Bodet

SYNCHRONISED CLOCK SYSTEMS

The European Leader in
Time Management Solutions

OVER 150 YEARS EXPERIENCE OF TIME MANAGEMENT

Since it was created in 1868, Bodet has specialised in the design, development and manufacture of time management systems.

FRENCH MANUFACTURING

Our products are manufactured in France by our skilled and dedicated workforce based in Trémentines *(near Nantes)*.

GLOBAL PRESENCE

Bodet has 5 subsidiaries across Europe in Belgium, Spain, Holland, UK and Switzerland. It exports its products to more than 70 countries through its network of distributors.

KEY AREAS OF EXPERTISE

Innovation
From tower clocks to computerised time management systems Bodet puts innovation at the heart of its strategy.

Quality
To ensure customer satisfaction, quality is continuously improved at all levels of the company in alignment with its ISO 9001 certification.

Environment
Bodet is involved in the ISO 14001 certification process. Our production facility is already certified for its Environmental Management System.

Competitiveness
The quest to improve efficiency in design, production and service ensures customers are offered ever more competitive solutions.

Responsiveness
Responding to your needs and providing you with prompt assistance are two of our core priorities.

International
Our experience of developing products for international organisations ensures our customers across the world receive the right solution for their needs.

Microquartz Sigma

Bodet

*S*YNCHRONISATION

Synchronisation is the first phase in time distribution where the master clock receives a very accurate time signal through a radio antenna or GPS.

Radio synchronisation

Every minute, a time message is broadcasted by France Inter (France) or DCF (Germany) with a synchronisation signal every 60 seconds.
The main advantage of radio synchronisation is the ability to perform automatic summer/winter time changeovers.

GPS synchronisation

With its satellite network the GPS system ensures time synchronisation anywhere in the world.
The GPS antenna receives a UTC *(Universal Time Coordinated)* time message and, if necessary, the master clock performs a time shift to match the time zone of its location. The same process is followed for the summer/winter time changeover.

*T*IME DISTRIBUTION

In a multi-clock installation, time distribution enables the reliable synchronisation of all the clocks instantaneously through a master clock.

WIRELESS TIME DISTRIBUTION

The master clock synchronises all the slave clocks automatically with a standardised 869 MHz radio time message.
Where there is a loss of the radio signal or radio interference, the clocks revert to operating independently.

ADVANTAGES
- *Substantial cost savings as there is no cable to install.*
- *Unlimited number of clocks.*
- *Easy installation and commissioning.*

WIRED TIME DISTRIBUTION

Coded time distribution

The coded time distribution, which is also known as AFNOR code, broadcasts a complete time message on a two-wire line. This method of time distribution is widely used in installations with a great number of clocks – for example at railway stations and airports - and where long cables are required.

ADVANTAGES
- *High level of accuracy and data safety.*
- *Standardised system.*
- *The signal can be received several thousands of meters away.*

Impulse time distribution

The master clock sends electrical impulses every minute to all the clocks on the distribution line.
This type of distribution is used in small and medium installations.

ADVANTAGES
- *A cost effective solution for a small time distribution system.*

Computer network time distribution

Connected to a computer network, the slave clocks receive an NTP time message from the master clock which is also connected to the network. The time message is sent either periodically (Multicast) or on demand (Unicast).

ADVANTAGES
- *Standardised solution to synchronise an unlimited number of clocks.*
- *Uses the existing computer network (no additional network to install).*

MONITORED TIME DISTRIBUTION

As well as ensuring synchronisation, monitored time distribution enables a set of slave clocks to be controlled remotely. The clocks send alerts via the ethernet network. The alerts can be reviewed and the associated parameters can be set.

The monitored time distribution operates with the SNMP *(Simple Network Management Protocol)* **Manager software** *(or any SNMP compatible software),* which receives the messages sent by the monitored clocks such as battery failure and shocks.

CRISTALYS | OPALYS

Combining clear display and modern design

PROFIL 900 | PROFIL TGV

The analogue classic

CRISTALYS RANGE

4 indoor models
- **Cristalys 7**
Time or date display.
Display: 7 cm.

- **Cristalys 14**
Time, date or temperature display.
Display: 14 cm.

- **Cristalys Date**
Time and date display.
Display: 7 cm.

- **Cristalys Ellipse**
Multi-function display: time, date, temperature, week number, message.
Display : 6 cm.

OPALYS RANGE

4 indoor models
- **Opalys 7**
Time or date display.
Display: 7 cm.

- **Opalys 14**
Time, date or temperature display.
Display: 14 cm.

- **Opalys Date**
Time and date display.
Display: 7 cm.

- **Opalys Ellipse**
Multi-function display: time, date, temperature, week number, message.
Display : 6 cm.

Backlit clocks

AVAILABLE TIME DISTRIBUTION SYSTEMS

FI/DCF   IMPULSIONNEL   AFNOR   DHF   NTP

PROFIL 900 RANGE

3 diameters

- **Profil 930** – Ø30 cm – *Indoor.*

- **Profil 940** – Ø40 cm – *Indoor or outdoor.*

- **Profil 960** – Ø60 cm – *Indoor or outdoor.*

4 casing colours

3 models of dial

AVAILABLE TIME DISTRIBUTION SYSTEMS

FI/DCF   IMPULSIONNEL   AFNOR   DHF   NTP

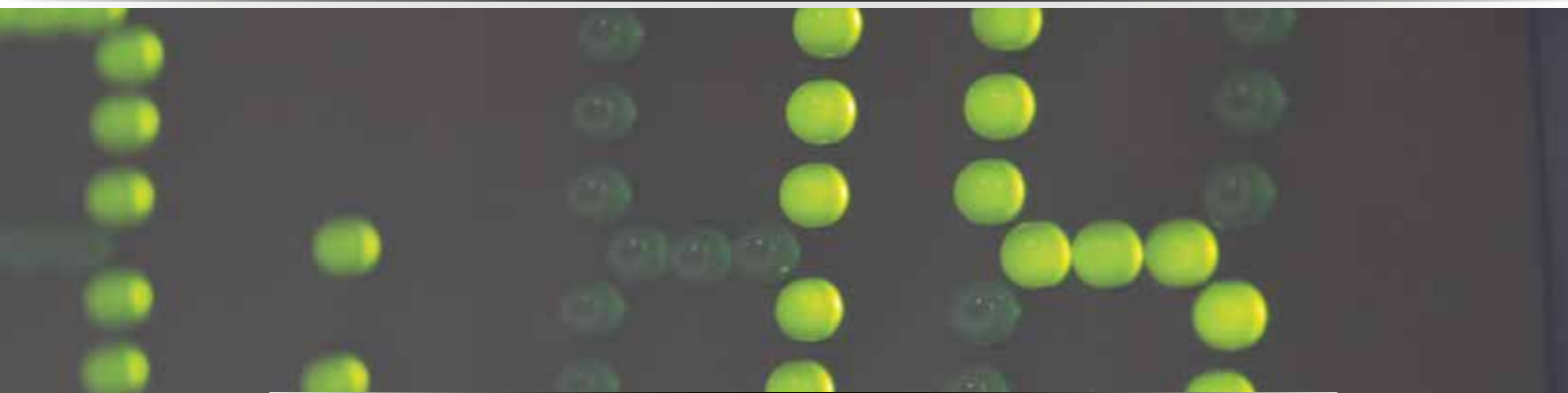### PROFIL TGV RANGE

4 diameters

- **TGV 930** – Ø30 cm – *Indoor.*

- **TGV 940** – Ø40 cm – *Indoor.*

- **TGV 950** – Ø50 cm – *Indoor or outdoor.*
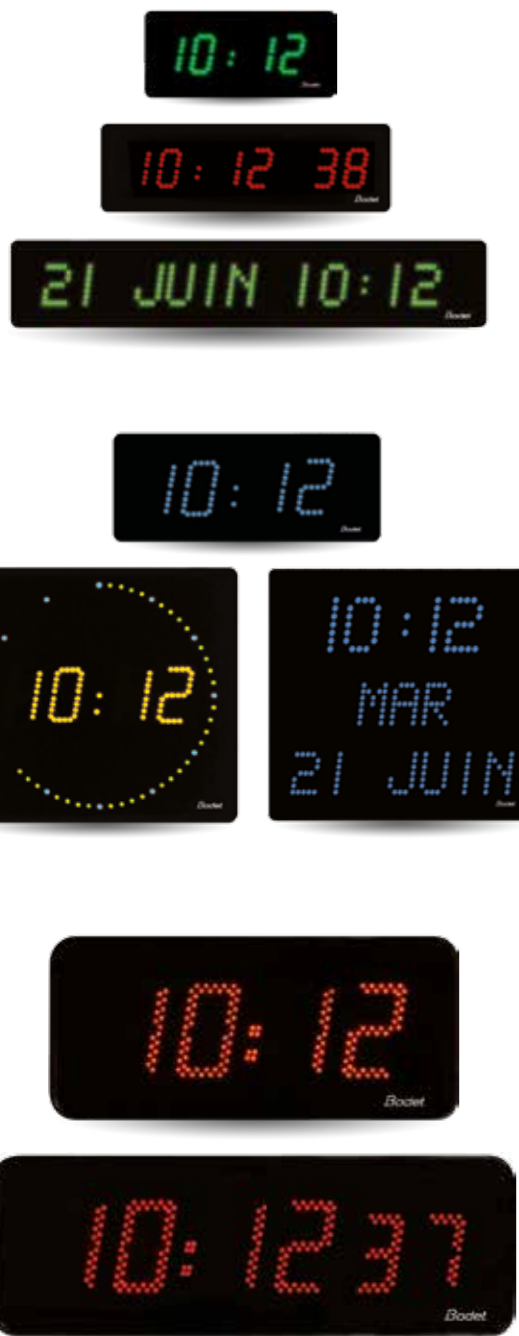
- **TGV 970** – Ø70 cm – *Indoor or outdoor.*

AVAILABLE TIME DISTRIBUTION SYSTEMS

IMPULSIONNEL   AFNOR   NTP

STYLE

The accuracy of LED clocks

STYLE RANGE

6 indoor models

- **Style 5** — Time or date display. Display: 5 cm.
- **Style 5 S** — Hour, minute and second display. Display: 5 cm.
- **Style 5 Date** — Time and date display. Display: 5 cm.
- **Style 7** — Time or date display. Display: 7 cm.
- **Style 7 Date** — Time and calendar display. Display: 7 cm.
- **Style 7 Ellipse** — Hour and second display. Display: 7 cm.

Available LED colours:

4 indoor and outdoor models

- **Style 12** — Hour, minute and temperature display. Display: 12 cm.
- **Style 12 S** — Hour, minute and second display. Display: 12 cm.

Style 12 and Style 12 S are also available in an outdoor version: Style 12 E and Style 12 ES.

Available LED colours:

AVAILABLE TIME DISTRIBUTION SYSTEMS

IMPULSIONNEL   AFNOR   DHF   NTP

WORLD STYLE

WORLD STYLE RANGE

4 indoor models

- *3 cities*, 4 cities, 5 cities, 6 cities*

Display

- *5 cm*

Available LED colours:

*available in red and green only

AVAILABLE TIME DISTRIBUTION SYSTEMS

IMPULSIONNEL   AFNOR   DHF   NTP

HMS / HMT LED

Perfect outdoor readability

6 outdoor models

HMT LED

4 display sizes:

- *15 cm, 20 cm, 25 cm and 45 cm*

HMS LED

2 display sizes:

- *15 cm and 25 cm*

Available LED colours:

TYPES OF SYNCHRONISATION

FI/DCF   GPS

AVAILABLE TIME DISTRIBUTION SYSTEMS

DHF   AFNOR   NTP

MASTER CLOCK

Reliable and accurate time ditribution

Models available in 3 versions

- **Sigma – H**
  Broadcasts time.
  Time distribution outputs:

  IMPULSIONNEL   AFNOR   DHF

- **Sigma – P**
  Broadcasts time and controls a network of relays and sounders.
  Time distribution outputs:

  IMPULSIONNEL   AFNOR   DHF

- **Sigma – MOD**
  Broadcasts time and controls a network of relays and sounders.
  Possibility to add extension cards: AFNOR output, relays, etc.
  Time distribution outputs:

  IMPULSIONNEL   AFNOR   DHF   NTP

2 formats: wall or rack mounting

Programming and parameter setting through software

TYPES OF SYNCHRONISATION

FI/DCF   GPS

TOWER CLOCKS

Time combined with your architectural style

Customise your tower clock with our range of dials, styles of figures and types of hands.

5 models of dial:

4 models of hands:

Various colours

TYPES OF SYNCHRONISATION   **AVAILABLE TIME DISTRIBUTION SYSTEMS**

FI/DCF   GPS   DHF   AFNOR   NTP

WORLDWIDE CUSTOMER REFERENCES

Public Sector
Music academy - Hungary
National Assembly
Poste office - Serbia
EDF
INSEE
Ministry of Defense
Ministry of Industry
Ministry of Economy - Cameroon
Opera house of Lyon
Courthouse - Abu Dhabi
Palace of Culture - Poland
European Parliament
SNCF

Airports
Algiers
Bangkok
Bordeaux
Brussels
Budapest
Esenboga
Lamaca
Cairo
Madrid
Marseille
Martinique
Orly
Pointe à Pitre
Roissy
Rome
Seville
Sofia
Stuttgart

Banks
Banque de France
Banque Populaire
Barclays
Berliner Bank
BNP Paribas
BTN Jakarta
Citibank
Commerzbank
Crédit Agricole
Crédit Mutuel

Deutsche Bank
HSBC
LCL
Natexis
National Bank of Abu Dhabi
National Bank of Serbia
Bank of Norway
Société Générale

Schools
ESEO
ESSCA
King Saud University - Saudi Arabia
Lycée Français de Barcelone - Spain
Lycée Français de Londres - United Kingdom
National University - Malaysia
Secondly International School - Hong Kong
School at Daiya - Kuwait
Tobb University Ankara - Turkey
University of Brighton - United Kingdom
Université de Batna - Algeria
Université de la Sorbonne - Abu Dhabi
Université Javeriana - Colombia
Vienna International School - Austria

Businesses
Carrefour
Citroën
Danone
France 2 et France 3
Glaces Miko
JC Decaux
La Redoute
Lilly Pharmaceuticals
Michelin
Motorola
Nestlé
Pirelli
Stanley
Total
Tesco
Veuve Clicquot
Volkswagen

Hospitals and Labs
Bosch & Lomb
CHU Charleroi - Belgium
CHU Cholet - France
Clinique Universitaire du cancer - Toulouse
University College - London
Ahus hospital- Norway
Cajamarca hospital - Peru
Princess Haya hospital - Jordan
Queen Mary hospital - Hong Kong
Queensland hospital - Australia
Saint Louis hospital - Paris
Hôpitaux civils - Colmar, France
Hôpitaux de Lyon

Subways
Algiers
Athens
Brussels
Bucharest
Istanbul
Cairo
Mexico City
Panama City
Paris
Seville
Shiraz Iran
Tehran Iran
Tunis

Transport
Autoroutes du Sud de la France
Eurotunnel
JERNBANEVERKT - Norway
ONCF - Morocco
RATP - France
RENFE - Spain
SNCB - Brussels
SNCF - France
SNTF - Algeria
TRANSMILENIO - Bogota, Colombia
VNR - Vietnam

Bodet

The Bodet Range

INDUSTRY

Time distribution
Digital signage
LED display
Audio System

TOWER CLOCKS

Bell restoration
Tower clocks
Bell electrification

SPORT

Timing
Scoreboards
Video display

SOFTWARE

Time management
Access control
Human Ressources management

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afaq
ISO 9001
ISO 14001
Qualité
Environnement
AFNOR CERTIFICATION

FABRICATION FRANÇAISE