Bodet Style II LED Clock Digital Clock User Manual

Contents

Bodet Style II LED Clock Digital Clock

Product Information

The product is a BODET clock, designed with ISO 9001 quality processes to ensure customer satisfaction. It comes with a user manual that provides instructions for installation, operation, and maintenance. The clock is available in different models, including NTP models, and may require the installation of BODET Detect software for programming. It is important to note that the information provided in the manual is non-binding, and Bodet reserves the right to make changes to the equipment without notice. Failure to follow the instructions may result in irreversible damage to the clock and void the warranty. For specific instructions related to different clock models, users should refer to the corresponding instructions.

Product Usage Instructions

Unpacking the clock

Carefully unpack the clock, ensuring all components are present and undamaged.

Cleaning

Use an anti-static product provided in the cleaning kit to clean the clock. Avoid using alcohol, acetone, or other solvents that may damage the clock's casing or glass.

Pre-requisites

Before programming the clock, install BODET Detect software, which can be downloaded for free from the BODET website. The clock should be connected to a PoE network socket using a PoE switch or injector. Select a location away from sources of electrical interference.

Clock Installation

Mounting without back cover

Refer to the dimensions listed in the table provided for the specific clock model. Insert the clock in the cut-out to mark the position of the 4 mounting screws.

Mounting with back cover

Refer to the dimensions listed in the table provided for the specific clock model. Insert the back cover in the cut-out to mark the position of the 6 mounting screws.

Connections

Connect the electronic board and optional keypad to the terminal strip on the back of the clock.
Note: The instructions provided above are a summary of the user manual. For detailed instructions and illustrations, please refer to the complete user manual available at **www.bodet-time.com**.

Initial checks

Thank you for choosing a BODET clock. This product has been carefully designed, adhering to ISO 9001 quality processes, to ensure your satisfaction. We recommend that you read this manual and the general safety measures and operating instructions carefully before handling the clock. Retain this manual for reference for the lifespan of your clock. The information supplied is non-binding; Bodet reserves the right to make changes to equipment, including functional, technical and aesthetic changes or changes to colours, without notice. Failure to observe these instructions may cause irreversible damage to the clock and invalidate the warranty. These instructions relate to NTP models. For other models, please refer to the corresponding instructions.

Unpacking the clock

Carefully unpack the clock and check the contents of the package. This should include:

- Style 5S or 7S Hospital clock

- Anti-static cleaning kit
- Manual
- **IMPORTANT**: product identification label

An identification label is affixed to the back of the clock. Use the URL link shown to download these instructions.

Cleaning

- Use an anti-static product identical to that in the cleaning kit provided.
- Never use alcohol, acetone or other solvents, which may damage your clock's casing or glass.

Pre-requisites
To programme the clock you must install BODET Detect software. This software is available to download for free on the BODET website www.bodet-time.com.
Note: the BODET clock must be connected to a PoE network socket via a PoE switch or a PoE injector. (802.3af, class 3: multicast, class 0: unicast).

Bodet recommends the following devices:

- PoE injectors: Zyxel, Tp link, D-Link, HP, Cisco, Axis, ITE Power Supply, PhiHong, Abus, Globtek.
- PoE switches: D-Link, HP, Planet, Zyxel, Cisco, NetGear, PhiHong.\

Select a location to install the clock, preferably away from sources of electrical interference, such as transformers.

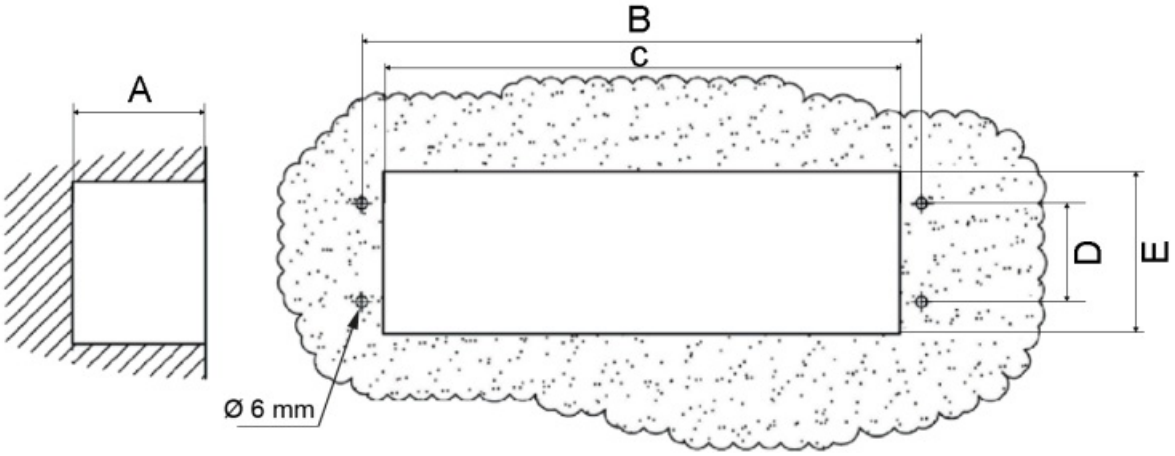
Installation

Clock installation
Mounting without back cover
According to the model of the clock make the cut-out following the dimensions listed in table below:

	A	B	C	D	E
Style 5S OP	46	400	366	68	109
Style 7S OP		440	406	85	125

Dimensions in mm

- a) Insert the clock in the cut-out in order to mark the position of the 4 mounting screws.



- b) Remove the clock and drill 4 holes Ø 6mm to insert the wall plugs.
- c) Feed the power cable and the synchronisation cable throught the cut-out.
- d) Connect the clock, adjust the brightness (refer to page 7) and set the time (refer to page 9).
- e) Apply a silicone seal between the clock and the wall.
- f) Fix the clock to the wall with the 4 screws Ø4 mm.

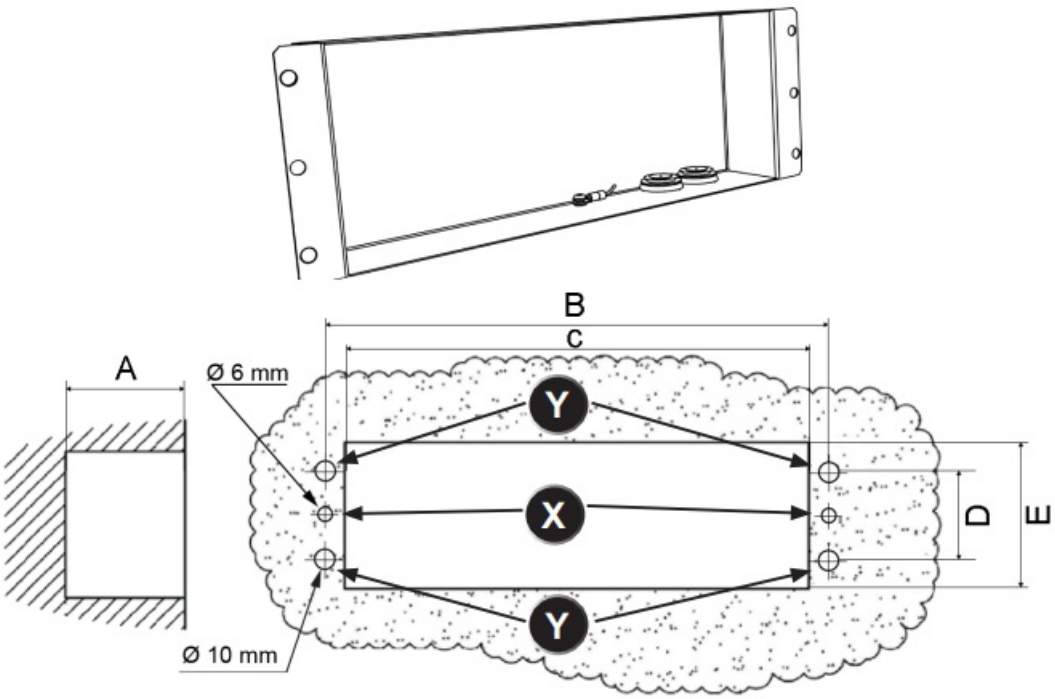
Installation ***without*** the back cover

Mounting with back cover
According to the model of the clock make the cut-out following the dimensions listed in table below:

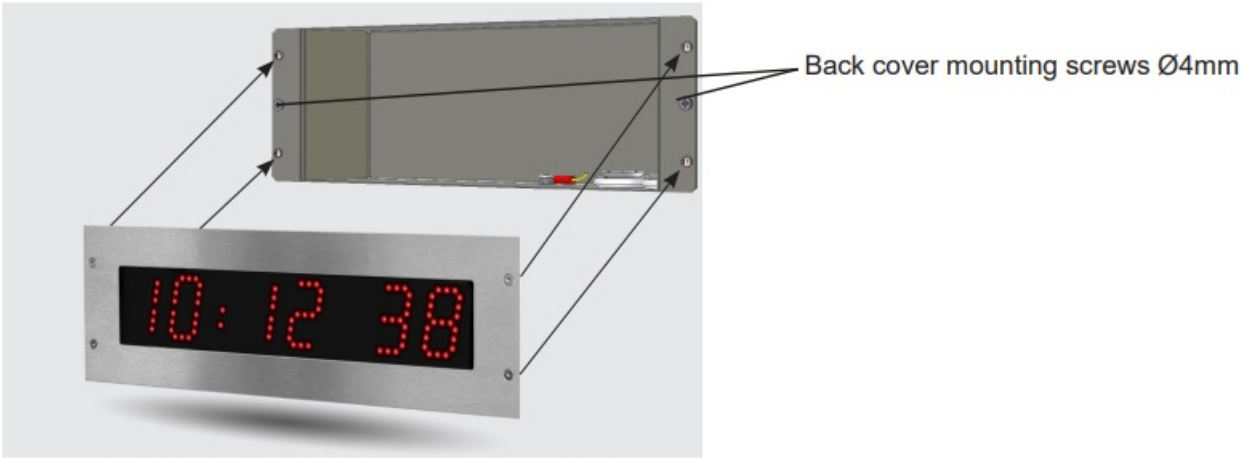
	A	B	C	D	E
Style 5S OP	46	400	366	68	109
Style 7S OP		440	406	85	125

Dimensions in mm

- a) Insert the back cover in the cut-out in order to mark the position of the 6 mounting screws.



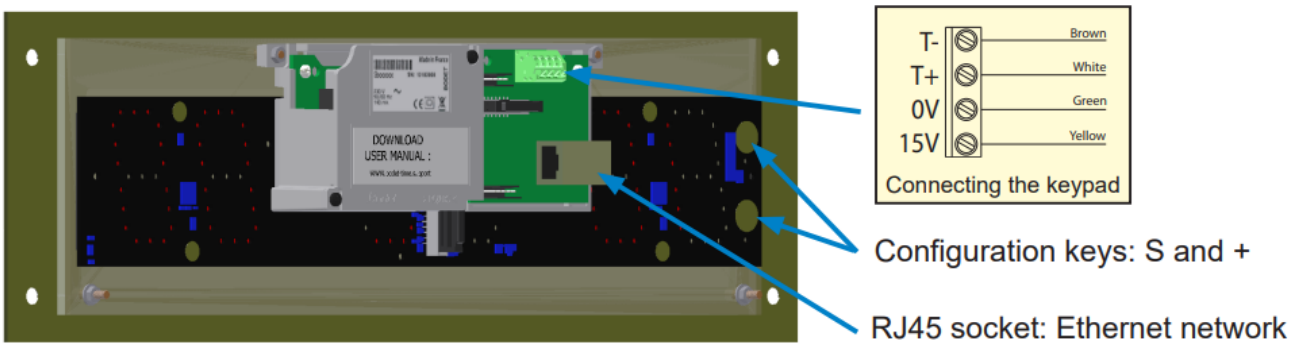
- b) Remove the back cover and drill 2 holes Ø 6 mm (**x**) to insert the wall plugs for the back cover mounting.
- c) Drill 4 holes Ø 10mm (**y**) to make room for the 4 clock mounting rivets.
- d) Feed the power cable and the synchronisation cable throught the cut-out and cable glands of the back cover.
- e) Apply a silicone seal between the back cover (fixing brackets) and the wall.
- f) Fix the back cover to the wall with the 2 screws Ø 4mm.
- g) Connect the clock, adjust the brightness (page 7) and set the time (refer to page 9).
- h) Apply a silicone seal between the back cover and the clock.
- i) Fix the clock to the back cover with the 4 screws Ø 4mm.



Installation ***with*** the back cover

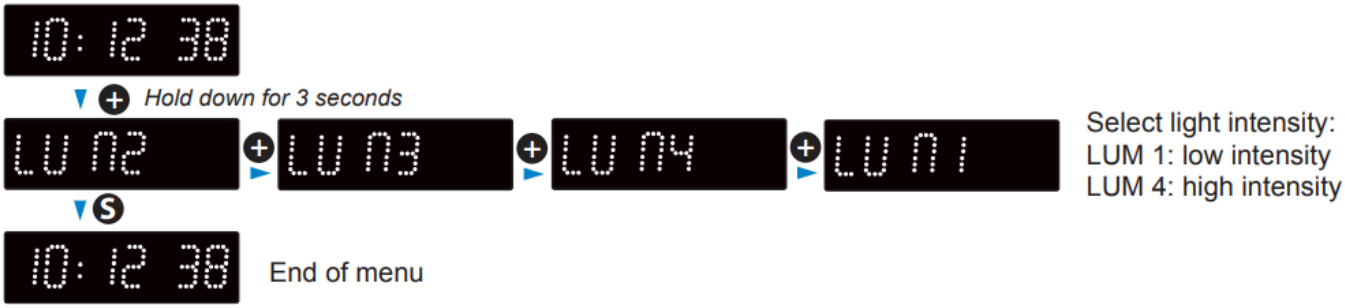
Connections

- Connect the electronic board (see next page) and the keypad (optional) to the terminal strip on the back of the clock.



Example of a Style 5S Hospital
Impulse synchronisation electronic board

- Set the brightness by pressing the “S” and “+” keys on the back of the clock (see above).
- Brightness may be adjusted when the Style clock is in normal use mode, i.e. in neither the configuration menu, nor in the set time menu. The default brightness is level 3.

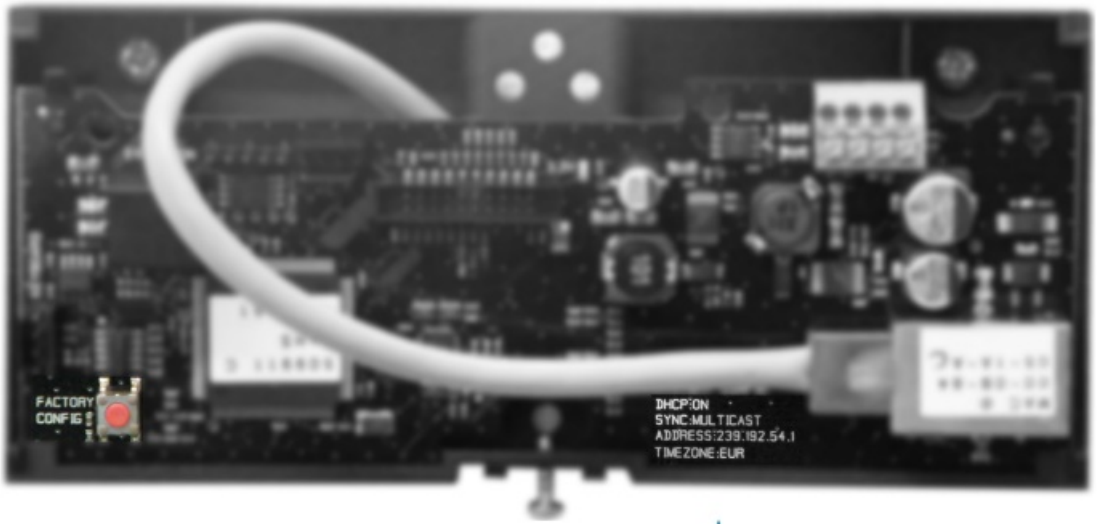


The luminosity can also be adjusted via the embedded web server of the clocks (page 14).

Installing the keypad

To install and use the keypad (including in timer mode), refer to the instructions supplied with the keypad.

Default configuration
Restore factory settings by keeping the red button on the electronic board pressed until the clock turns black.
Location of button on the electronic board:



The full factory configuration is as follows:

- IP configuration by DHCP (DHCP: ON)
- Time zone: EUR
- Synchronisation: Multicast
- Synchronisation address: 239.192.54.1

These four parameters are printed on the electronic board.

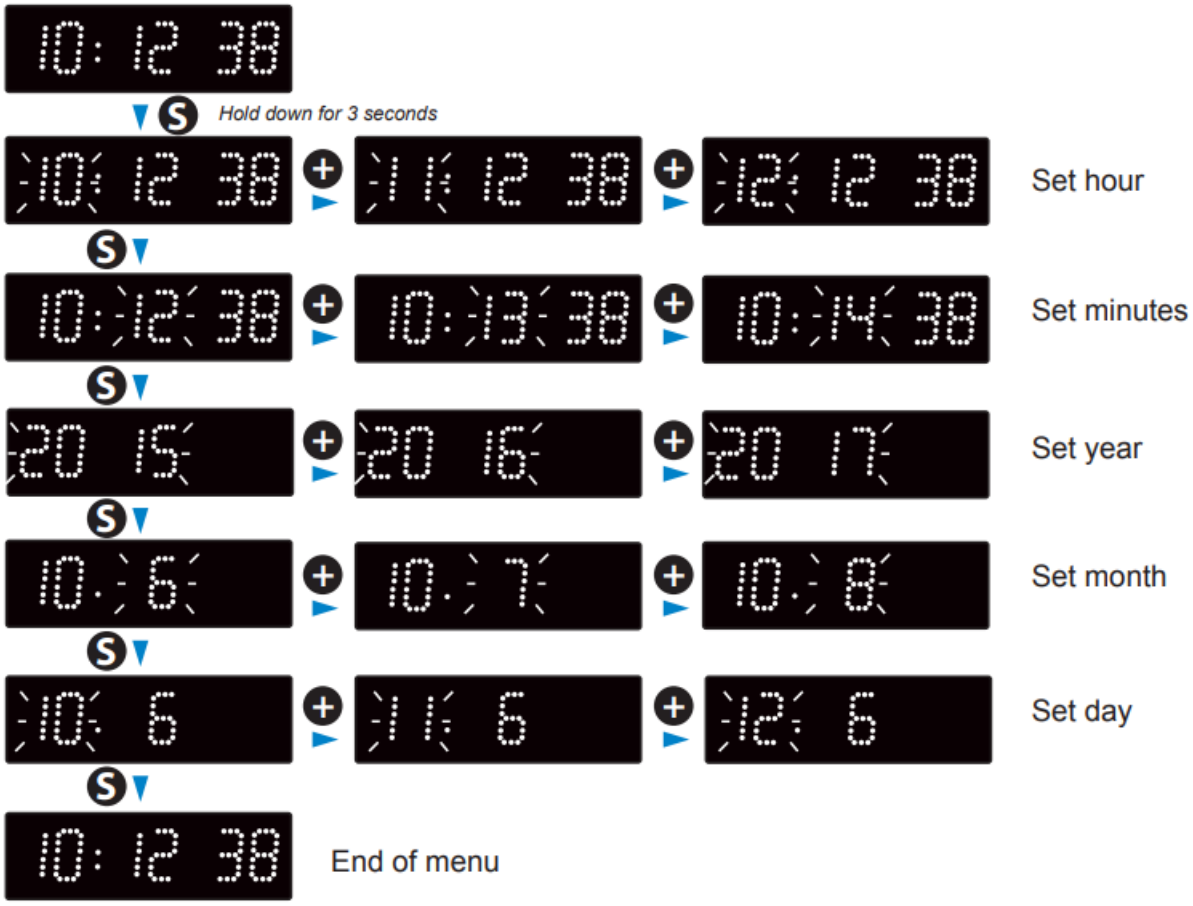
- Clock name: “BODET-@MAC”
- Pool period for unicast synchronisation: 15 mins.
- SNMP disabledTrap type: V2C
- Temperature alarm threshold: -5°C to +55°C
- Trap status issue period: 24 hr
- No password
- Luminosity: level 3
- 12 hr/24 hr mode: 24 hr
- Eco mode: Nor
- ON & OFF time: 23 hours OFF / 6 hours ON\

On the electronic board connector:

- Green LED: network activity + power supply
- Yellow LED: network type (ON = 100 m, OFF = 10 m)

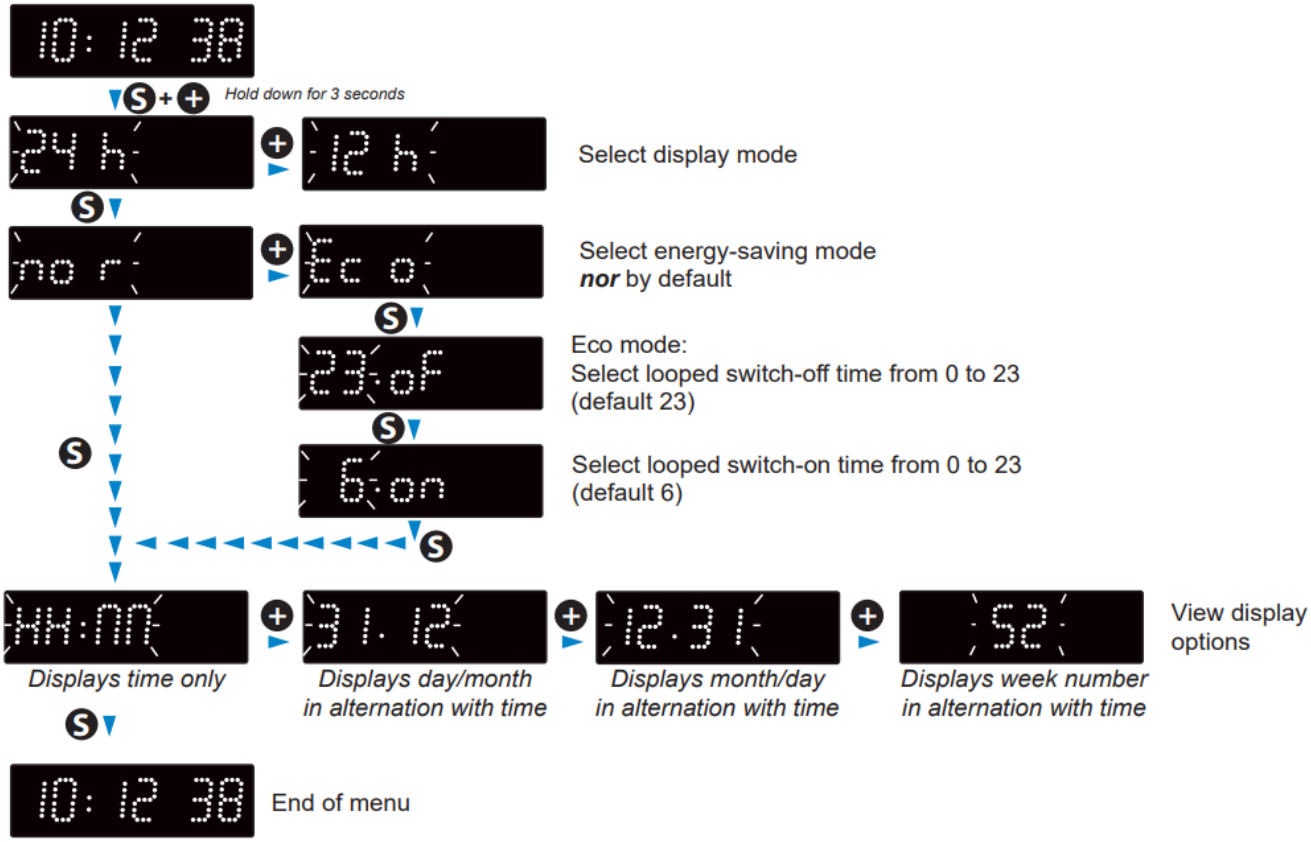
Basic configuration

Setting time/date/year
To set time, date and year, press and hold “S” for 3 seconds.



Manual configuration menu

Accss the configuration menu by pressing and holding “S” then “+” for 3 seconds.



This configuration can also be set in the clock’s embedded web server.

Web interface

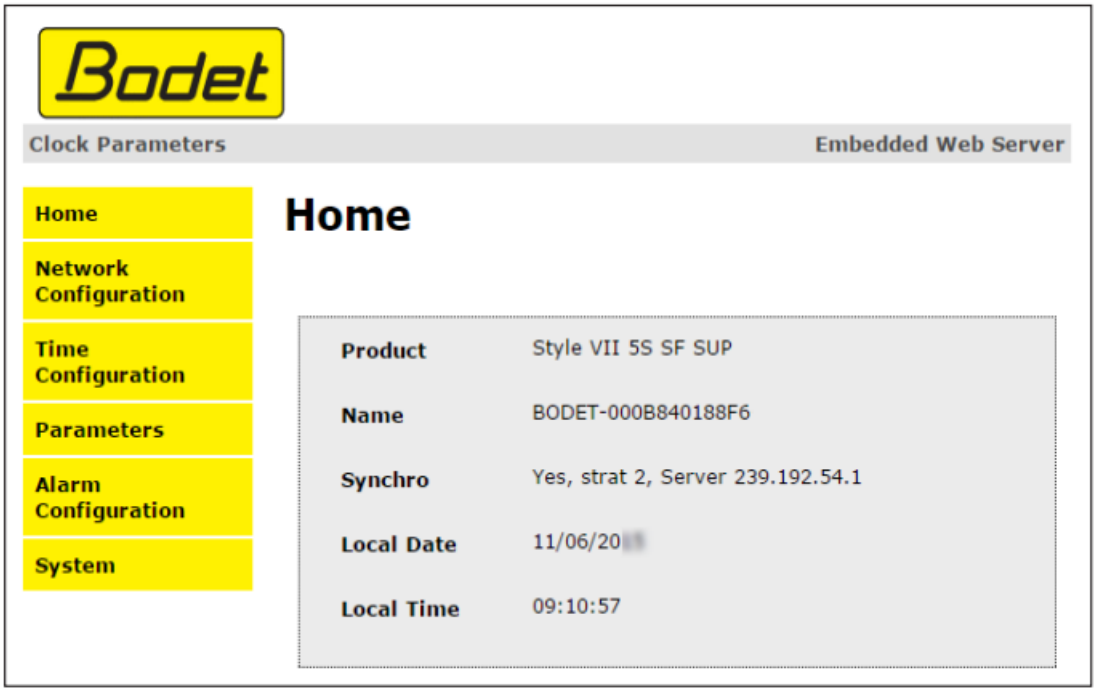
There are two ways to access the web interface to configure the clock:

1. Open an web browser and enter the IP address of the clock in the address bar. The clock IP address is allocated automatically or entered by the installer (page 11).
2. Run BODET Detect software and click on to open the appropriate web server for the networked clock (refer to the software instructions, ref.: 607548).

   BODET Detect can be used to:

   - Detect all clocks on the network
   - Configure each clock (individually or by copying the settings for one clock to a group of clocks)
   - Update the clock's software version
   - Check clock status
   - Access downloaded MIB files

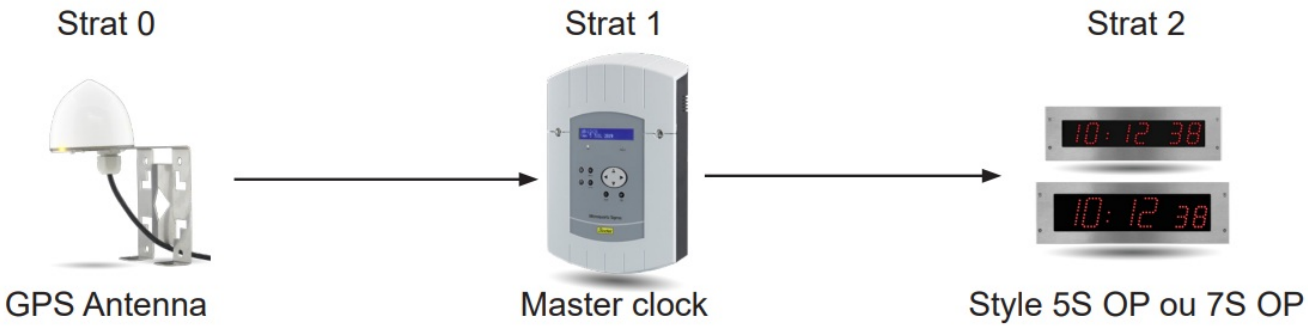
Home page



The clock web server home page contains general information about the clock.
The information is displayed as follows:

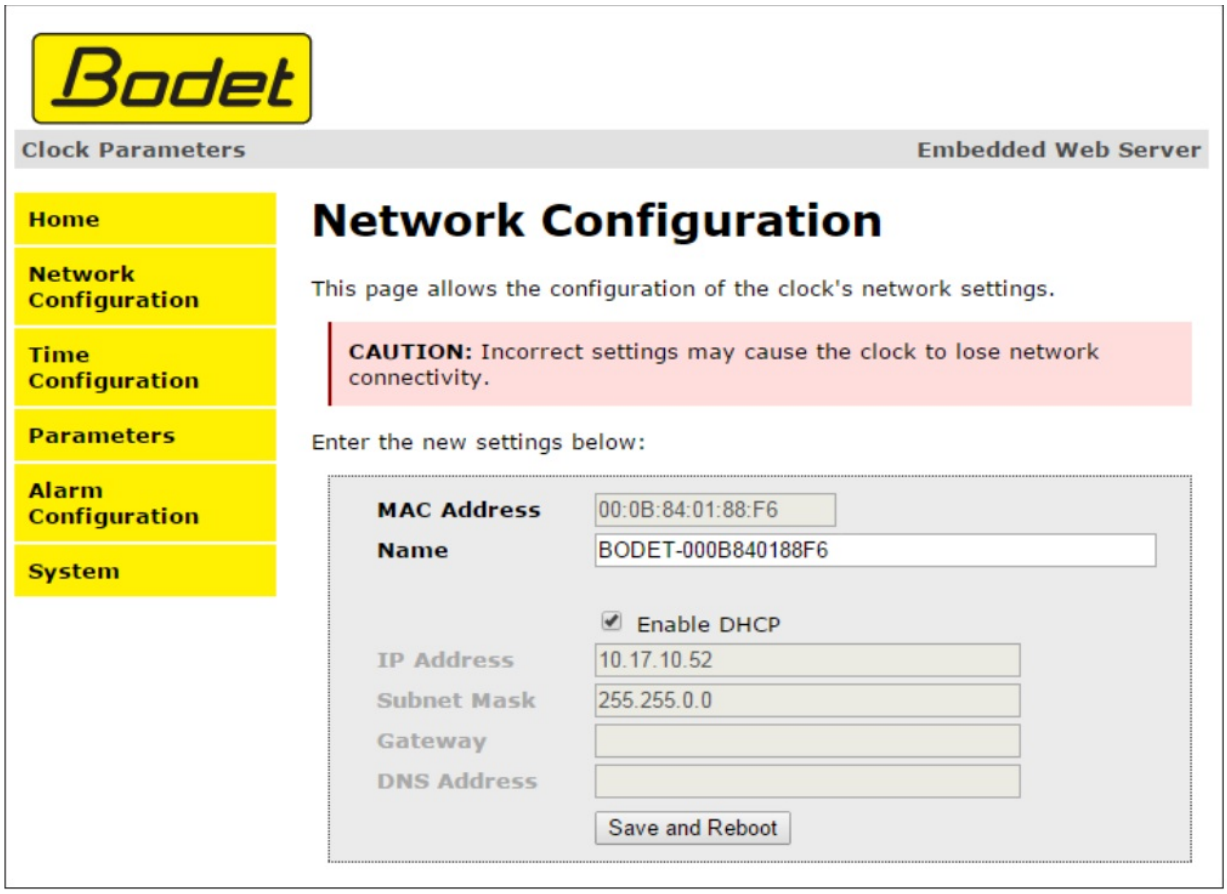
- **Product:** product type + SF (Single Face) or DF (Double Face) + SUP (Supervised).
- **Name:** user-defined clock name (default: Bodet-@MAC).
- **Synchro**: synchronisation status ("Strat 2" indicates that the clock is at the 2nd level from the synchronisation source) + IP address of the server on which the clock is synchronised.

Example:



- Local date: current date.
- Local time: current time.

Network configuration



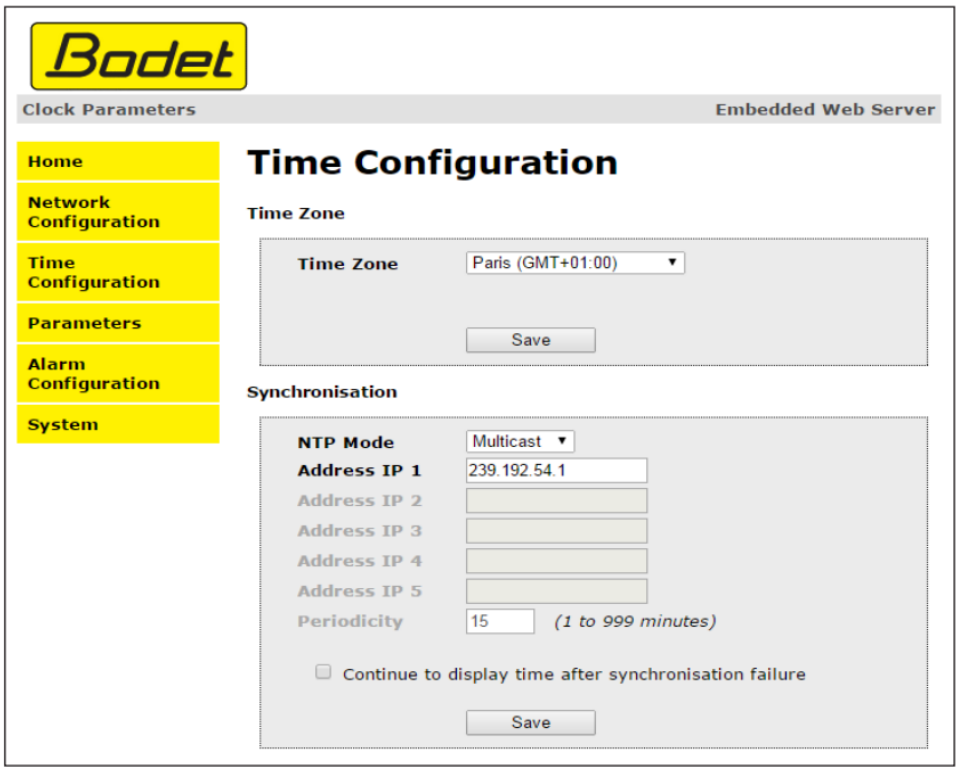
This page is used to configure the clock on the network. The warning indicates that the clock might lose network connectivity if the settings are incorrect.
The following information is displayed:

- **MAC Address:** This is the clock's MAC address. This address is unique to each device. This number is indicated on a label on the back of the Bodet clock.
- **Name:** User-defined clock name.
- **Enable DHCP checkbox:** If checked, the device's network IP settings will be configured automatically. If this box is unchecked, the following settings are available:
- **IP Address:** Manually sets the device's IP address (required).
- **Subnet Mask:** The subnet mask associates a clock with the local network (required).

- **Gateway:** The gateway can be used to connect the clock to two data networks.
- **DNS Address:** This can be used to associate a domain name with an IP address. This avoids having to enter an IP address in the browser as a user-defined name can be used instead. For example: www.bodet.com is easier to remember than 172.17.10.88.

save and reboot saves your configuration and reboots the clock.

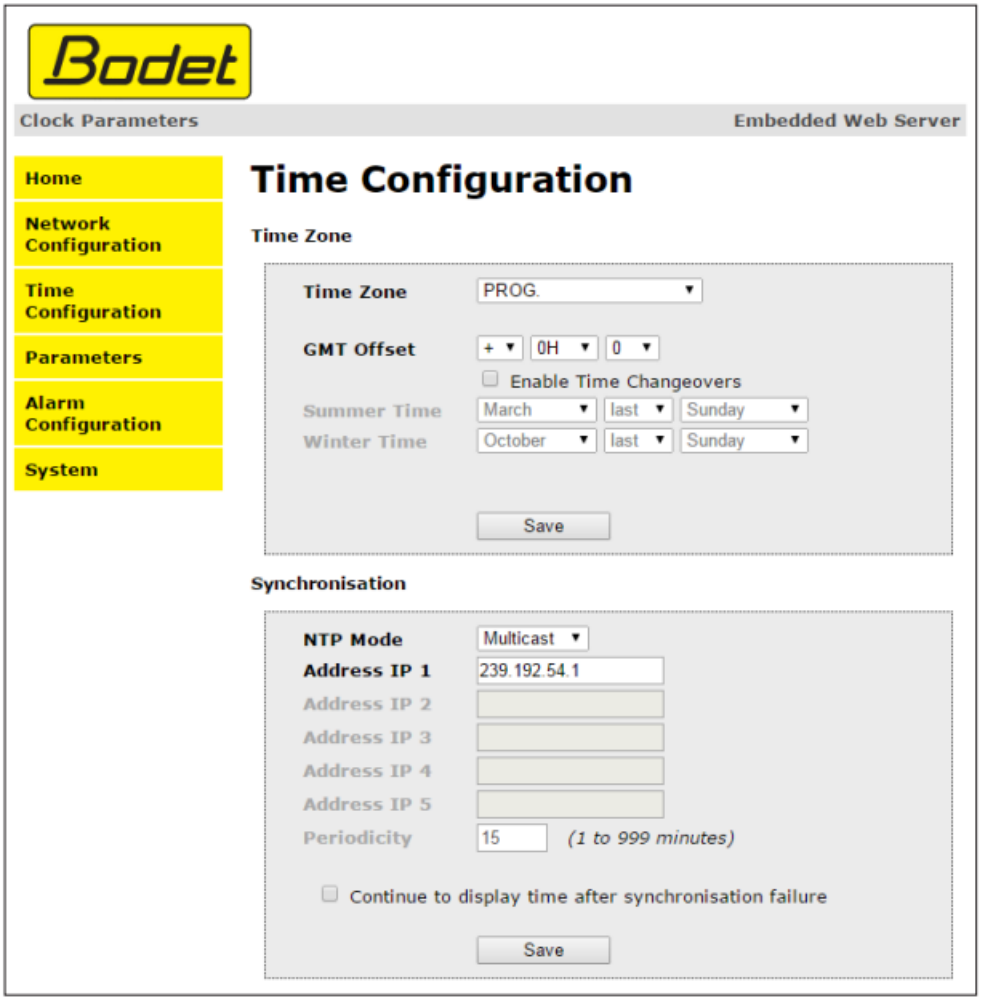
Time configuration and synchronisation



The Time Configuration page is divided into two parts. One is used to set the time zone, the other to set the synchronisation mode.
The following information is displayed:

- **Time zone:** The time zone can be selected from the dropdown menu (summer/winter time is handled automatically depending on the selected time zone). A default undefined time zone can also be set in the dropdown menu (“PROG”).

Select “PROG” in the dropdown menu to set time, month, fixed day or schedule for time changeovers:



- **NTP Mode**: Used to select one of 3 mode types:
  - **Unicast**: In Address IP 1, enter the IP address of the NTP server. In this case, it is the clock that calls the NTP server.

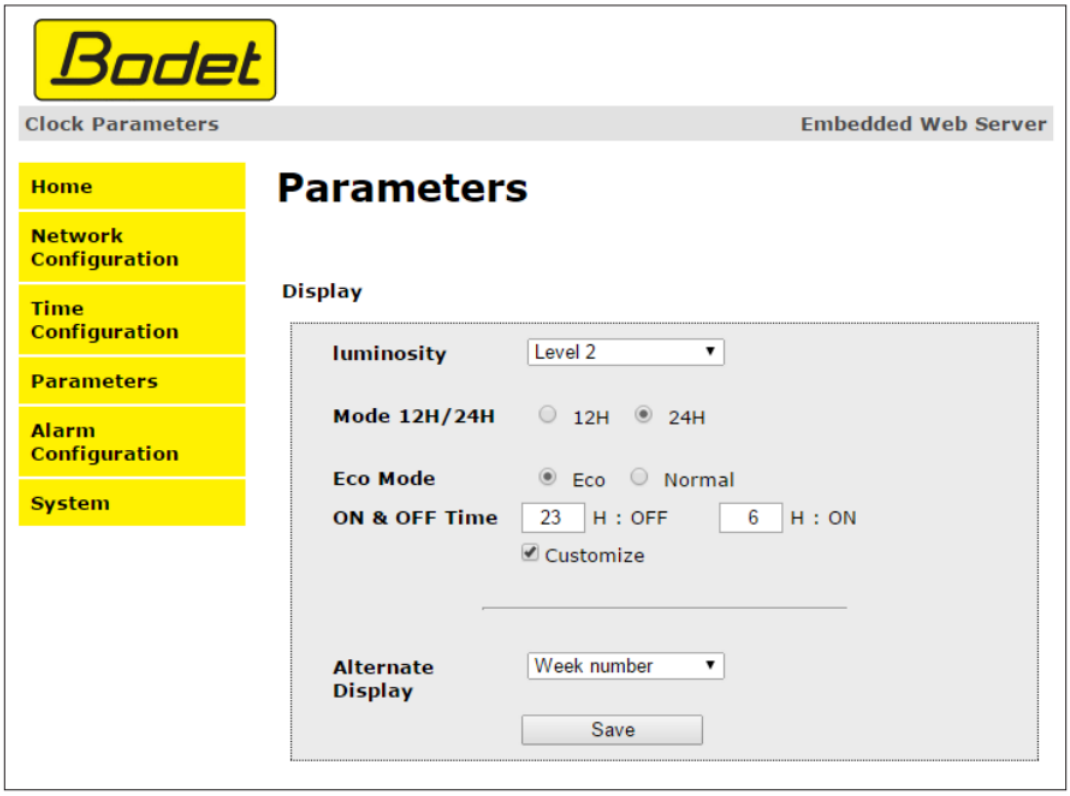
    It is also possible to set up redundancy (if the first server fails to respond, the second is requested and so on). For this purpose up to 5 server addresses may be entered (IP address 1/2/3/4/5). The Periodicity field sets the frequency with which the clock requests the configured NTP servers.
  - **Multicast**: In this case, the NTP server broadcasts the time on the Multicast address given to it. The Multicast address of the clients (receivers) must be the same as that on which the server broadcasts. By default, Bodet products transmit or receive using the Multicast address: 239.192.54.1 The Multicast addresses are included between 224.0.0.0 and 239.255.255.255.
  - **By DHCP:** As for Unicast mode, except the NTP server addresses are automatically retrieved via the DHCP server (option 42 enabled on the DHCP server).

The checkbox “Continue to display” is used to define how the clock should respond if NTP synchronisation has been lost for 48 hours:

- If “Continue to display” is OFF, the clock blacks out and the colon is fixed.
- If “Continue to display“ is ON, the clock continues to operate using its internal time base and the colon “:” ceases to flash.

save is used to save any settings made on this page.

Parameters

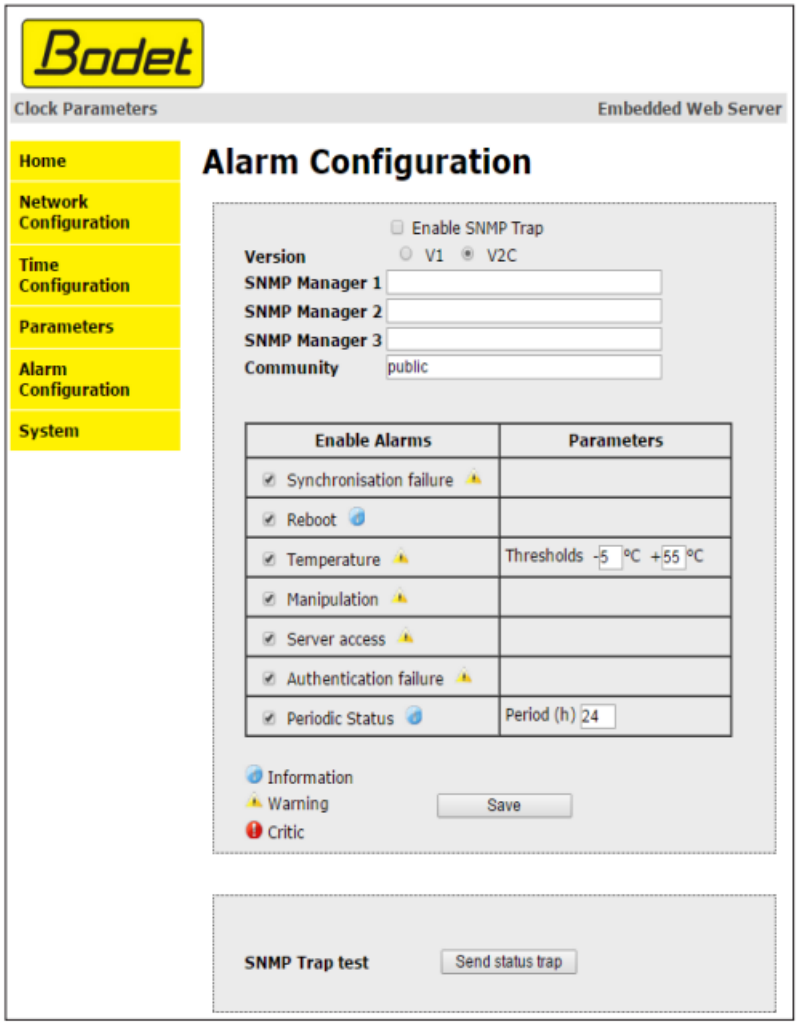


This page is used to configure the clock display on the network.
The following information is displayed:

- **Luminosity**: Used to set clock brightness between 4 levels from 1 (low) to 4 (high). Default brightness is 3.
- **Mode 12H/24H:** Used to display the time in 12- hour or 24-hour mode.
  Example: 8:00 (in 12-hour mode) or 20:00 (in 24-hour mode).
- **Eco Mode**: Used to enable the clock's energy-saving mode. In Eco mode, the clock displays the flashing colon and is set to minimum brightness (level 1). This mode is set for a period configured below (ON & OFF Time). This mode is disabled if the user opens the configuration menu (using the "S" and "+" keys) or changes the settings on the web server or if the clock is rebooted.
- **ON & OFF Time:** Used to define the period when Eco mode is enabled. This mode is only enabled when the status changes. Example: if Eco mode is set at 8:30 for 8:00 (day D), the clock switches to this mode at 8:00 on the following day (D+1).
- **Alternate Display:** Used to select which information is displayed in alternation with the time display. Time display can alternate with week number, date + month or the month + date.

save is used to save any settings made on this page.

Alarm configuration



This page is used to enable clock supervision, to define the information to be transmitted and the destination server. One or more settings can be defined and configured as alarms.
The following information is displayed:

- **Enable SNMP Trap:** If enabled, error messages are sent to the SNMP Manager(s) automatically.
- **SNMP Manager 1/2/3**: IP addresses of servers receiving alerts from the clocks.
  SNMP Manager redundancy increases the reliability of alerts.
- **Community:** A set of clocks defined by the user. All the clocks on the network must have the same Community name.
- **Synchronisation failure:** This setting is used to detect synchronisation discrepancies with the master clock (type Sigma) or the time server (type Netsilon).
  Multicast: Alarm triggered when the multicast synchronisation is absent for at least 1hour|
  Unicast: Alarm triggered when the unicast synchronisation is absent for 3 times the duration of the poll (periodicity) and at least 1 hour (allowing for the NTP server maintenance)
- **Reboot**: This setting is used to detect a clock reboot.
- **Temperature**: This setting is used to warn that the temperature range has been exceeded (variable temperature range).
- **Manipulation**: This setting is used to trigger an alert if a setting is changed manually on the clock (using the “S” and “+” keys).
- **Server access**: This setting is used to trigger an alert if a user connects to the web server of the clock.
- **Authentication failure:** This setting is used to trigger an alert if a user sends an incorrect ID to the web server of the clock.

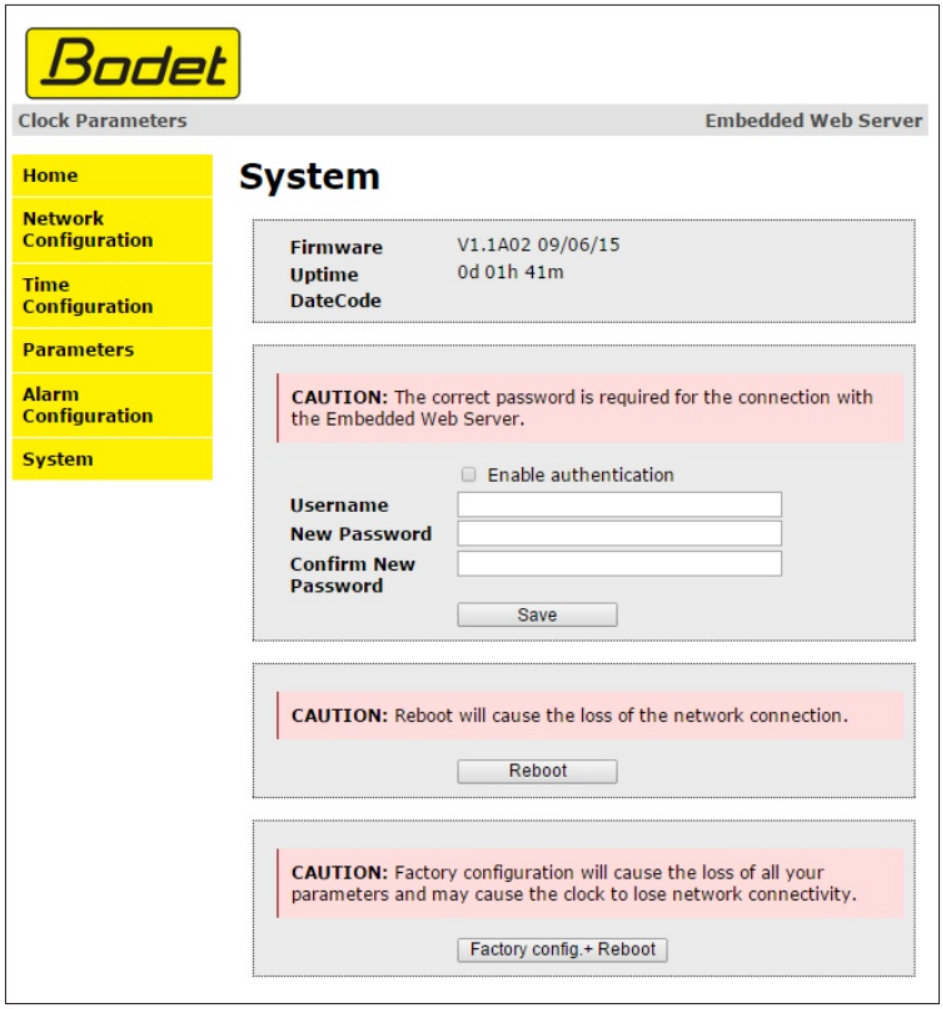
- **Periodic Status:** This setting is used to verify that the device is still working correctly (in case alerts are “lost”). This verification is carried out at a set frequency.

Information: The errors or faults reported are minor and a visit by a maintenance technician to correct the fault is not strictly necessary.
Warning: The errors or faults reported are significant and a visit by a maintenance technician to correct the fault is necessary.
Critical: The errors or faults reported are serious and an urgent visit by a maintenance technician to correct the fault is necessary.

Save is used to save any settings made on this page.

Send status trap is used to send a trap status to all of the configured SNMP managers to ensure that supervision is configured correctly.

System and protection



This page is divided into four parts as follows:

1. Part 1: Information panel displaying software version, time elapsed since the clock was powered on and the date of manufacture of the product (year/week).
2. Part 2: A warning message to inform the user that once set, the correct password must be used to establish the connection with the web server. To save a user name and password, enter the information in the fields provided for this purpose. Click to store your new ID and password.

3. Part 3: A warning message to inform the user that a clock reboot will cause network connectivity to be lost when the reboot occurs. The button reboots the clock.
4. Part 4: A warning message to inform the user that a reboot restoring factory settings will delete all user-defined settings and may cause the clock to lose network connectivity if there is no DHCP server on the network. The Factory config.+ Reboot button reboots the clock, restoring factory settings.

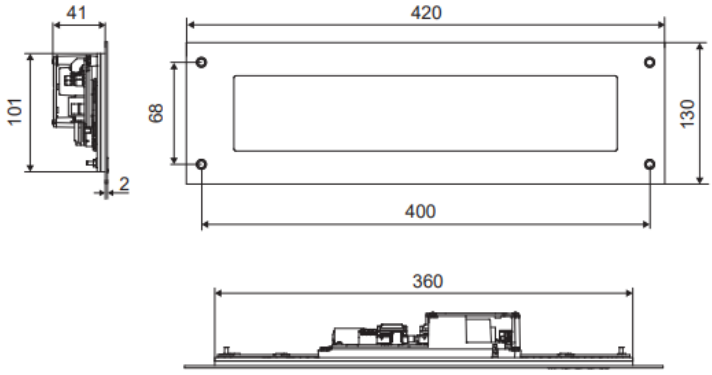
Memory backup

Style clocks have a permanent backup feature which stores all of the configuration parameters and display settings, even in the event of prolonged power failure.

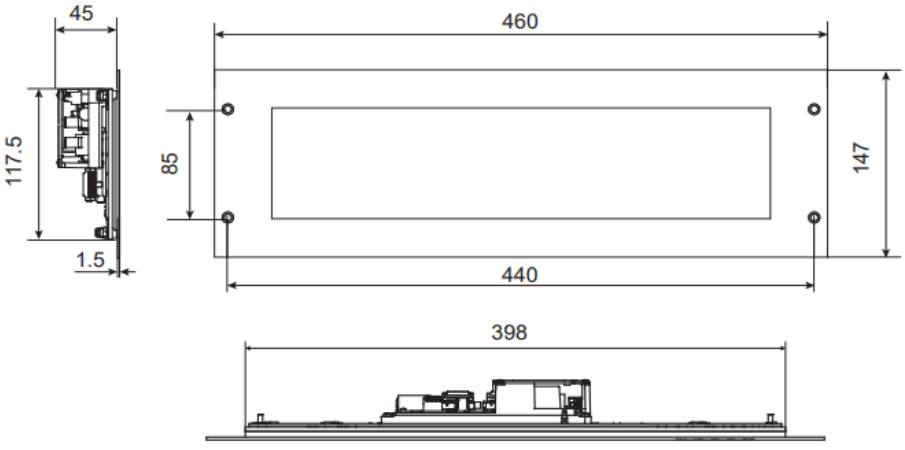
Technical specifications

- **Synchronisation:** RFC 2030-compliant (SNTP V4), unicast and multicast mode or via DHCP.
- **Synchronisation status:** colon flashes if the clock is synchronised; colon steady then blackout if a clock is not synchronised
- **Network connection:** 10Base-T/100Base-TX
- **Power supply:** PoE (Power over Ethernet)
- **Power consumption:** 4W
- **Accuracy:** ±0.1s with automatic changeover to summer/winter time
- **Operating temperature:** -5°C to +55°C
- **Protection rating:** IP65, IK07 (Style 7S OP), IK09 (Style 5S OP).
- **Compliance**: directives LVD 2014/35/EU and EMC 2014/30/EU.

Style 5S OP

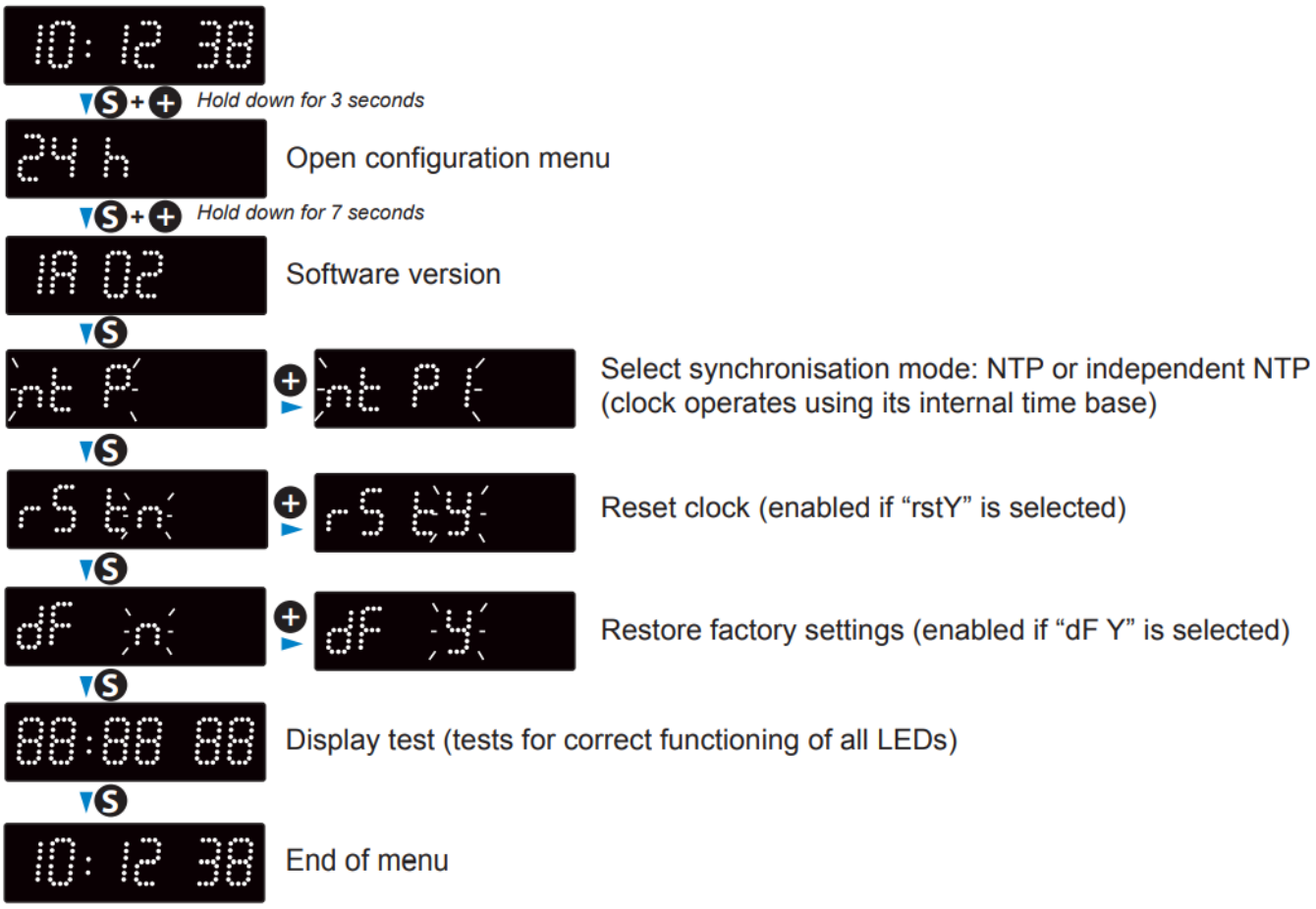


Style 7S OP



Maintenance menu

To access the maintenance menu, open the configuration menu by pressing and holding “S” then “+” for 3 seconds. Release both keys, then press and hold “S”, then “+” again for 7 seconds.



What to do if…

What to do if…	Check that…
There is no synchronisation afte r installation.	1) The signal type sent by the master clock is the same as the clock's signal type. 2) The NTP server is on the same network as the slave (IP addresses, subn et mask and gateways).
The NTP slave time is incorrect.	1) The time zone selected on the web server is correct.
There is no DHCP server on the network.	1) The default network configuration on the clock is as follows: – IP: 172.17.30.110 – MASK: 255.255.0.0 – GATEWAY: 0.0.0.0 – DNS: 0.0.0.0
One of the Style clocks does not switch on or repeatedly reboots.	1) The maximum power from the PoE switch is sufficient to supply all of the clocks connected to the switch. 2) Cable length is less than 100 metres (refer to the network wiring standard s). 3) All switch outputs are PoE-compatible.

Documents / Resources

	Bodet Style II LED Clock Digital Clock [pdf] User Manual Style II LED Clock Digital Clock, Style II, LED Clock Digital Clock, Clock Digital Clock, Digital Cl ock, Clock

References

- European leader in time measurement and management
- BODET Group: leader in time measurement and time management