compartment, carries the following information :

- Manufacturer : TELEDYNE OLDHAM SIMTRONICS
- Model: TLU 600 (European)

or TLU 610 (Cyrillic display).



SIMTRONICS
Fire & Gas

Teledyne Oldham Simtronics
ZI Est - Arras, France

Type : TLU600 S/N:

CE 0080 Ex ia IIC T4 Ga -20°C ≤ Ta ≤ 50°C

IECEx LCI 10.0005X LCIE 03 ATEX 6256X Ex II1G

Umax = 7.2V
Pmax = 2.5W

AVERTISSEMENT / WARNING
Ne pas charger ni remplacer la batterie en zone explosible
Do not charge or change the battery in hazardous location
Utiliser uniquement le chargeur fourni / Temps de charge : 6h
Use the provided charger only / Charging duration : 6 hours
Utiliser uniquement le pack batteries SIMTRONICS de type WILL
Use only SIMTRONICS battery pack type WILL

Figure 1 : TLU Label

1.2 Functions

The TLU 600/610 universal remote controller is used to exchange data with the telecapteur. This dialogue is based on a tree of on-screen menus and the use of function keys.

It simplifies every operation connected with maintenance, calibration, etc. The amount of usable functions will depend upon the telecapteur involved. For example, with gas detector range of product, the remote controller can be used to calibrate, read current status, measure current, etc. For the flame detector, the remote controller can be used to stimulate a flame detection.

Similarly, the language used in these exchanges (French, English, etc.) is set on the remote controller (except for the welcome screens).

The password used for the switching on of remote controller gives access to authorized functions.

The telecapteur and remote controller communicate by an infra-red link. Communication is therefore always by “line of sight”, i.e. there must be no obstacle between the telecapteur and the remote controller.

The average communication distance is about 6 meters.

1.3 Remote controller construction

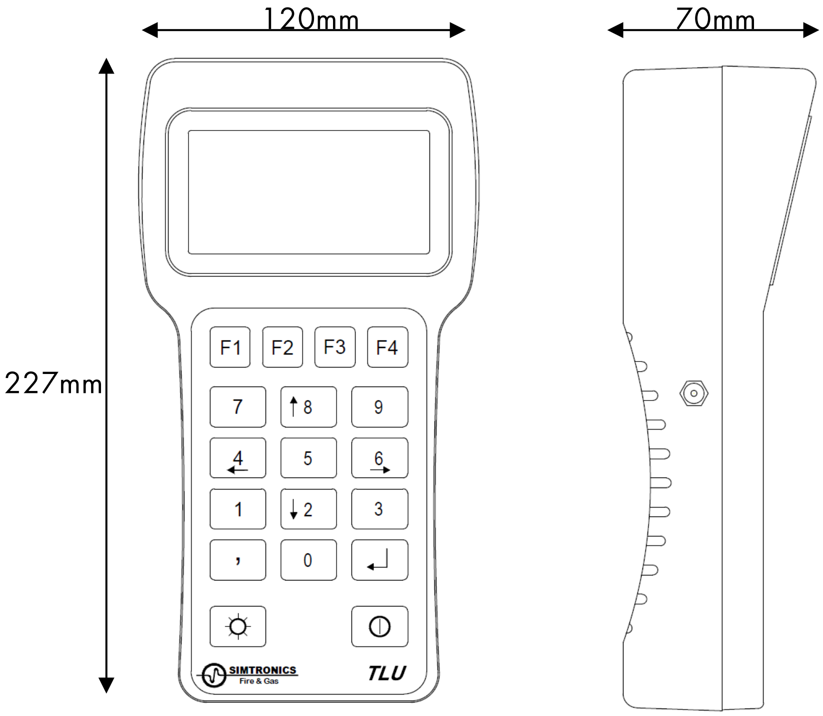
The remote controller includes :

- a case ,
- a back-lit LCD screen displaying 4 lines of 20 characters,
- internal electronics,
- a buzzer,
- a battery unit compartment,
- a keypad with 18 keys including four function keys.

A charger is supplied with the remote controller.

Figure 2 : the remote controller

The case is made up of two parts: the cover which carries the keypad, the main body which carries the LCD screen, electronics and charger connector, and the battery compartment.



The case has an infra-red communication window at the front and a charger connector socket on the left-hand side.

The parts are assembled using crosshead self-tapping screws and the waterproofness is assured by charged seals graphite.

Figure 3 : the remote controller keypad

The lower left button controls the backlighting of the LCD screen.

The lower right button is the remote controller ON/OFF.

The four functions keys are labelled *F1*, *F2*, *F3* and *F4*.

The central matrix comprises 12 keys: 0 to 9, comma and enter. Keys 2, 4, 6 and 8 are dual function, acting also as up, down, right and left arrows.

2 Certification

The equipment was designed and built to comply with the European directive 2014/34/UE for products able to work in explosive atmosphere (usually called ATEX directive) which, for the certified devices is shown on the label by the symbol Ex, the class of protection and the approval number obtained by a certified laboratory.

3 Operation

3.1 Switching ON

The remote controller is switched ON by pressing the ON/OFF key at the bottom right of the keypad (see Figure 2). The remote controller then runs a self-test routine. The character set is then displayed on the LCD screen, then gives access to the menus.

3.2 Password

Two safety levels protect the *telecapteur* functions:

- Level 1 called "USER"
- Level 2 called "MAINTENANCE"

The remote controller is despatched with the following pass words:

- Level 1 "USER": one press at the bottom "enter"
- Level 2 "MAINTENANCE" "012345"

You can change the pass words. Their length is possible between 0 and 6 characters. You can valid the pass word pressing the bottom "enter" (the only one bottom to press in the case of 0 character).

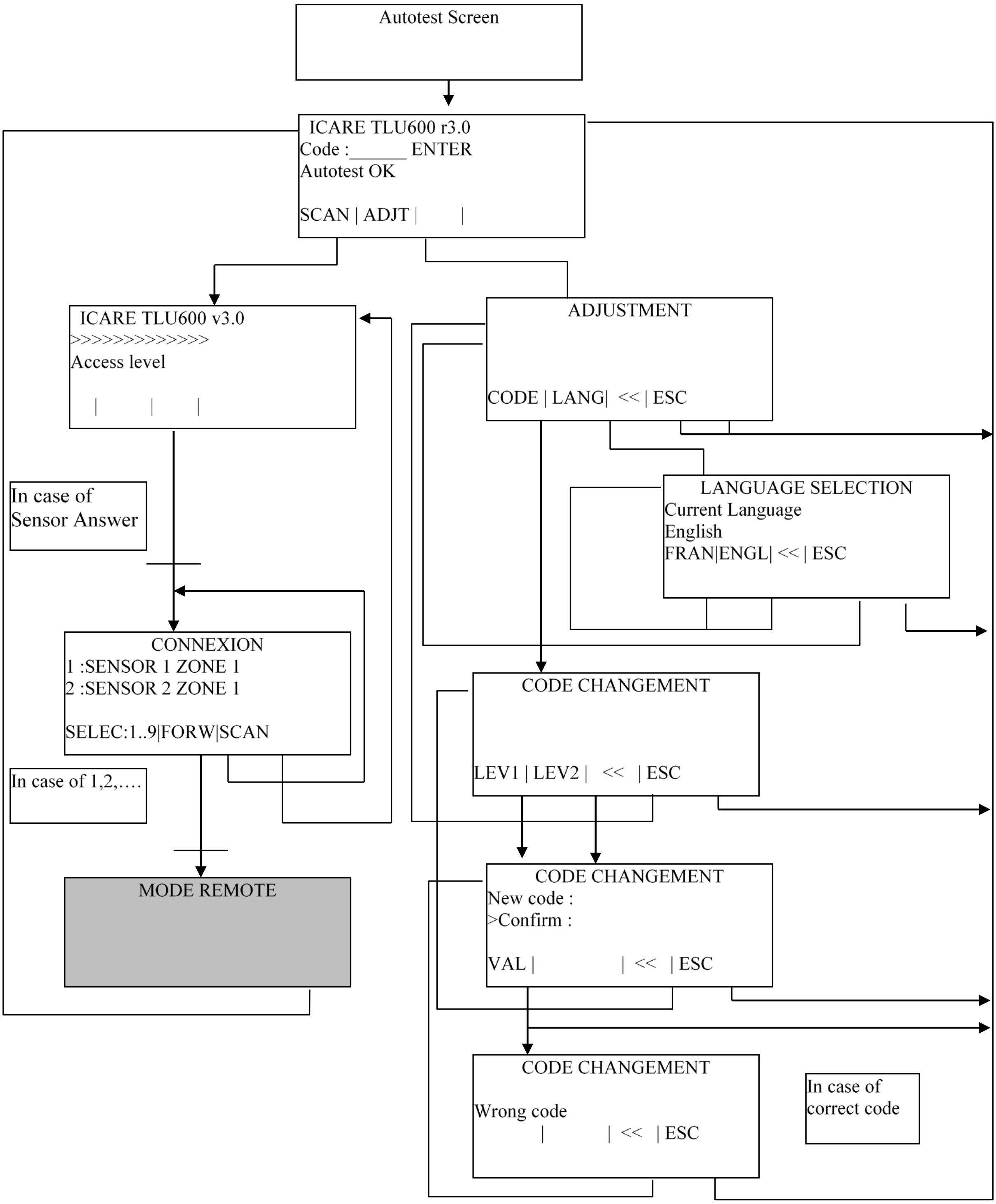
3.2.1 Compatibility with the old family before the Serie 63

Telecapteur before the Serie 63 are not protected with the safety levels. Whatever the password entered in the remote controller, the *telecapteur* gives access to the menus.

3.3 Menu

To go to menus of the remote controller, a password must be entered. Then it is possible to go to all or a part of the following menus.

The following figure gives an overview of the various menus:



3.3.1 Language choice

To change the language of the remote controller:

- Go to the menu Setting/Language,
- Choose English or French,
- Then go out the menu pressing at the bottom "Esc" or "«". The telecapteur will recognize automatically the language from the Serie 63).

3.3.2 Password modification

To change the pass word :

- Go to the Setting/Code
- Choose the access level to modify
- To be valid the password has to be entered twice

.

3.3.3 Connection to sensor (*telecapteur*)

To connect to a sensor:

- Go to Scan Menu
- After the questioning phase, the remote controller displays the sensor list which answered
- -Select a sensor with its number or launch again a Scan.

When a sensor is selected, the remote control goes in REMOTE mode. The menus which appear are those of the selected telecapteur.

```
     CONNEXION
1 GD001

SEL:1..9   |FORW|SCAN
```

Figure 4: connection established screen

In this example, the telecapteur carrying the label GD001 has been recognised by the remote controller.

The label is an 8-character identity chosen by the customer and allocated to the telecapteur during its manufacture in the TELEDYNE OLDHAM SIMTRONICS factory.

Press key 1 to begin the dialogue with this telecapteur.

It may be that there is more than one sensor in the remote controller's field of view. A list of them will then appear on the screen as shown below:

```
     CONNEXION
1:GD001
2:DMTV65
SEL:1..9   |FORW|SCAN
```

Figure 5: connection to multiple sensors screen

Press function key F3 (FORW) to view the next telecapteur.

Each line is numbered. Press the key for that line number (1 to 9) to communicate with the corresponding telecapteur.

Up to this point, the menus have been in French. From this point onwards, the language used will be that programmed into the telecapteur (French, English, etc.).

A green LED in the telecapteur 's infra-red head will, until this point, have been flashing at a frequency of about 0.5 Hz. From the moment you select this telecapteur, the flashing rate will increase to 1 Hz to indicate that communication has been established and will remain at this frequency throughout the dialogue. This makes it easier to identify the selected sensor and shows that communication is taking place.

3.4 Pictograms

Several symbols called pictograms are used to simplify TLU 600/610 operation.

These pictograms appear in the right-hand column (20th column of the screen).

3.4.1 Charging indicator: " 🔌 "

When the battery is charging, the " 🔌 " pictogram appears on the right of the screen as shown below:

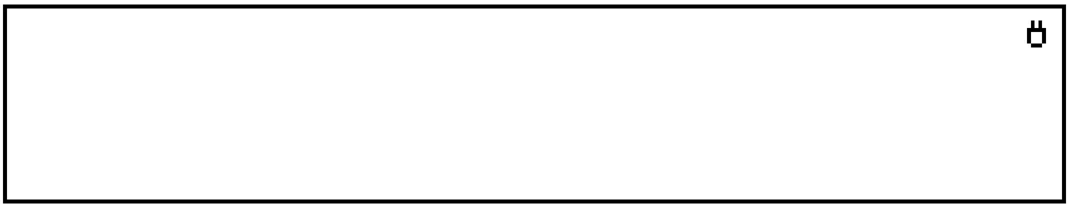


Figure 6 : battery charging indicator

3.4.2 Low battery level indicator: " 🪫 "

When battery voltage falls to its lower limit, the " " pictogram appears on the right of the screen as shown below:

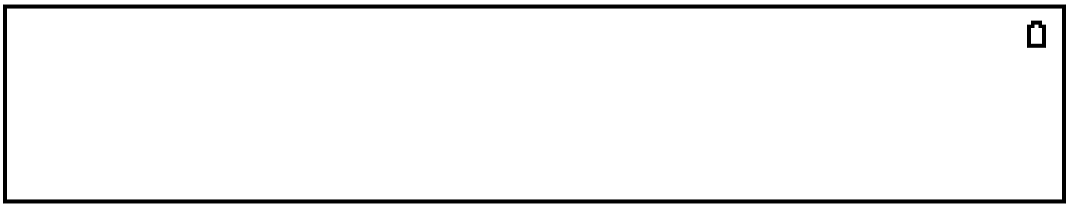


Figure 7 : low battery level indicator

The battery must then be recharged using the charger supplied. (see chapter 3.4.5: page **Erreur ! Signet non défini.**).

Do not continue to use the remote controller longer than half an hour after this symbol first appears without recharging the battery. To do so could damage the battery unit.

3.4.3 Connection indicator: " ⇅ "

Once dialogue with the sensor has been established, the "⇅" pictogram appears on the right of the screen. It remains on-screen until the connection is broken.

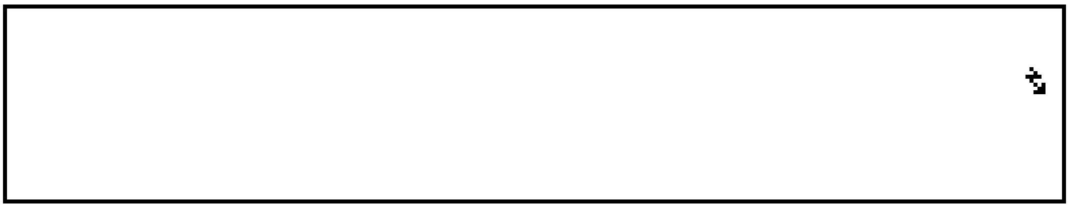


Figure 8 : connection indicator

The connection may be broken in two ways:

- Using the *FCNX* (End connection) menu. This is the normal way to end communication with a telecapteur.
- You have moved your remote controller away from the sensor for more than 3 minutes. The telecapteur has closed the connection because it assumes that you have forgotten to use the *FCNX* menu to end the dialogue.

Once the connection is broken, the green LED on the telecapteur returns to flashing at around 0.5 Hz.

3.4.4 Targeting indicator: " ⊙ ", " ✻ "

Once dialogue is established with the telecapteur (connection indicator " " is displayed), the targeting indicator lets you know the quality of communication with the telecapteur.

When the " " symbol is displayed, the quality of communication is excellent.

Figure 9 : good communication indicator

When the "✻" symbol replaces the one referred to above, communication is becoming difficult. If there is no indication, communication has been lost. If this happens, move closer to the telecapteur and make sure you are pointing the remote controller directly at it. If the sun is shining directly at the remote controller, you may need to shade the infra-red communication window at the front of the controller.

Figure 10 : poor communication indicator

3.4.5 Battery recharging

Only the charger supplied with the remote controller is to be used to recharge the battery; using any other charger risks permanent damage to the remote controller. It carries the label TLU600.

⚠ Never charge the battery in an explosion risk area.

The charger must never be used in an explosion risk area, nor must the remote controller when it is on charge

---

To ensure optimum battery life, you should wait until the low battery charge indicator (🔋) appears and then recharge completely over.

The charger of the TLU600 is an automatic charger with fast load adapted specially.

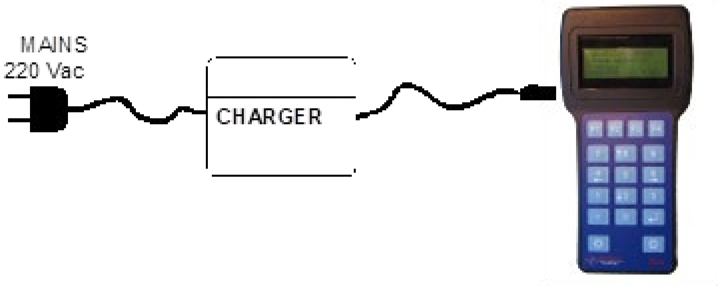


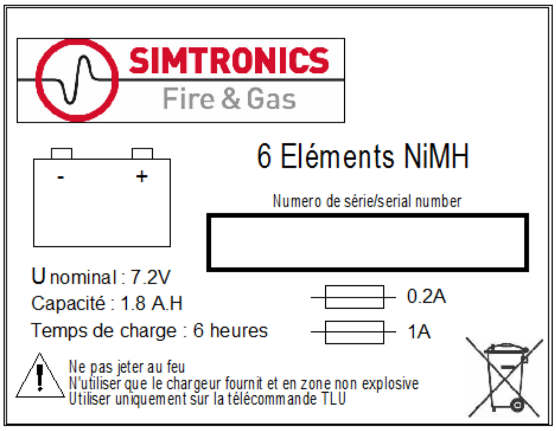
Figure 11 : charging connection

- Connect the charger with the main 100-240V AC 50-60Hz. The LED gets clearer in yellow (not connected battery)
- Connect the charger with the remote controller. The LED remains yellow during some seconds during the initialization and test phase.
- The LED gets clearer in orange during the fast charge which can last till two hours.
- Switching in compensation charge, green/yellow blinking.
- Switching in slow charge, the LED gets clearer in green when the battery is charged.

In case of emergency, it’s possible to interrupt the fast load to use the remote controller, but with a reduced battery capacity.

The battery can be subjected at some hours of slow load, without damage, but the permanent charge is not advised.

The energy source of the remote controller is a moulded block NiMH 7.2V nominal, 1800 mAh, joining safety elements and carrying the label bellow



In case of failure of the block battery, it's necessary to replace the block by a same block battery, only supplied by TELEDYNE OLDHAM SIMTRINICS, to keep the ATEX protection.

3.4.6 Back-Lighting

The remote controller is fitted with a screen back-lighting system which provides excellent legibility regardless of ambient lighting conditions.

Back-lighting can be turned on and off using the button at the bottom left of the remote controller (seeFigure 3, page 9).

3.4.7 Automatic cut OFF

The remote controller has an automatic cut-off system to conserve battery life.

This system is activated 3 minutes after the last key press or whenever the connection to a *telecapteur* has been broken for over 3 minutes.

4 Technical Specifications

Operating temperature:	-20°C to 50°C,
Self-powered operation:	4 hours,
Power supply:	Rechargeable NiMH batteries,
Dimensions (maxima):	227 Long x 120 Wide x 70 Deep,
Weight:	0,87 kg.

5 Maintenance

⚠ To be done out of ATEX area

5.1 Cleaning

Take care not to scratch the infra-red communication window.

5.2 Changing a battery unit

To change the battery unit:

- remove the battery compartment by undoing the 6 cross-head screws.
- Disconnect the link connector.
- Change the unit.
- Reconnect the link cord making sure the connector is the right way round.
- Coil the cord into the space between the body and the battery unit.
- Refit the compartment using the 6 screws, taking care to avoid pinching the wires or damaging the waterproof seals.

6 Packaging and transport

Whenever the equipment is to be transported (for repair, etc.), it is advisable to pack the remote controller and its accessories in their original packaging.

7 Storage

Store the remote controller in a dry, dust-free area at a temperature in the range -20 to +45°C.

8 Special conditions for safe use

- The equipment is an intrinsically safe autonomous portable appartus. It can be used in hazardous areas.
- The equipment can be only powered by the battery type WILL manufactured for Icare.
- The battery must be charged outside the hazardous area and the value of the charging current shall not exceed 250mA.
- The apparatus can be only clean with a damp clothes.
- Operating ambient temperature: -20°C to +50°C.