

## 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 battery	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 6xy	NTP
-	982 Hxy	NTP (silent)
-	981 3xy	DCF radio
982 2xy	982 3xy	DHF battery
982 4xy	982 5xy	DHF TBT

x and y: refer to the illustrations.

### Dials models (x):

- 1 = Arabic figures
- 2 = Minute notch
- 3 = DIN

### Front casing colours (y):

- 1 = White
- 2 = Black
- 5 = Aluminium
- 3 = Chrome

## MOVEMENTS AND SYNCHRONISATION

### • Quartz 1.5V

The clock is completely autonomous, the time information is provided by its own time system.

### • 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

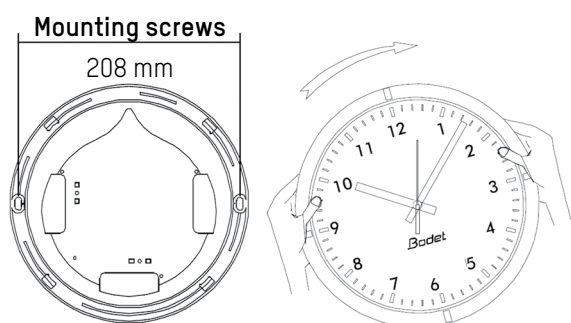
The clock is completely autonomous. The DCF radio synchronised movement provides absolute accuracy and automatic summer/winter changeovers.

### • 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.

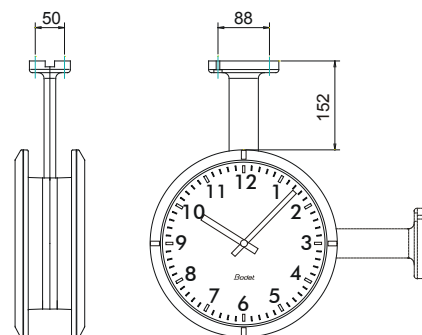
Consumption TBT: from 15mA at 6V to 8mA at 12V to 7mA at 16V.

### Single-sided wall support



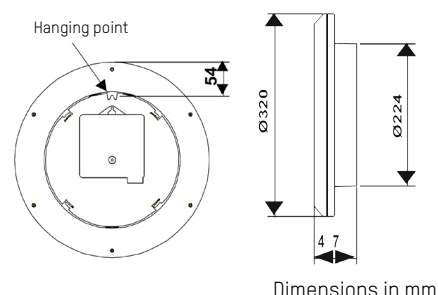
Once the the bracket (wall or double-sided) is installed, turn the clock a quarter turn in the clockwise direction so that the clock is in the correct position.

### 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



Dimensions in mm

Réf.: 643191U 10/17