Clock

Profil 960

LED illumination

INSTALLATION AND OPERATING INSTRUCTIONS

B.P. 1
49340 TRÉMENTINES
FRANCE
Tél. : 02 41 71 72 00
Fax : 02 41 71 72 01
www.bodet.com

Réf.: 607092 E

Upon receipt, always check the product for damage during shipment. If any is found, you may file a damage claim with the carrier

Table of contents

I - INITIAL VERIFICATION

Thank you for choosing a BODET clock. This product has been carefully designed for your satisfaction based on ISO9001 quality requirements. We advise you to read this manual thoroughly before attempting to manipulate the clock.
Keep this booklet during all the life of your clock, so that you can refer to it each time it is necessary.
Bodet accepts no responsibility for accidents resulting from any use not conforming with the above provisions.
Any modification to the product will invalidate the warrantee.

1.1. Unpacking the clock

Unpack with caution and check the contents of the packaging. It must contain :

- the Profil clock,
- for radio synchronised models : the antenna,
- a key to open the casing,
- an antistatic cleaning kit,
- this booklet.

Versions : a label inside the clock specifies what model the clock is :

AFNOR HMS = the clock is a receiver driven by : a master clock that sends AFNOR NFS-87500A coded time messages or a radio receiver antenna, and powered by 240 VAC, with a servo second hand.

AFNOR HM = the clock is a receiver driven by : a master clock that sends AFNOR NFS-87500A coded time messages or a radio receiver antenna, and powered by 240 VAC.

MN 24V = the clock is a receiver driven by a master clock that sends minute impulses on a parallel line.

REC MN 1V5 = the clock is a receiver driven by a control unit “Remote keyboard” or radio synchronised control unit “BT radio” that sends minute impulses.

1.2. Cleaning

Use an antistatic product of similar type to the one shipped in the original packaging. Never use alcohol, acetone or any other solvent liable to damage the casing and glass on your clock.

1.3. Recommandations

LED lights can be hazardous to the eyes.

The LED lighting systems are less energy consuming than other types of lighting and have lifetimes much longer.

Partly because of the limited nature of the surface emission, LEDs have luminances at least 1000 times higher than those of a traditional lighting source. The level of direct radiation from such sources exceeds the level of visual discomfort.

Our clocks are designed so that there is no direct light, and thus no risk. However, it is recommended to switch off the lighting system before opening the clock for maintenance.

II - INSTALLATION

Select the place where the clock will be installed while making sure that radio reception is correct for radio synchronisation models.

The radio receiver clock should be installed in a place that is free from electrical interference (cathode tube, transformers, etc.).

Avoid fixing the clock directly to a metal plate or reinforced concrete wall.

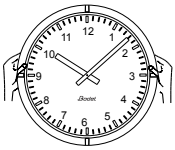
The clock orientation (dial perpendicular to the emitter direction) towards the emitter enhances the reception.

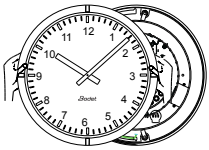
The best reception conditions are outside buildings or near by a window.

2.1. Single face clock

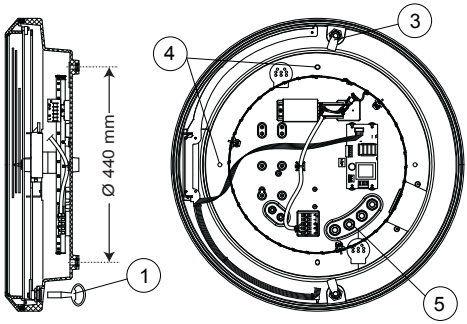
- Open the clock by giving the 2 screws (3) a quarter turn with the key (1), and then pull the whole dial towards you (hinge arm opening).

The hinge arm opening system ensures a fast and secure maintenance of the lighting without having to put the front part of the clock on the ground.





- Hang the clock and fix it with M8 screws (4), without locking it, after you have put the wires (between Ø7 and Ø10) through the waterproof pressure joints (5).



- Carry out the various connections (external supply : see page 8 and connection to time distribution network : see page 10).
- Lock the clock.
- Power it.
- Reset the time if necessary.
- Close the clock.

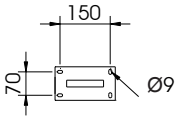
2.2. Double Face clock

2 models of double face clocks are available :

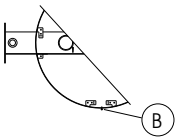
- One model with an integrated bracket that includes two back to back dials.
  One model with a hinged arm system that holds two single face clocks.

2.2.1. Double Face integrated clock

Drill the support (wall, pillar, ...) to the required dimensions and fix the bracket.

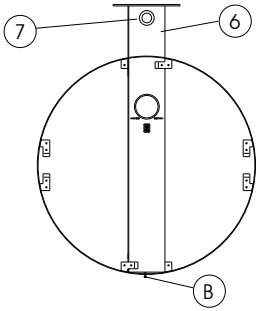


- Unscrew by 10 mm the 2 bolts (B) on each face.

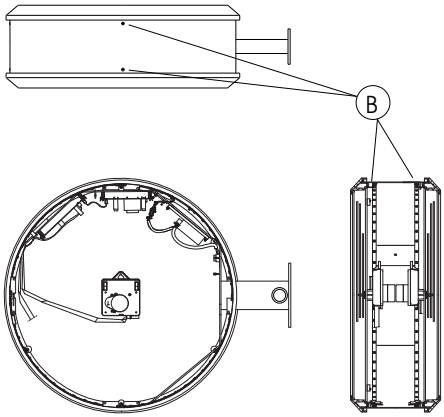


- Remove each face by rotating them anticlockwise (for receiver clocks, Do Not forget to disconnect the 2 movements).

- Fix the double sided bracket after you have put the wires either through the plate support (6), or through the aperture on the side of the bracket (7).



- Carry out the various connections (external supply : page 8 and time distribution network : page 10).
- Power the clock and reset the time if necessary.



- Place each face on the bracket and rotate them clockwise to place the clock in its final position.

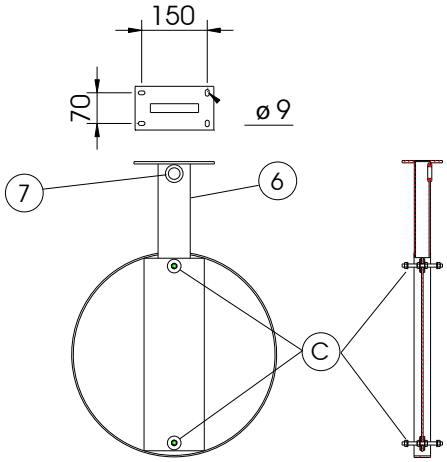
- Screw the bolts (B) to lock the clocks in rotation.

2.2.2. Clock on keyboard

- Drill the support (wall, pillar, ...) to the required dimensions and then fix the bracket.

- If necessary, carry out the various connections (external supply : page 8 and connection to time distribution network : page 10).
- Put the wires either through the hinged arm system (6), or through the hole on the side of the bracket (7).

- Fix the clock (or clocks) to this keyboard with the 2 threaded shafts (C).



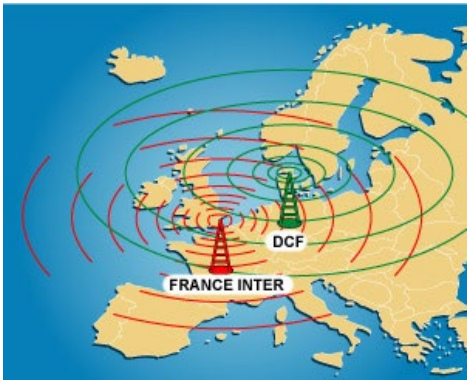
2.3. Setting the antenna

For radio synchronised clocks :

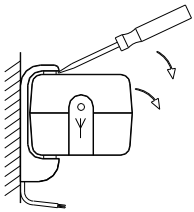
The best reception conditions are outside buildings or near windows.

Positioning the antenna (perpendicular to the direction of the transmitter) improves reception.

The antenna must not be placed on a metal support.

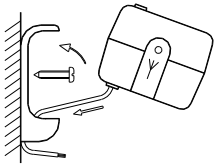


As for any radio system, a building with metal structures can cause interference in the reception of the signal.



Computers, television sets and electrical appliances can also cause interference that disrupt the reception of the radio message.

- Unlock the antenna from its support.



- Fix the support with the screw supplied and lock the antenna again.

Beware : in a double face system. So as not to cause interference between the 2 antennas, the latter must be fixed **at least one metre away from each other.**

III - POWER SUPPLY

Installation and maintenance of this equipment must be carried out by qualified personnel only.

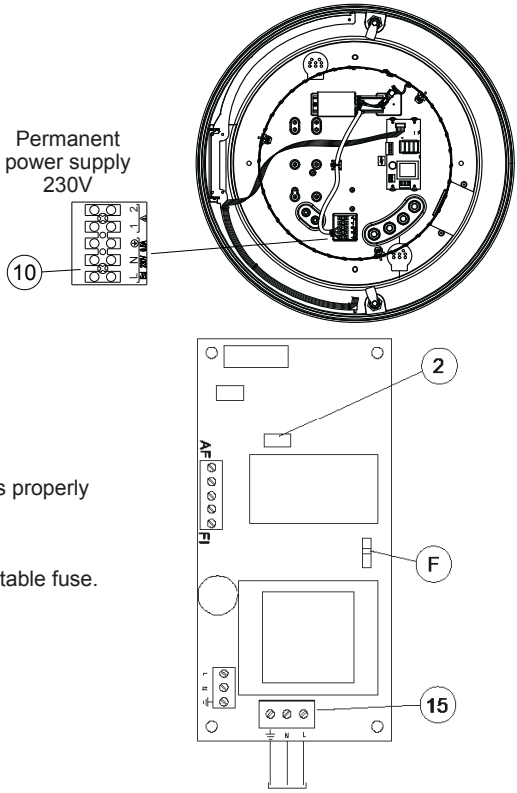
Electrical installation must comply with current standard CEI 364. (NF C15-100 in France for example).

The mains supply for the clocks must include a neutral phase circuit breaker 10A C curb, rapidly accessible. This circuit breaker must be switched off during maintenance operations.

Note : the power supply wires must be linked near their fixing point.

3.1. AFNOR clock 230V :

- Connect the mains supply 230V 50Hz of the illumination kit to the terminal (10) : max.1,5 mm^2 wire and bare on 5 mm.
The earth wire must be longer than those of live and neutral.



- Connect mains supply 230 Volt 50 Hz to the supply card terminal (15).

- Lock the wires with collars.

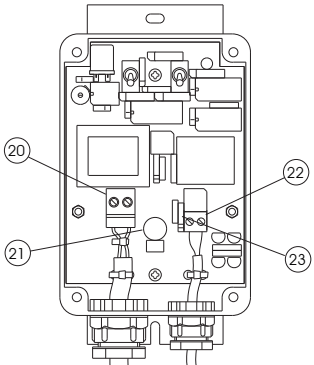
- Check that the terminal (2) of the battery is properly connected to this electronic card.

- The electronic card is protected by a resettable fuse.

3.2. Independent Quartz clock on mains :

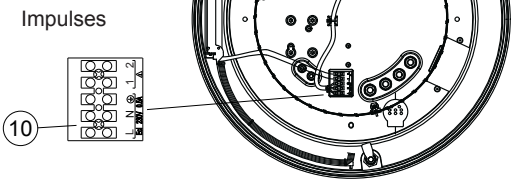
Single face.

- Connect mains supply (230VAC) to the terminal (20) of the power supply unit (ref.933006).
- Connect the impulses line between the terminal (22) of the power supply unit and the terminal (2) of the clock.
- The time base is protected by a 0,2AT / 250V fuse (21).



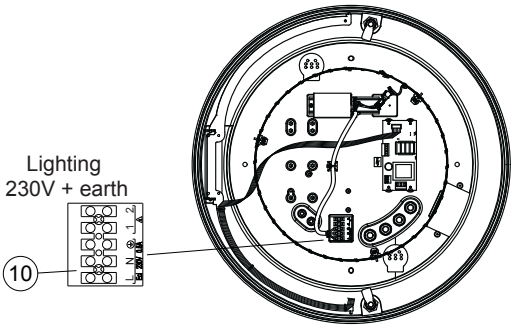
Double face.

- Connect mains supply (230VAC) to the terminal (20) of the power supply unit.
- Connect the impulses ligne between the terminal (22) of the power supply unit and the terminal (10) of the clock.
- Check that the dip switch (23), on the card of the time setting box, is in “DF” position.



3.3. Lighting connection

A 10 A fuse or circuit breaker for the lighting power supply should be installed and switched off prior to any maintenance in the clock.
This circuit breaker must be switched off during maintenance operations.



- Connect lighting supply 230V + earth (0,10A) on the terminal (2), the earth wire must be longer than the other ones.
- Nota : the power supply wires should be assembled together near their connecting terminal.

IV - OPERATING AND TIME SETTING

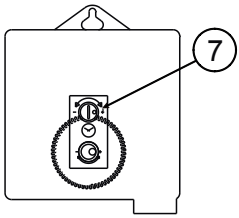
NOTA : to respect the security rules, the time distribution network must be be SELV-type.

- The impulses wires should be assembled together near their connecting terminal.

4.1. Impulses slave clock

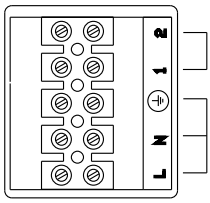
A time distribution network emits only impulses, so that it is necessary to set the clock at the time of this network.
To add a clock on a network, it is necessary to stop this network and to set on time the clock.
To set on time the clock, turn the control knob (7 or 8).

4.1.1. minute 24V // receiver,

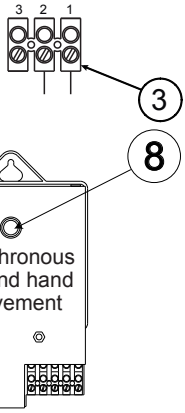


- Connect the time distribution network to terminals 1 and 2 on the terminal strip (3).

Nota : in some clocks (double face, waterproof, ...), an intermediate terminal allows to connect impulses ligne easily.

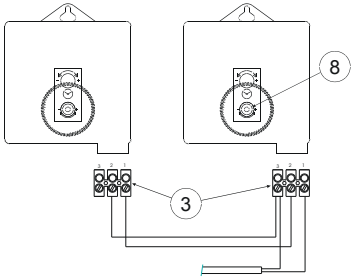


Impulses



Leave works 2 minutes.
- If the clock, or one of the clocks in case of a double side mounting, is one minute (or ½ minute according to the movement type) late : stop the emitter, reverse the connection on terminal (3) and put the clock forward 2 minutes (or 1 minute), then restart the emitter.
In fact, the same impulse is either positive or negative according to the way to connect and the initial position of the movement, it will take or not the first impulse.

4.1.2. ½ minute and minute serial receiver

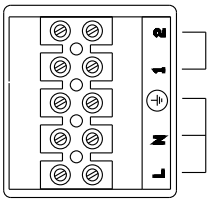


Connect the time distribution network to terminals 1 and 2 on the terminal strip (3).

- The terminal 3 of the terminal strip (3) is available. You can use it to connect a double side clock following the diagram opposite.

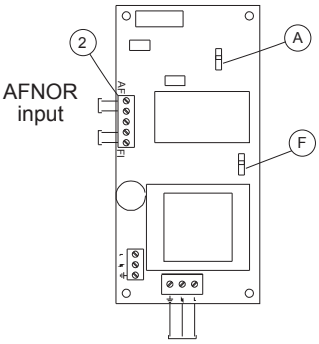
.

To insure the continuation of the serial distribution network, (to avoid to cut the serial line when a slave clock is disconnect) connect the 100 Ohms 1/2 Watt resistor delivered (for 65mA).
Leave works 2 minutes.



- If the clock, or one of the clocks in case of a double side mounting, is ½ minute (or one minute according to the movement type) late : stop the emitter, reverse the connection on terminal (3) and put the clock forward 1 minute (or 2 minutes), then restart the emitter.
In fact, the same impulse is either positive or negative according to the way to connect and the initial position of the movement, it will take or not the first impulse.

4.2. AFNOR/IRIG-B time signal reception



- Connect the time signal network to the two upper terminals of the AFNOR receiver card.
Check that the dip switch (F) on the electronic card is pushed downwards (ON position).
Check that the dip switch (A) is pushed to AFNOR position.

Operating principle of AFNOR HM receiver clock:

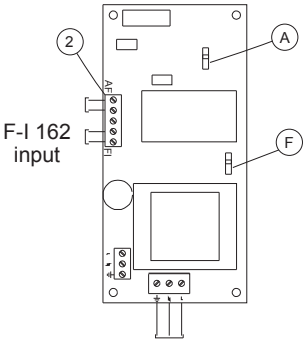
During 1 hour without reception of the time signal the clock operates with its own time basis.
If the signal recovery is achieved within this hour, the clock will be resynchronised automatically.
After 1 hour the clock is reset and hands are set on position 12.00.

- When switching on power supply, hands are set at 12.00 until the correct reception of the time signal is achieved. After 3 successive coherent AFNOR time signals are received, the clock starts and automatically get on time with fast impulses.

Operating with battery :

Without power supply 230V the clock operates with its battery during 1 hour.
- After 1 hour without time signal reception or if the battery voltage drops down, hands are set position 12.00 until power supply recovery.

4.3. Radio receiver clock



Antenna connection :

Connect the 2 wires of the antenna on the GND terminal.

Check that the DIP (A) is pushed to the position.

When switching on power supply, hands are set at 12.00 until the correct reception of the time signal is achieved or a manual setting on time is done.

After 3 successive coherent time signals are received, the clock starts and automatically get on time with fast impulses.

Operating principle of receiver :

Once the clock is synchronised, it will operates with its own time basis even if there is no more reception until there is no power failure.

Operating with battery :

Without power supply 230V the clock operates with its battery during 1 hour.

After 1 hour without time signal reception or if the battery voltage drops down, hands are set position 12.00 until power supply recovery.

The synchronous second hand witch is powered by the main 12V 50Hz, will stop immediately.

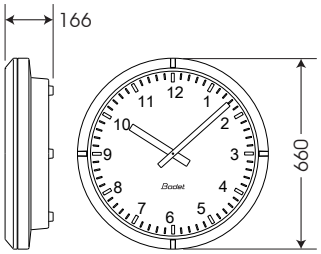
4.4. Independent Quartz on mains with remote keyboard

See the booklet of the remote keyboard, reference : 605198.

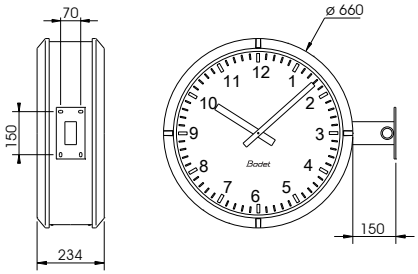
Attention : in case of a double face clock, check that the Dip switch (6) of the remote keyboard is in “DF” position.

V - TECHNICAL FEATURES

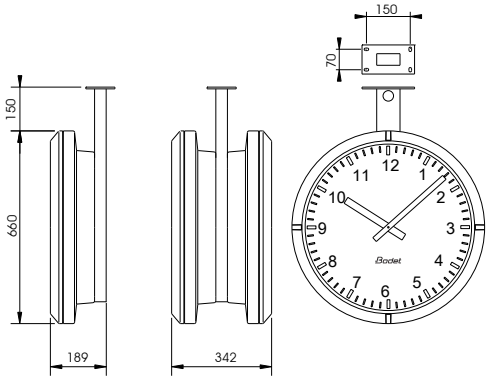
Readability : 60m.
Dimensions :
Profil 960 Single Face



Profil 960 Double Face integrated :



Mounting on bracket



Radio receiver clock :

Permanent power supply : 230V; 70mA.
Electrical isolation: TT or TN.
Accuracy : absolute with automatic summer/winter changeover.
The electronic of the clock is protected by 1 fuse 0,2AT/250V.

Independent Quartz on mains with remote keyboard clock :

Supply : 230VAC 0,2A.
Accuracy : 1 minute/year.
The electronic of the clock is protected by a fuse 0,2AT/250V.

Receiver impulses Minute 24V // HM :

Reversed polarised minutes impulses 9,6 mA.
Accuracy of the master clock.

Receiver impulses ½ minute serial HM :

Reversed polarised ½ minutes impulses 0,9V/65 mA.
Accuracy of the master clock.

AFNOR/IRIG-B time signal reception HM 230V :

Permanent power supply : 230V; 15mA.
Electrical isolation: TT or TN.
Accuracy of the master clock.

	Supply	Operating temperatures	Protection index	Weight
Profil 960 HM minute // and ½ minute serial receiver		-25°C to +70°C	IP537	14 kg
Profil 960 HM DF minute // and ½ minute serial receiver			IP437	24,4 kg
Profil 960 HM AFNOR receiver 230V	230 Volt 50 Hz ±10%		IP537	14,7 kg
Profil 960 HMS AFNOR receiver 230V			IP537	14,7 kg
Profil 960 HM DF AFNOR receiver 230V			IP437	25 kg
Profil 960 HMS DF AFNOR receiver 230V			IP437	25 kg
Profil 960E Quartz with remote keyboard			IP537	14 kg
Profil 960E DF Quartz with remote keyboard.			IP437	24,4 kg

DF = Double face, HM = hour-minute, HMS = hour-minute with synchronous second hand.

VII - WHAT TO DO IF...? ...CHECK.

What to do if...?	… Check.
■ No synchronisation after the installation.	■ Check that the type of signal send by the master clock (min, ½ min, AFNOR/ Irig-B) is in accordance with the type programmed in the clock.
■ Minute or ½ minute parallel receiver stopped.	■ Lack of impulse, check the master clock and the network.
■ AFNOR / Irig-B receiver stopped at 12h00.	■ Lack of impulse since more than 1 hour, check the master clock and the network.
■ The synchronous second hand is stopped on a receiver clock.	■ The permanent supply powering second hand is cut-off. Check this power supply.


100% papier recyclé