

DESCRIPTION









- Analogue display clock.
- Hour-Minute or Hour-Minute-Second display depending on the model.
- ABS casing IP 40, IK02 (indoor use).
- Optimal viewing distance: 20m.
- Poly methacrylate protective crystal (PMMA).
- Front casing colours: black, white, aluminium paint or chrome-plated metal.
- Dial markings: Arabic figures or minute notches or DIN.
- Wall bracket with optional locking system.

STANDARDS

- Standard EN 50081-1: Generic Emissions.
- Standard EN 50082-1 and 50082-2: Generic Immunity.
- Standard EN 55022 class B: Information Technology Equipment– Radio disturbance characteristics.
- Standard EN 60950: Information Technology Equipment – Safety.
- Radio Standard EN 300-220-3 and EMC Standard EN 301-489-3 for Radio Equipment.
- Standard NFS 87-500 A: AFNOR and DHF Time Distribution Protocols.



TECHNICAL FEATURES

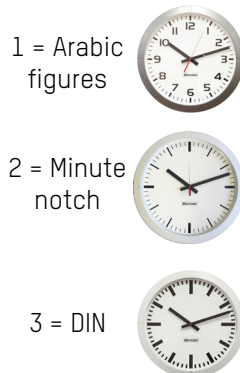
| | Movement | Power supply | Operating temperatures | Weight |
|---|--------------------------------------|--|------------------------|--------|
| | Quartz 1.5 V | 1.5 V LR6 battery | - 5°C to +50°C | 0.7 kg |
|  | 24V minute parallel impulse | - | - 10°C to +50°C | 0.9 kg |
|  | 24V second parallel impulse | - | - 10°C to +50°C | 0.9 kg |
|  | ½ minute serial impulse | - | - 10°C to +50°C | 0.9 kg |
|  | AFNOR | 6 to 24 VDC | - 5°C to +50°C | 0.9 kg |
|  | NTP NTP (silent, sweeping second) | Power over Ethernet, Class 0 device, 2W maximum | - 5°C to +50°C | 0.9 kg |
|  | DCF Radio | 1.5V LR6 battery | - 5°C to +50°C | 0.7 kg |
|  | DHF transmitter | 2x1.5V LR6 batteries | - 5°C to +50°C | 0.9 kg |
|  | DHF TBT | 6 to 16 VDC | - 5°C to +50°C | 0.9 kg |

REFERENCES

| Hour-Minute | Hour-Minute-Second | |
|-------------|--------------------|-------------------------|
| - | 981 1xy | Quartz 1.5V |
| 981 5xy | - | 24V minute impulse |
| - | 981 4xy | 24V second impulse |
| 981 6xy | - | ½ minute serial impulse |
| 982 8xy | 982 9xy | AFNOR |
| 982 Fxy | 982 Gxy | NTP |
| - | 982 Hxy | NTP (silent) |
| - | 981 3xy | DCF radio |
| 982 2xy | 982 3xy | DHF transmitter |
| 982 4xy | 982 5xy | DHF TBT |

x and y: refer to the illustrations.

Dials models (x):



Front casing colours (y):



MOVEMENTS AND SYNCHRONISATION

• Quartz 1.5V

The clock is completely autonomous, the time information is provided by its own time system. The operating temperature range for these clocks is -25°C to +50°C when using Lithium batteries.

• 24V minute impulse

Slave clocks are connected to a distribution line and activated through electrical impulses sent every minute by the master clock.

• 24V second impulse

Slave clocks are connected to a distribution line and activated through electrical impulses sent every second by the master clock.

• 1/2 minute serial impulse

Slave clocks are connected to a distribution line and activated through electrical impulses sent every ½ minute by the master clock.

• AFNOR

The coded time distribution consists in transmitting a complete time message every second: the time on the receiver is automatically and immediately set after connection to the clock line.

The AFNOR coded time does not interfere with any other transmissions, and is insensitive to other electrical interference.

Consumption TBT: 10 mA (6 VDC), 8 mA (24 VDC).

• Network Time Protocol (NTP)

Slave clocks are connected to the Ethernet network and powered by PoE (Power over Ethernet).

The time is synchronised by the time server or the master clock over the Ethernet network in unicast, multicast or DHCP mode.

• Network Time Protocol (NTP) silent

Slave clocks are connected to the Ethernet network and powered by PoE (Power over Ethernet).

The time is synchronised by the time server or the master clock over the Ethernet network in unicast, multicast or DHCP mode.

The second hand's movement is continuous. The advantage of this clock is its very low noise level (<20dB at 1 metre).

• DCF radio

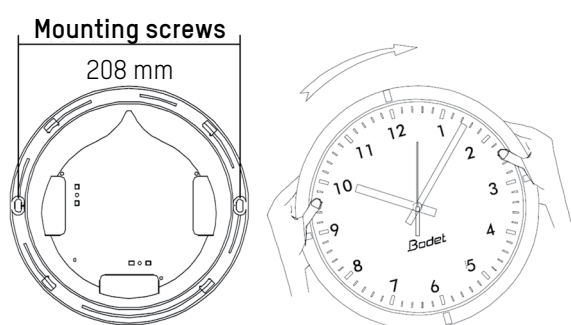
The clock is completely autonomous. The DCF radio synchronised movement provides absolute accuracy and automatic summer/winter changeovers.

• DHF

The DHF clocks pick up the time signal sent by the master clock via a radio signal and synchronise automatically. If radio reception is poor, the clocks keep time thanks to their own time systems.

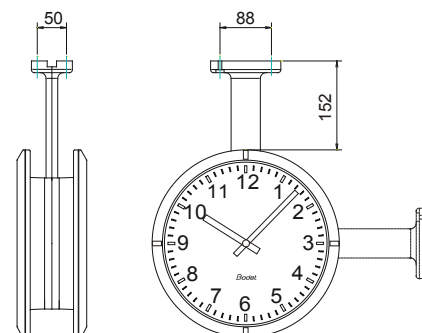
Consumption TBT: from 15mA at 6V to 8mA at 12V to 7mA at 16V.

Single-sided wall support



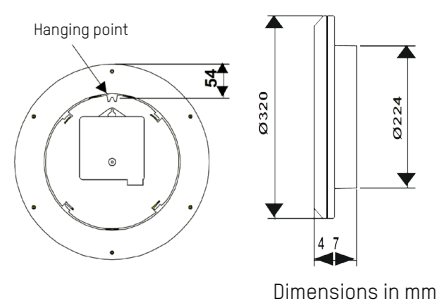
Once the the bracket (wall or double-sided) is installed, turn the clock a quarter turn in the clockwise direction so that the clock is in the correct position.

Double-sided bracket mounting



MOUNTING ACCESSORIES

- 981 001..... Double-sided bracket
- 981 002..... Short double-sided bracket
- 981 006..... Secure wall mounting bracket for single-sided clock
- 938 914..... 230V recess mounting power supply for TBT clock
- 938 916..... 230V plug-in power supply for TBT clock



DESCRIPTION






- Analogue display clock.
- Hour-Minute or Hour-Minute-Second display depending on the model.
- ABS casing IK02, indoor model IP40, outdoor model IP53
- Optimal viewing distance: 35m.
- Polymethacrylate protective crystal (PMMA).
- Front casing colours:
 - indoor model: white, black, aluminium paint or chrome-plated metal,
 - outdoor model: white.
- Dial models: Arabic figures or minute notches or DIN.
- Wall bracket with optional locking system for indoor model, included for outdoor models.



STANDARDS

- Standard EN 50081-1: Generic Emissions.
- Standard EN 50082-1 and 50082-2: Generic Immunity.
- Standard EN 55022 class B: Information Technology Equipment- Radio disturbance characteristics.
- Standard EN 60950: Information Technology Equipment - Safety.
- Standard NFS 87-500 A: AFNOR and DHF Time Distribution Protocols.

WIRED MODELS

| | Movement | Power supply | Operating temperature | | Weight |
|---|---------------------|---|-----------------------|----------------|--------|
| | | | Indoor | Outdoor | |
| | Quartz 1.5 V | 1.5 V LR6 battery | -5°C to +50°C | -10°C to +50°C | 2.1 kg |
| | 1.5V serial impulse | 230 VAC * | -10°C to +50°C | -10°C to +50°C | 2.1 kg |
|  | 24V minute impulse | | -10°C to +50°C | -20°C to +50°C | 2.5 kg |
|  | 24V second impulse | | -10°C to +50°C | -20°C to +50°C | 2.5 kg |
|  | 1/2 minute serial | | -10°C to +50°C | -20°C to +50°C | 2.5 kg |
|  | AFNOR TBT | 6 to 24 VDC | -5°C to +50°C | -20°C to +50°C | 2.1 kg |
|  | NTP | Power over Ethernet, Class 0 device, 2W maximum | -5°C to +50°C | -20°C to +50°C | 2.1 kg |

*230V AC power supply only via a time setting control box (ref: 933007).

REFERENCES

| Hour-Minute Indoor model | Hour-Minute Outdoor model | Hour-Minute-Second Indoor model | Hour-Minute-Second Outdoor model | |
|--------------------------|---------------------------|---------------------------------|----------------------------------|---------------------------|
| - | - | 983 1xy | 984 1xy | Quartz 1.5V |
| - | 984 2xy | - | - | 1.5V serial impulse |
| 983 5xy | 984 5xy | - | - | 24V minute impulse |
| - | - | 983 4xy | - | 24V second impulse |
| 983 6xy | 984 6xy | - | - | 1/2 minute serial impulse |
| 985 8xy | 984 8xy | 985 9xy | - | AFNOR TBT |
| 985 Fxy | - | 985 Gxy | 984 Fxy | NTP |

x and y: refer to the illustrations.

Dials models (x):

1 = Arabic figures



2 = Minute notch



3 = DIN



Front casing colours (y):

1 = White



5 = Aluminium



2 = Black



3 = Chrome



Bodet

MOVEMENTS AND SYNCHRONISATION

• Quartz 1.5V

The clock is completely autonomous, the time information is provided by its own time system. The operating temperature range for these clocks is -25°C to +50°C when using Lithium batteries.

• 1.5V serial impulse (for BT Chrono)

Slave clocks are connected to a radio synchronisation box (BT Chrono) that generates electrical impulses every minute. The operating temperature range for these clocks and for the box is -10°C to +50°C.

• 24V minute impulse

Slave clocks are connected to a distribution line and activated through electrical impulses sent every minute by the master clock.

• 24V second impulse

Slave clocks are connected to a distribution line and activated through electrical impulses sent every second by the master clock.

• 1/2 minute serial impulse

Slave clocks are connected to a distribution line and activated through electrical impulses sent every ½ minute by the master clock.

• AFNOR TBT

The coded time distribution consists in transmitting a complete time message every second: the time on the receivers is automatically and immediately set after connection to the clock line.

The AFNOR coded time does not interfere with other transmission, and is insensitive to other electrical interference.

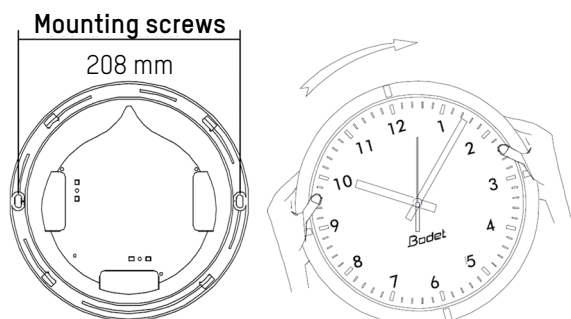
Consumption TBT: 10 mA (6 VDC), 8 mA (24 VDC).

• Network Time Protocol (NTP)

Slave clocks are connected to the Ethernet network and powered by PoE (Power over Ethernet).

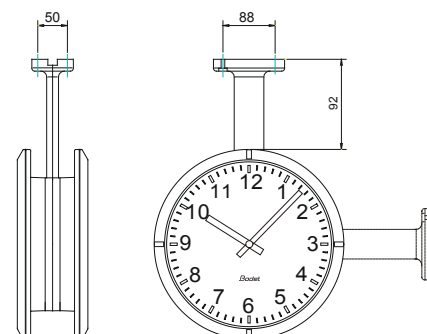
The time is synchronised by the time server or the master clock over the Ethernet network in unicast, multicast or DHCP mode.

Single-sided wall support



Once the the bracket (wall or double-sided) is installed, turn the clock a quarter turn in the clockwise direction so that the clock is in the correct position.

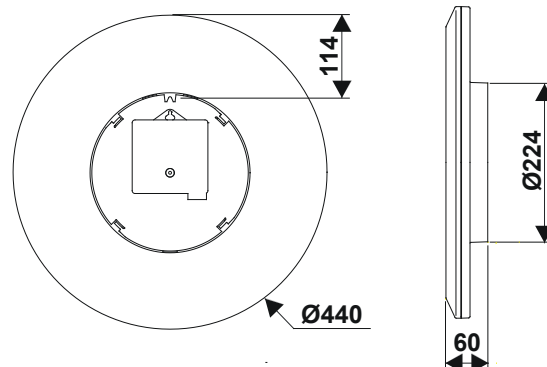
Double-sided bracket mounting



MOUNTING ACCESSORIES

- 981 001..... Double-sided bracket
- 981 002..... Short double-sided bracket
- 981 006..... Secure wall fixing bracket for single-sided clock
- 981 008..... Secure wall fixing bracket for Profil DHF/230V
- 981 009..... Double-sided bracket for Profil DHF/230V
- 938 914..... 230V recess mounting power supply for TBT clock
- 938 916..... 230V plug-in power supply for TBT clock

Hanging point



Dimensions in mm