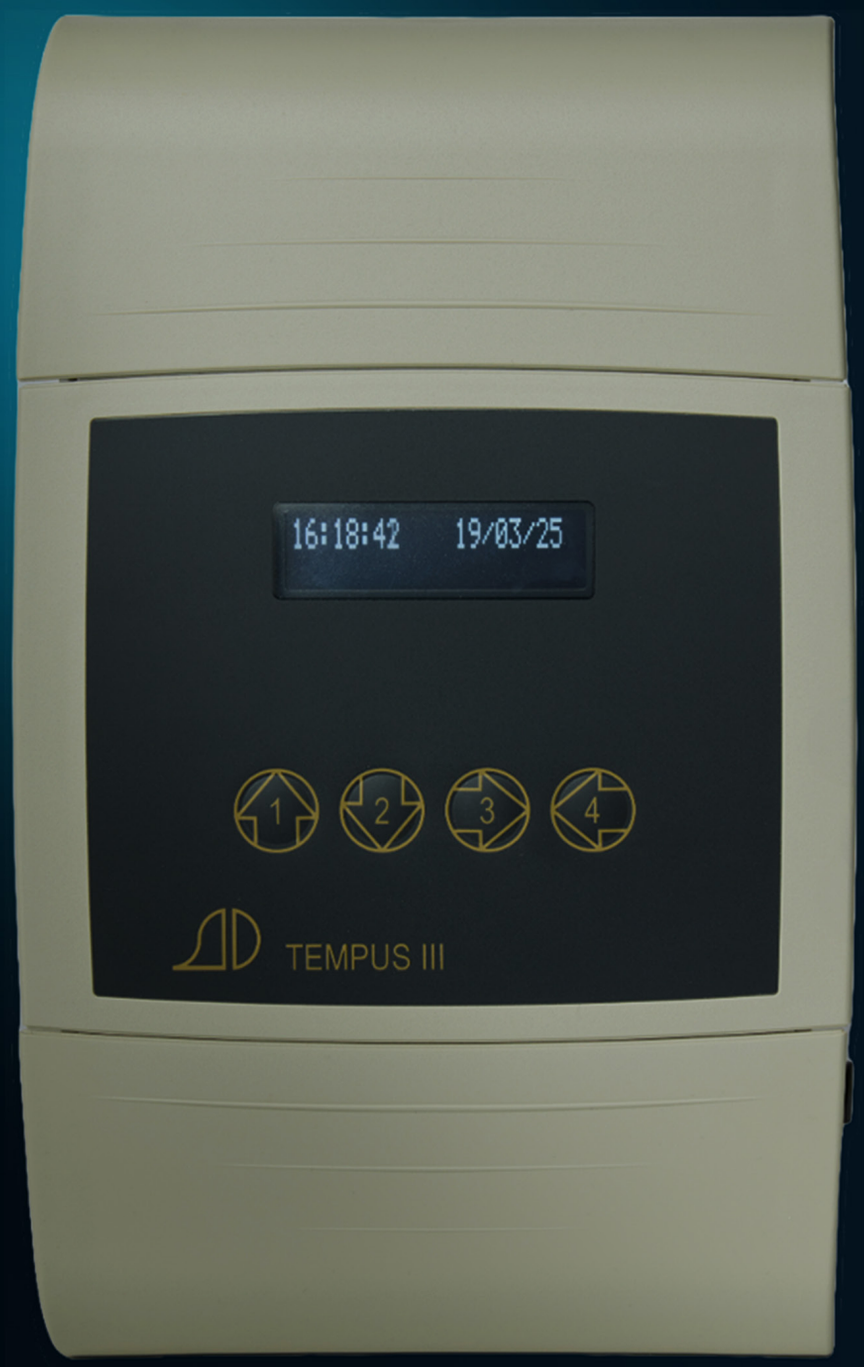
TEMPUS® III

Programmable master clocks
for time indication and tolling



User friendliness by application
of today's technology

clock-o-matic

TEMPUS® III programmable master clocks

For time indication and tolling

The Tempus master clocks are specially designed for smaller installations, such as in town halls, chapels, schools, and factories, where only time indication and tolling are required.
They are not suitable for applications involving swinging bells, heating, or lighting.

The Tempus III series comes in 2 versions.

• **Tempus III** is used for installations where only time indication (tower clock/ slave clock) is required.

• **Tempus III E** is used for installations where, in addition to time indication, 1 or 2 electromagnetic strikers need to be controlled.

TEMPUS® III

for time indication only

This device is provided with:

• tower clock control via 2 mechanical relay outputs: to control one or more tower clocks connected in parallel.

• Output slave clock control via 24 VDC polarised impulses: to control one or more slave clocks connected in parallel. This output can supply up to 0.25 A and is protected against short circuits.

TEMPUS® III E

for time indication & control up to 2 strikers

For this, there are 2 solid-state, non-sparking FET outputs provided to which the striker coil can be connected directly.
Besides the possibilities of the basic Tempus device, the following functions are available:

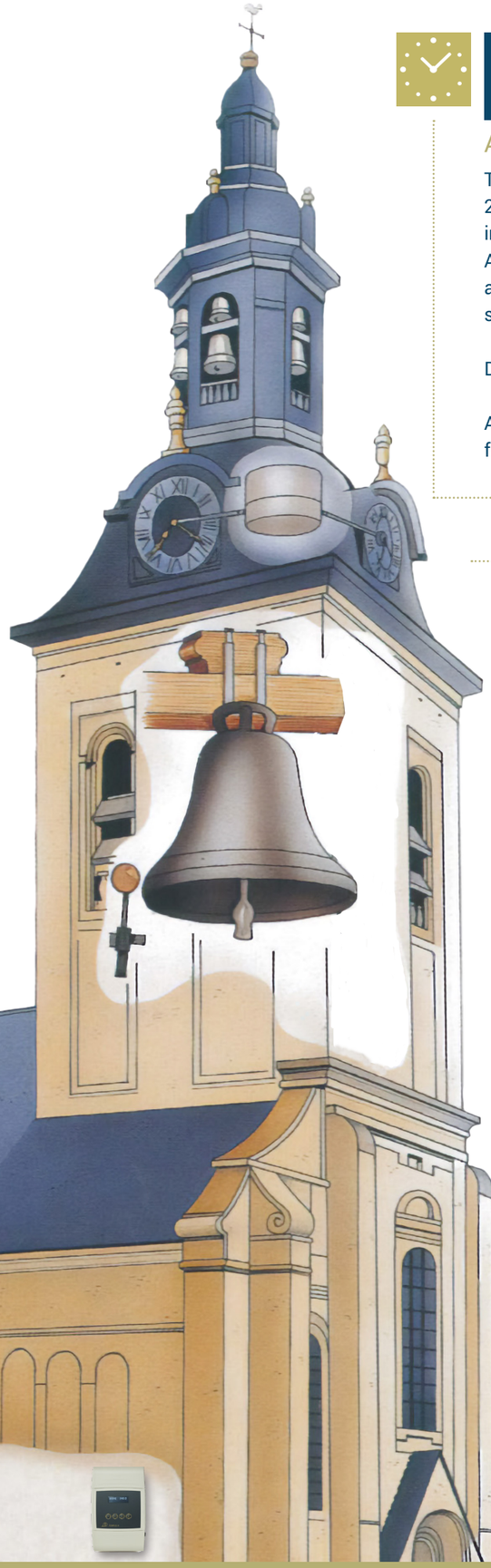
• hour stroke, hour stroke repetition, half-hour stroke and quarter strokes. Possibility for the customer to switch the programmed hour stroke on/off

• Angelus: possibility for the customer to switch the programmed Angelus on/off (morning, noon, evening)

• switching simulated swinging on/off manually (= tolling)

• 5 swinging programmes: possibility for the customer to switch the programmed simulated swinging programmes on/off

• user button for single strokes



Tower clock control

Auto DST switchover

The Tempus III is capable to control up to 2 tower clock movements & 2 slave clocks independently.
All worldwide standards of tower clock control are supported - 2, 3 and 4-wire and (double speed) synchronous clocks.

DST switchover is fully automatic.

Automatic correction of each clock after power failure.

Worldwide time synchronization

Synchronized internal time base

The **internal time base** of the Tempus III can be synchronized with the most common standard time bases:
• DCF radio receiver (coverage: Western Europe)
• GPS satellite receiver (coverage: worldwide)

Each Tempus III device is available with built-in GPS (must be specified when ordering).

All tower clocks & slave clocks are synchronized by the Tempus III.

Automatic DST changeover.

Easy control system

Features

• **user-friendly**
high quality OLED screen with backlight
(57 mm x 15 mm) with 2 lines - hour and date indication & programming info
• **unobstrusive design** that fits into every interior
• **user code** protects the device against access by unauthorised people
• **minimum maintenance** requirements - no battery needed for backup of programming details and clock hand positions

TEMPUS® III

Electrical and mechanical specifications

- Power supply: 100–240VAC
- Power consumption: max. 25W
- Internal time backup: rechargeable $LiMnO_2$ battery, autonomy: 14 days, expected life time 10 years
- Module for backup: software only
- Housing:
  Wall mount: ABS/PC UL94-V0 (self-extinguishing), 215 x 150 x 60mm

Options

- UL COMPATIBLE version (on low voltage 24VAC)
- built-in GPS antenna

CE Standard

The device complies with the following standards:

Security standard:

- EN 609505

Electromagnetic compatibility:

- EN 50081-2: Generic Emission Standard EN 55022
- EN 50082-2: Generic Immunity Standard
- EN 61000-4-2: Electrostatic Discharge (ESD)
- EN 61000-4-3: Radiated Electromagnetic Field
- EN 61000-4-4: Electrical Fast Transient/ Burst
- EN 61000-4-5: Surge Immunity

Hardware

- **Tempus III with 4 outputs**

- 2 mechanical relay outputs for tower clocks
- polarized slave clock output

- **Tempus III E with 6 outputs**

- 2 mechanical relay outputs for tower clocks
- polarized slave clock output
- 2 spark-free FET outputs for strikers

- **no inputs**

Tolling

Hour strike

simultated swinging

Angelus

Funeral tolls

Tower clock control

All Master Clock Types - Selection Table

Master clocks:	Apollo III	Tempora III	Tempus III E	Tempus III
Typical application:	Churches, carillons Schools & Industry	Smaller churches Schools & Industry	Monumental clocks Hourstrike bells	Monumental clocks Indoor clock circuits
Display/Command table:	Touchscreen 7 inch	Touchscreen 4,3 inch	OLED alphanumeric	OLED alphanumeric
Bell Striker outputs:	Yes	Yes	2	No
Bell swing outputs:	Yes	Yes	No	No
Total N. of outputs:	10 or 12 relay outputs	8, 6 or 4 relay outputs	One for 3-wire clocks One for 24VDC polarized clocks	One for 3-wire clocks One for 24VDC polarized clocks
Extension of outputs:	Yes, option up to 125 by serial bus comm.	No	No	No
Inputs:	Yes, 4 input option board or 10 input serial boards	Yes, 2, option license	No	No
Digital sound:	Yes, bell sound sampler & MP3	No	No	No
Remote programming and service (internet LAN port):	Option	Option	No	No
Time sync:	Option GPS, DCF, NTP	Option GPS, DCF, NTP	Option GPS, DCF	Option GPS, DCF
Serial bus system for tower equipment:	Yes	No	No	No