TEMPUS: features

The TEMPUS master clocks were developed especially for smaller installations in town halls, chapels, schools and industry and have the following features:

- **compatible with the CE-standard, a guarantee for quality products**
  - the device does not generate harmful disruptions (electromagnetic compatibility)
  - the device is immune to disruptions from outside (overvoltage) and complies with CE-rules concerning "burst & transient" on the net
  - using materials UL 94-V0, that extinguish fire independently
  - the device complies with the rules concerning electrical safety

- **minimum maintenance requirements**
  - use of maintenance-free lithium battery with a running reserve of 10 years

- **user-friendly**
  - display with background lighting (10mm x 70mm)
  - hour and date indication
  - simple control system – easy installation and user menu

- **easy communication** via the latest means of communication, such as the modem and PC and via the plug-in PIM-module

- **compatible with standard systems of radio synchronization** DCF (Mainflingen) - MSF (Rugby) – GPS (worldwide)

- **synthetic housing in high-quality polystyrene UL94-V0**

- **compact dimensions** 215mm x 150mm x 60mm

- **sober design which fits into every interior**

- **completely automated summer/winter time changeover**

- **Number of outputs:**
  - 2 relay outputs for directing tower clocks (basic version) or 2 continuous outputs such as school bell, weekly signal, illumination,... (TEMPUS P device)
  - 2 slave clock outputs 24V polarized (max. 0.25A) (basic version)
  - 2 sparkless FET-outputs for strikers (max. 5A) (TEMPUS E)

  <u>Remark</u>: these outputs are not adjustable as with the APOLLO II or TEMPORA device

- **different net currents:** 230V, 110V

- **user code**: protects the device from being controlled by unauthorized people

All dimensions are indicative and are given under the reserve of changes.

TEMPUS: possibilities

There are three versions of the TEMPUS master clock available:

1. **TEMPUS** is used for installations that only require **indication of time**. This device is provided with:

   - **3-wire tower clock control** via 2 mechanic relay outputs: enables the control of one or more tower clocks, connected in parallel.

   - **Slave clock control via 24V polarized output**: enables the control of one or more secondary clocks, connected in parallel. This output can supply 0.25A and is secured against short circuits.

2. **TEMPUS E** is used for installations that require **indication of time** as well as the control of 1 or 2 electromagnetic **strikers**. For this, there are 2 fixed sparkless FET-outputs foreseen where the striker's coil can be directly connected to. (without extra rectifying - no need for a striker box)

   Next to the possibilities of the basic TEMPUS device, the following functions are also available:

- **hour stroke, if necessary repeated hour stroke, half-hour stroke and quarter strokes:** possibility for the costumer to switch the programmed hour stroke on/off
- **angelus:** possibility for the costumer to switch the programmed angelus on/off
- **switching simulated pealing on/off manually (=tolling)**
- **5 swinging programs:** possibility for the costumer to switch the programmed simulated ringing programs on/off
- **manual tolling**

3. **TEMPUS P** is used for installations that require **indication of time** as well as **programmable signal outputs** for controlling the heating, illumination, school bell, synchronization impulses... This device is provided with:

   - **2 mechanic relay outputs**: for controlling 1 or 2 continuous signal outputs (programmed or manual).

   - **Timer function**: to activate the continuous signal outputs for a certain time.

   - **Slave clock control via 24V polarized output**: for controlling 1 or more secondary slave clocks, connected in parallel. This output can supply 0.25A and is secured against short circuits.

   - **75 programme points**: to be used by the installer and the client.

4. **TEMPUS WITH UL COMPATIBILITY**: the Tempus device is available on low voltage. An external adaptor on low voltage is also delivered. This adaptor is UL-listed. Like this, a whole entity is created which meets the UL norms.

5. **TEMPUS WITH BUILT-IN GPS ANTENNA (CAMPA SYNCHRONISATION DEVICE)**: Tempus with receiver for satellite signals, applicable at any location on this planet. The distance between the Tempus with built-in GPS and the window or roof where the satellites can be seen, may not exceed 5 meters.

TEMPUS: options

The following options are available with the basic device:

- **Radio synchronization**, a guarantee for absolute precision. There are 3 different receivers possible: DCF (Mainflingen), MSF (Rugby), GPS (worldwide). Every Tempus master clock is available with built-in GPS receiver.

- **PIM module**, a programmable plug-in module: a module that can be used for loading new software versions into the device. Even the parameters themselves can be loaded into the PIM and then copied to another device.

- **Computer cable RS232**: By means of this option, the internal time of the computer can be synchronized with the master clock.