

## 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
	½ 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	
-	-	<b>983 1xy</b>	<b>984 1xy</b>	Quartz 1.5V
-	<b>984 2xy</b>	-	-	1.5V serial impulse
<b>983 5xy</b>	<b>984 5xy</b>	-	-	24V minute impulse
-	-	<b>983 4xy</b>	-	24V second impulse
<b>983 6xy</b>	<b>984 6xy</b>	-	-	1/2 minute serial impulse
<b>985 8xy</b>	<b>984 8xy</b>	<b>985 9xy</b>	-	AFNOR TBT
<b>985 Fxy</b>	-	<b>985 Gxy</b>	<b>984 Fxy</b>	NTP

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.

### • 1.5V serial impulse (for BT Chrono)

Slave clocks are connected to a radio synchronisation box (BT Chrono) that generates electrical impulses every minute.

### • 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.

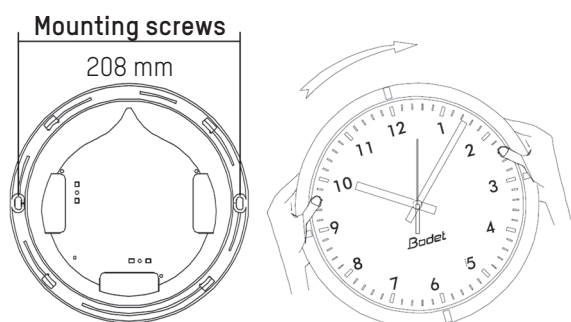
Consumption TBT: 10 mA (6 VDC), 8 mA (24 VDC).

### • Network Time Protocol (NTP)

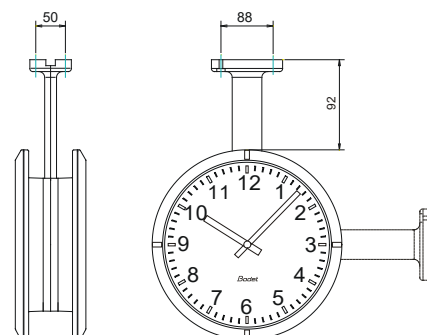
Slave clocks are connected to the Ethernet network and powered by PoE (Power over Ethernet).

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



#### Double-sided bracket mounting

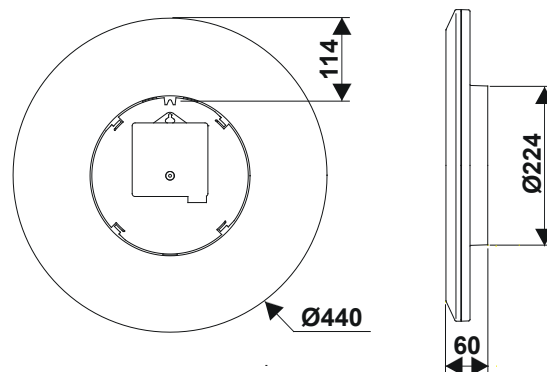


Once the the bracket (wall or double-sided) is installed, turn the clock a quarter turn in the clockwise direction so that the clock is in the correct position.

## MOUNTING ACCESSORIES

- 981 001..... Double-sided bracket
- 981 006..... Secure wall fixing bracket for single-sided clock (Locking disk)
- 981 008..... Secure wall fixing bracket for Profil DHF/230V (Locking disk)
- 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

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- Standard EN 55022 class B: Information Technology Equipment – Radio disturbance characteristics.
- Standard EN 60950: Information Technology Equipment – Safety.
- Standard EN 300-220-3: Physical Interoperability Standard for Radio Equipment – Short Range Devices.
- Standard EN 301-489-3: EMC Standard for Radio Equipment

## WIRELESS MODELS

	Movement	Power supply	Operating temperatures		Weight
			Indoor	Outdoor	
	DCF Radio	1.5V LR6 battery	-5°C to +50°C	-10°C to +50°C	2.3 kg
	DHF battery	2x1.5V LR6 batteries	-5°C to +50°C	-10°C to +50°C	2.5 kg
	DHF TBT	6 to 16 VDC	-5°C to +50°C	-20°C to +50°C	2.7 kg
	DHF 230V	230 VAC	-	-20°C to +50°C	2.7 kg

## REFERENCES

Hour-Minute Indoor model	Hour-Minute Outdoor model	Hour-Minute-Second Indoor model	Hour-Minute-Second Outdoor model	
-	-	983 3xy	984 3xy	DCF radio
985 2xy	984 Bxy	985 3xy	-	DHF battery
985 4xy	-	985 5xy	-	DHF TBT
-	984 Cxy	-	-	DHF power supply

x and y: refer to the illustrations.

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### Front casing colours (y):



## MOVEMENTS AND SYNCHRONISATION

### • DCF radio

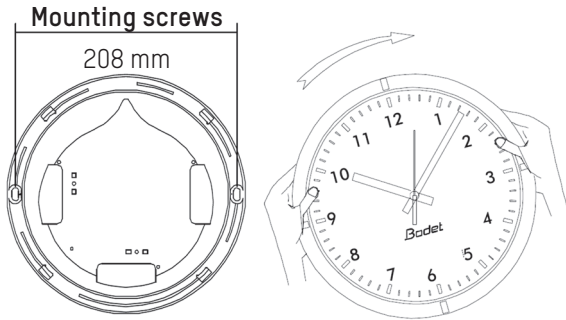
The clock is completely autonomous. The DCF radio synchronised movement provides absolute accuracy and automatic summer/winter changeovers.

### • DHF

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

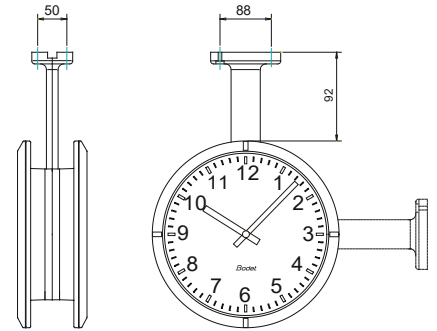
Consumption TBT: from 15mA at 6V to 8mA at 12V to 7mA at 16V.

### 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.

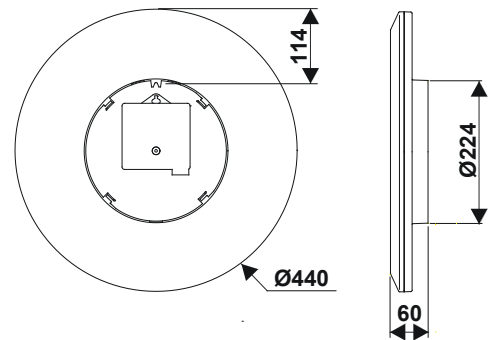
### Double-sided bracket mounting



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### Hanging point



Dimensions in mm