

**LEDI 6  
LEDI 6/S**



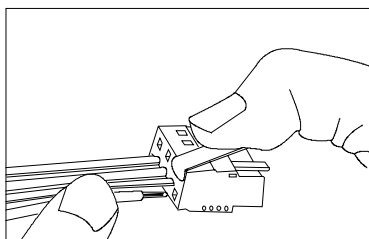
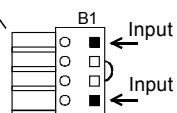
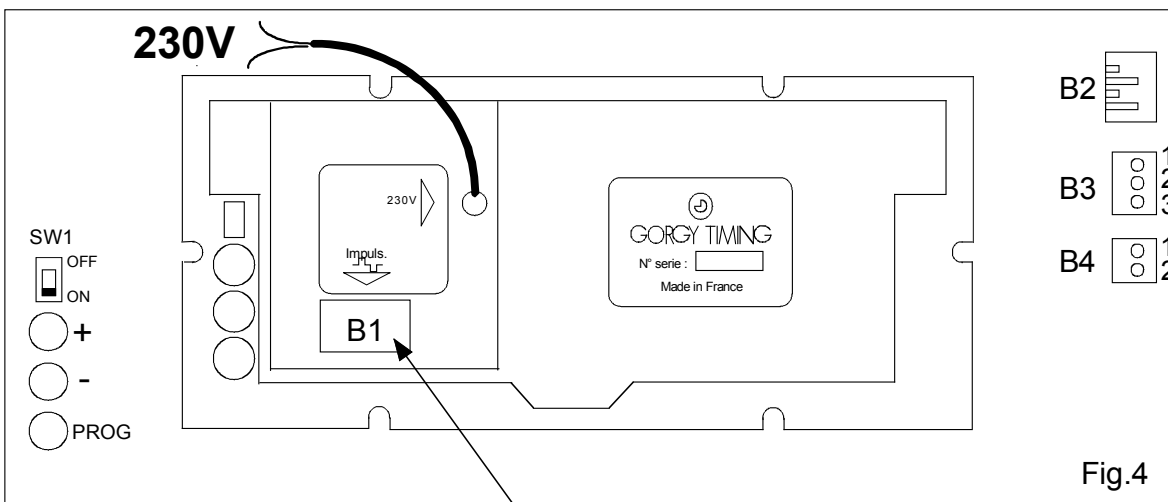
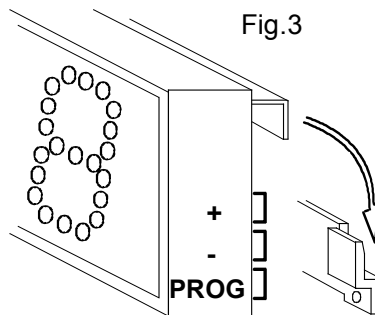
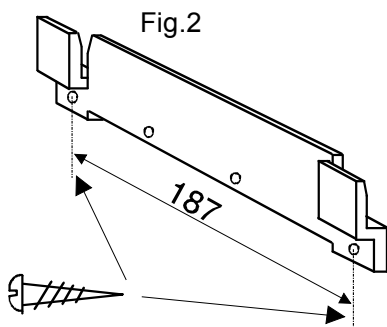
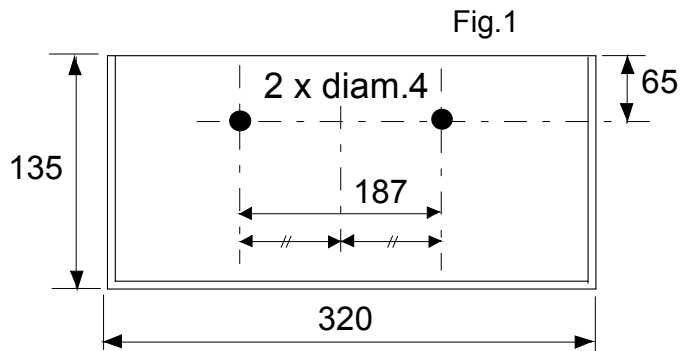
STANDARD, FLUSH-MOUNTED  
or WATERTIGHT  
CASE

**USER MANUAL**



**GORGY TIMING**  
LA MARQUE DU TEMPS

**MOUNTING PRINCIPLE  
STANDARD CASE**

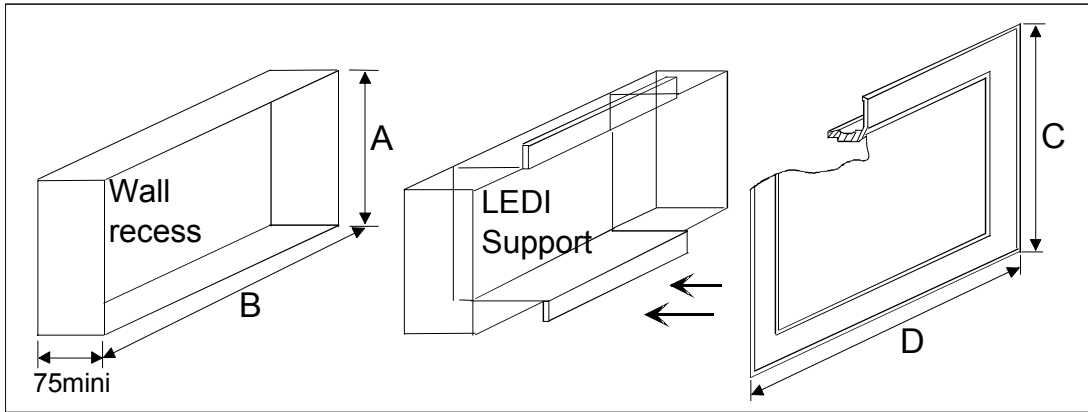


Use the lever  
to make the connections input

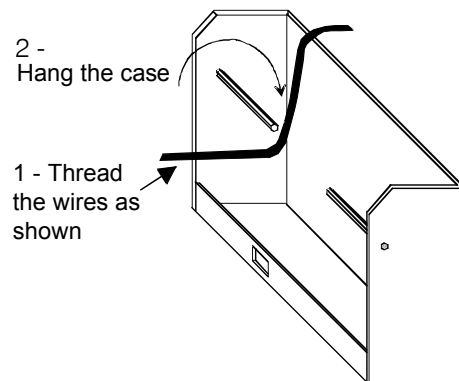
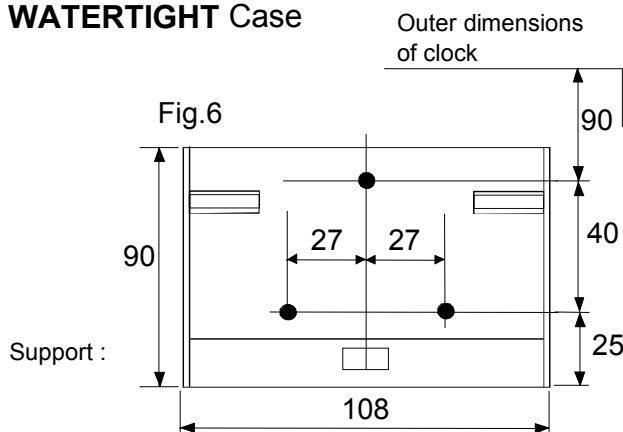
**FLUSH-MOUNTED case**

Cotes (mm)	LEDI	
	"6"	"6/S"
A	151	161
B	335	415
C	188	198
D	378	458

Fig.5



**MOUNTING PRINCIPLE  
WATERTIGHT Case**



**1- CHARACTERISTICS**

LEDI 6 standard case                    325 x 135 x 36 (+31) mm  
 LEDI 6 flush-mounted case        378 x 188 x 5 (+75 flush-mounted) mm  
 LEDI 6 watertight case                392 x 202 x 125 mm

LEDI 6/S standard case                405 x 145 x 36 (+31) mm  
 LEDI 6/S flush-mounted case       458 x 198 x 5 (+75 flush-mounted) mm  
 LEDI 6/S watertight case              462 x 202 x 125 mm

- 7-segment LED numerical display of hours, minutes, seconds ("S" option)
- Height of figures: 60 mm.
- Inclination of figures: 10°.
- Legibility: 25 metres.
- Power supply: 230 V (±10%)/50-60 Hz (115 V AC or 48 V AC optional)
- Consumption: 6 W.
- Emergency power supply provided by built-in Cd-Ni battery: 48 hours minimum.

## EXISTING VERSIONS

### ➤ **Autonomous version**

Built-in quartz time base: frequency 3.6864 MHz, stability  $\pm 0.2$  s/24 hours between 20° and 25°C.

### ➤ **Minute impulse receiver, parallel connection**

24 V reversed impulse every minute.

Impulse duration: 0.1 s.

Impulse consumption: 6 mA/24 V.

### ➤ **Half-minute impulse receiver, series connection**

Series connection with external 39 ohm shunt.

Reversed impulse every half-minute.

Impulse duration: 0.1 s.

Impulse consumption: 1.25 V.

Current strength: 60-120 mA.

### ➤ **AFNOR NFS 87-500 code receiver**

Nominal input level: 2.2 V DC.

Input impedance: 3.5 kOhms.

Minimum input voltage: 70 mV DC.

### ➤ **869 MHz Radio version**

The clock synchronizes itself automatically following the emitting period of the emitter. Waiting the reception, 2 points between the hours and the minutes stay off until one reception was received. Then these points have a second period blink except a 59th second off during 3 minutes.

## 2 - MOUNTING

### **Standard case** (cf. fig. 1 - fig. 2 - fig. 3)

- Prepare the wall support for attaching the bracket. Leave at least 60 mm between the top of the case and the ceiling.
- Fix the bracket on the wall support using two 4 mm dia. screws.
- Hook the case over the bracket.

### **Flush-mounted case** (fig. 5)

- Prepare the wall support. LEDI 6: 335 x 151 x 75 mm.                      LEDI6/S: 415 x 198 x 75 mm
- Position the support clip in the wall recess.
- Clip the clock on to its support.

### **Watertight case** (fig. 6 - fig. 7)

- Prepare and drill the wall support.
- Fix the “LEDI’s support” using three M5 screws
- Hang and clip the clock on to its support, taking care to bring out the wires at the top.

## 3 - CONNECTIONS (fig. 4)

- Connect the 230 V/50-60 Hz mains supply to the 3-conductor cable.
- Flip the battery switch **SW1 to the ON** (lower) position after connecting the clock.

**N.B. If the hours and minutes remain unlit, wait a few minutes for the internal battery to be recharged.**

### 3.1 - WATERTIGHT case

All connections are made at the back, without having to open the case. Cables should be connected as shown by the identification marks.

7-conductor cable

- Ascii 232 version :RXD : Blue                      Ascii 422/485 version :RX- / TX- : Blue  
    TXD : Pink    RX+ / TX+ : Pink  
    GND : Brown     GND : Brown
- Impuls or AFNOR NFS87500 version : Green / Grey
- Pip version : White/ yellow

## **3.2 - STANDARD and WATERTIGHT cases**

### **3.2.1 - Impulse or AFNOR code receiver**

In the case of a polarised impulse or AFNOR NFS 87-500 code receiver clock, connect the impulse or code input to terminal B1 and connect this to the bottom. The clock will then be automatically converted from autonomous to receiver version

### **3.2.2 - Radio-synchronised version**

In the case of a radio-synchronised clock, connect the antenna to terminal B1.

It may be necessary to carry out the initial setting manually (in the event of a disturbance in the radio signal or momentary break-down of the DCF transmitter). In this case, proceed in the same way as for an autonomous clock (see section 4 - Setting).

## **4 - SETTING** (fig. 4)

The time is set by using the "+", "-", and "PROG" keys at the back of the clock (in the case of the watertight cases, slightly loosen the knurled knob and open rotate the access flap).

Each time the "PROG" key is pressed, a different part of the display begins to flash. This is then modified by using the "+" and "-" keys. The figures can be advanced quickly by pressing continuously on these keys.

The setting cycle is as follows:

- 1 adjustment of time display time (from 1 to 9 seconds)
- 2 adjustment of temperature display time (from 1 to 9 seconds)
- 3 adjustment of hours
- 4 adjustment of minutes

## **SYNCHRONISATION**

If the minutes have not been modified, one press on "PROG" will validate the new time setting without modifying the initial synchronisation (e.g. modification of time/temperature alternation or seasonal changeover for autonomous clocks).

If the minutes have been modified, one press on the "PROG" key will make the entire display flash, indicating that the clock is in synchronisation phase. A second press on "PROG" will enable the clock to be synchronised (this should be done on a time signal given by a reference clock, e.g. the speaking clock). The display will then stop flashing.

## **REMARKS**

- The first two cycles (time/temperature alternation) only apply in the case of a clock with the temperature display option. On initialisation, the default duration for the time display is 4 seconds and that for the temperature display 2 seconds.
- All setting phases are limited to 30 seconds, except the synchronisation phase, which can only be terminated by pressing on the "PROG" key.

## **5 - BRIGHTNESS CONTROL**

The brightness is adjusted by pressing on the "+" and "-" keys when not in the setting cycle or a light-dependent resistor may be built into the clock to ensure automatic brightness control in accordance with the ambient lighting.

## **6 - OPTIONS**

### **6.1 - HOURLY PIP OUTPUTS**

With this option, any of the following may be obtained on terminal B4:

- 4 pips, each lasting 200 ms, delivered on the hour:
  - 1st pip: 59 min 57 sec
  - 2nd pip: 59 min 58 sec
  - 3rd pip: 59 min 59 sec
  - 4th pip: 00 min 00 sec
- a one-second pip every 12 hours
- a 0.5-second pip on the second
- a one-second pip on the minute
- a one-second pip on the hour
- a one-second pip every 24 hours
- a one-second pip on the quarter hour
- an end-of-timer contact (when the timer function reaches 0 in count-down mode).

Two types of output are offered for these time signals:

#### **Dry-contact output**

- output via a relay, with contact closing on each time signal,
- characteristics of relay to be used: cut-off capability.

#### **Open-collector output**

Umax: 60 V Imax: 50 Ma

In case of an open-collector output, the ground is connected to 1.

### **6.2 - 12-HOUR OPTION**

This version has the same characteristics as the standard version, except that the display goes from 01h00 to 12h59 (the timer format remains in 24-hour mode).

### **6.3 - THERMOMETER OPTION**

The temperature transducer is supplied with a 4 metre cable, which may be extended up to a maximum of 25 metres. Accuracy is to within  $\pm 0.4^{\circ}\text{C}$ .

In the event of an indoor temperature being displayed, the transducer must be placed between 1.5 and 2 m above ground and as far as possible from any heat source.

In the event of an outdoor temperature being displayed, the transducer must be placed under cover, in a ventilated area, to avoid any effect from direct sunlight. Greenhouse effects should also be avoided.

### **6.4 - ASCII RS232 OR RS422 OPTION**

ASCII RS232C link on terminal B3

- 1: GND
- 2: TXD
- 3: RXD

ASCII RS422/485 link on terminal B3

- 1: E/S -
- 2: E/S+
- 3: GND

This option operates in three modes:

### **6.4.1 - Transmitter mode**

In this mode, the clock transmits a code (configuration 2400 bauds, 8-bit format, even parity, 1 stop bit) which has two parts:

1- time information in the form:

STX day of week SP day of month/month/year SP SP hour:minute:second CR

2 - status information (timer, temperature, brightness, etc.).

The first part of the information sequence serves, for example, to synchronise a computer (in this case the second part is not taken into account).

The complete information sequence is used to control another clock.

### **6.4.2 - Receiver mode**

In this mode, the clock works autonomously but is set with respect to the ASCII code that it receives (configuration 2400 bauds, 8-bit format, even parity, 1 stop bit). This ASCII code may be either:

- time information in the form:

STX day of week SP day of month/month/year SP SP hour:minute:second CR

generated either by the RT3000 or RADIO TIMING ASCII or any other ASCII code generator,

- information from another clock of the same type working in transmitter mode; in this case, the clock is completely slaved to the other.

### **6.4.3 - Two-directional mode**

In this mode the ASCII coded time message is transmitted after reception of a recognition character ("D") (configuration 2400 bauds, 8-bit format, even parity, 1 stop bit).

Message transmitted:

STX hundredth of second SP day of week SP day of month/month/year SP SP  
hour:minute:second CR

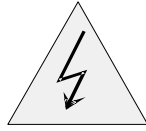
e.g. 76 FRI 03/02/90 15:14:45

which means that the second corresponding to this message is 76 hundredths of a second over when the character "D" is received.

N.B.: - In the case of the LEDI 6 (indicating only hour and minute information), the date information is replaced by zeros and the day of the week in alphanumeric characters by three spaces. However, if this clock is an AFNOR NFS 87-500 receiver or is radio-synchronised, the date information is generated.

If there is a mains cut, the display goes out but the clock continues to run on its internal battery (the hour pips and ASCII output are no longer generated).

- For ASCII code receiver clocks, if the incoming message is not in the correct configuration, it may be necessary to set the clock manually. As soon as the ASCII message is received, the clock compensates for any difference with the reference time.



**WARNING**

ISOLATE BEFORE REMOVE COVER

FOR19/A/005D

Registered trademark and design



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Société anonyme à directoire et conseil de surveillance au capital de 450.000 €



GORGY TIMING RC 74 B