PEWETA Data Bus RS485 integrates LED digital clocks into a professional, flexible clock system. Down to the very second!

In addition to conventional synchronisation of digital clocks by a pulse or a telegram received from a master clock, PEWETA offers a specific time telegram for digital clocks: ***PEWETA data bus RS485.***

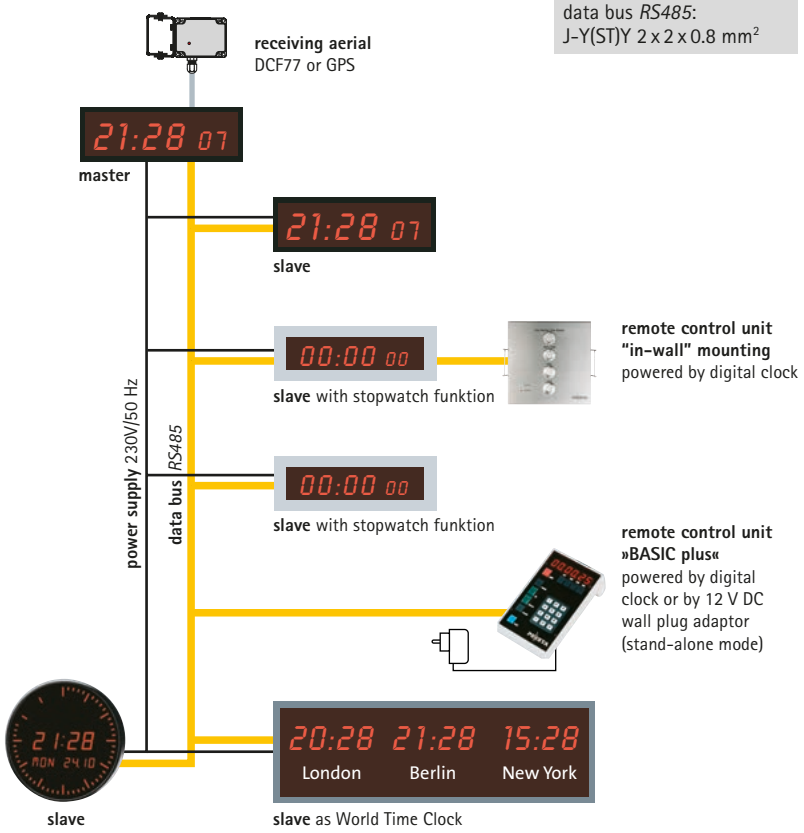
PEWETA LED digital clocks, type *data bus RS485 master* are capable of synchronising and controlling up to 32 other LED digital clocks/stopwatches, type *data bus RS485 slave*, through an interface.

Besides transmission of time and date, LED digital clocks with stopwatch mode can be specifically addressed and operated by one or multiple remote control units via *PEWETA data bus RS485*.

Typical areas for the use of this networking technology are **hospital operating theatres**, the "media environment" of **radio and television studios** as well as **situation centres and map rooms**, **World Time Clock Systems** or any other environment, where precise time and date information, transmitted professionally, must be accessed reliably.

Configuration scheme *PEWETA data bus RS485*

Wire type recommended for data bus *RS485*:
J-Y(ST)Y 2 x 2 x 0.8 mm²



Data bus RS485
function and advantages

PEWETA data bus RS485

PEWETA data bus RS485 can be used to combine LED digital clocks into a network and thus build a sophisticated time system. Data are symmetrically transmitted via an *RS485* interface.

By means of *PEWETA data bus RS485*, up to 32 LED digital clocks can be combined into a high-performance network.

One of the LED digital clock will be fitted with a master clock function to serve as a *master*, while the other LED digital clocks will be configured as *slaves*.

Digital distribution of the entire time and date information is a safeguard for fast and continuous synchronisation.

Even in case of a disruption (line fault, etc.) of the *RS485* data bus, all LED digital clocks of the slave type continue to serve as fully adequate clocks with quartz-based operation.

After clearance of a line fault all *slaves* will automatically, within a few seconds, return to displaying current time and date.

Stopwatch function

By means of wire-based remote control units every LED digital clock connected to the *PEWETA data bus RS485* can be turned into a stopwatch (option). *PEWETA data bus RS485* will safeguard count-up and count-down functions of all stopwatches integrated, synchronous down to the second. Since each LED digital clock integrated into the system can be addressed individually, the remote control unit can on one hand trigger several stopwatch displays simultaneously. These can also be located separately. On the other hand, several remote control units, e. g. located at different desks, can trigger the functions of a single stopwatch.

The respective settings favoured must be configured upon installation.

Additionally, the active »BASIC plus« remote control unit (see page 145) can address one or more selected slaves directly. The 6-digit LED display on the remote control unit can be used as an additional desk display and or to show start values entered.

Advantages

- PEWETA LED digital clocks of *master* type serve as the master clock controlling the *slaves* connected but additionally display the usual time (and date). Thus, a standard master clock is not required for this clock system but can, however, be employed to synchronise the *master*.
- All PEWETA LED digital *slave* clocks will be set to current time and current date within seconds.
- Each PEWETA LED digital clock is available in a *PEWETA data bus RS485* version.

The LED digital *master* clock can be synchronised by one of these options:

- a **DCF77** or **GPS** receiving aerial
- **24 V minute pulses** from a PEWETA Master Clock
- ***DCFport24* pulse telegram** from a PEWETA Master Clock
- ***AirPort24* radio telegram** from a PEWETA *AirPort24* Transmitter
- LAN as an **NTP client**.