



## Master Clock

# CompuTime Center CTC

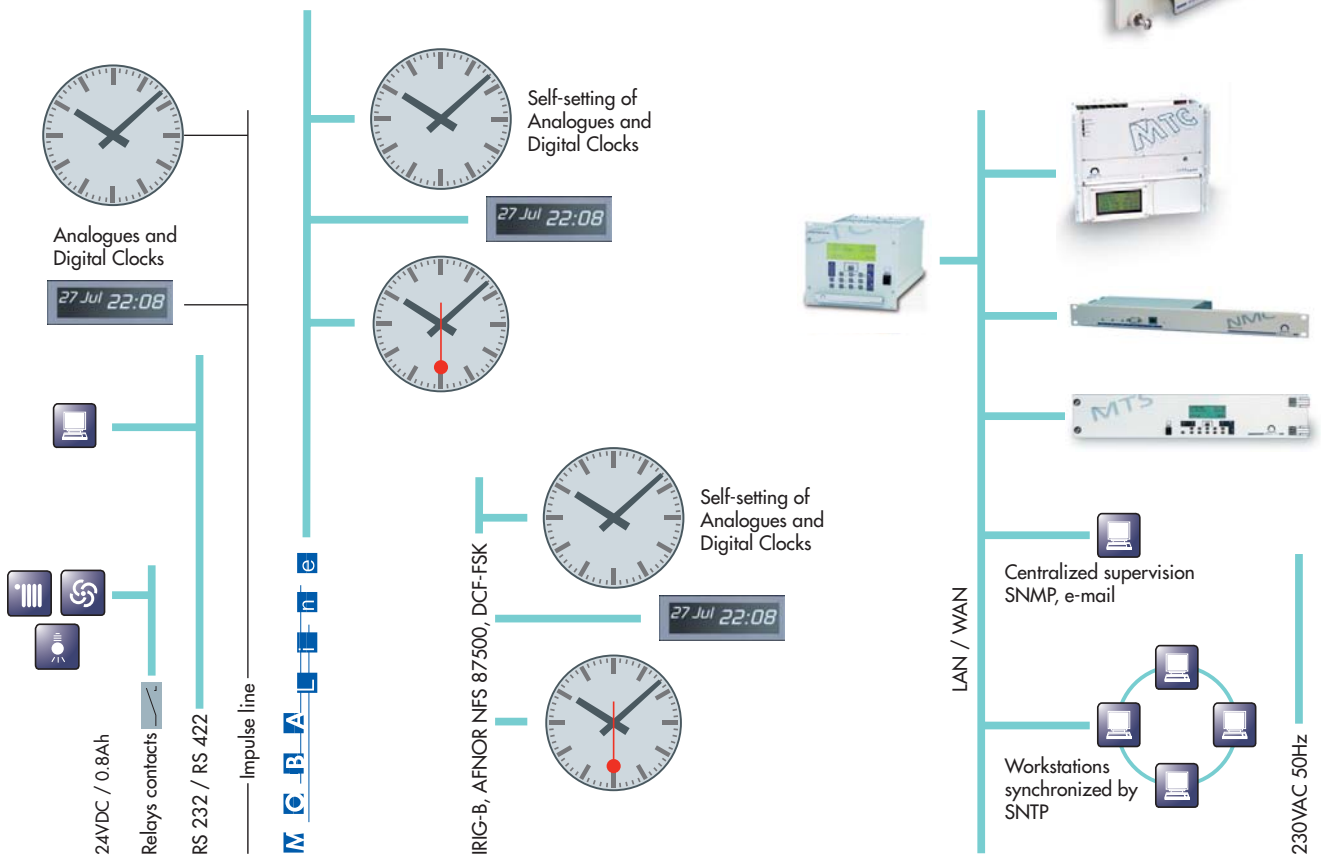
The reliable, modern and modular concept with its configuration flexibility gives an unconditional asset to any new installation. Due to its multi-line architecture the CTC is suitable for a wide range of applications.

The different types of outputs provide the facility of controlling traditional or self-setting slave clocks as well as LAN based systems.

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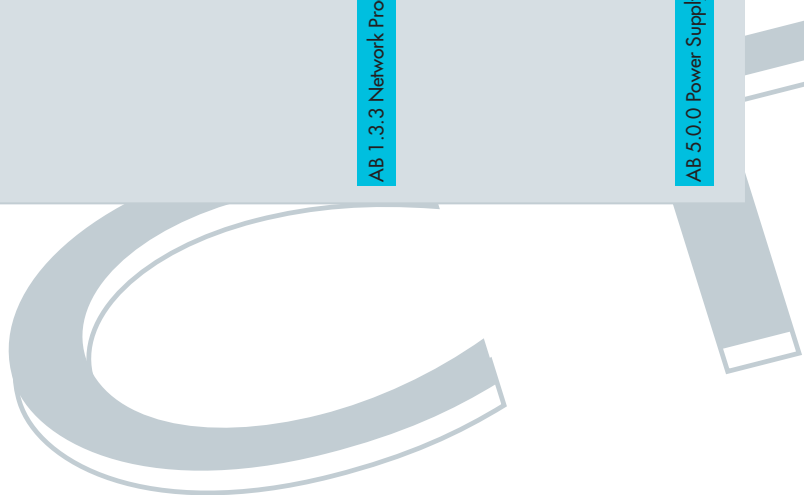
## CTC à la carte

The CTC's modular design allows numerous different configurations according to your requirements.



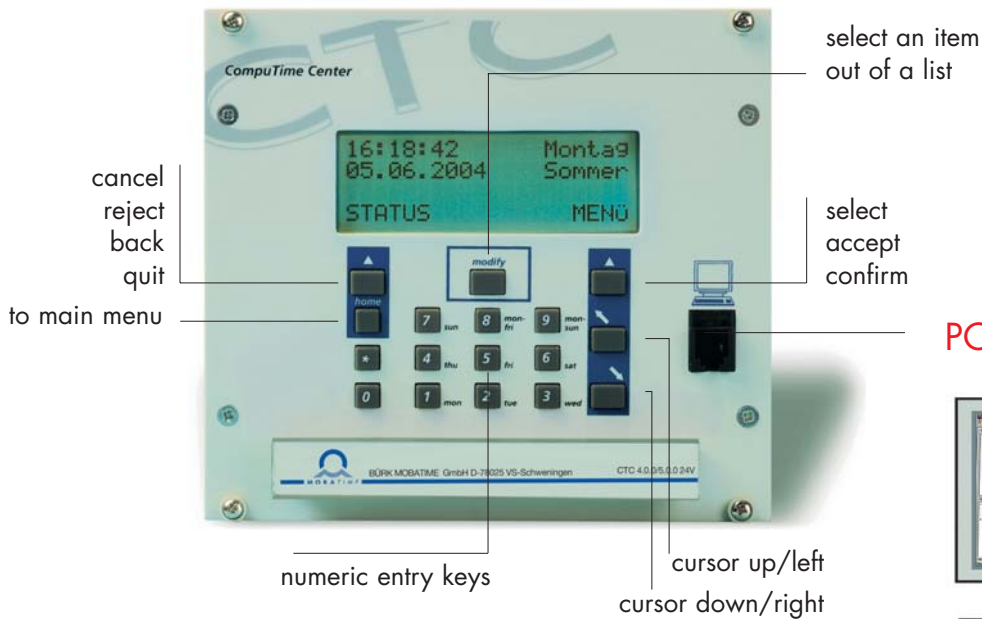
|                          |                          |                               |                       |                          |                              |                            |                       |
|--------------------------|--------------------------|-------------------------------|-----------------------|--------------------------|------------------------------|----------------------------|-----------------------|
| AB 2.0.8 Battery Back-up | AB 9.0.0 Programm Module | AB 4.1.0 Serial Communication | AB 4.0.0 Impulse Line | AB 4.3.0 MOBALine Driver | AB 4.2.0 Time Code Generator | AB 1.3.3 Network Processor | AB 5.0.0 Power Supply |
|--------------------------|--------------------------|-------------------------------|-----------------------|--------------------------|------------------------------|----------------------------|-----------------------|

CTC's Selection of Application Boards



## User-friendly

Easy and intuitive programming, configuration and supervision of the master clock due to CTC's intelligible user interface.



## PC-Link



Windows application to edit and download:

- Switching programs for relays
- Time zones table
- Software updates

## World Time Management

Each output is individually allocated to one of the 100 entries of the time zone table determining:

- Time offset to UTC (Universal Time Coordinated)
- Beginning and end of daylight saving time



## CTC's General Specifications

Master clock equipped with: alphanumeric display 4x20 characters and backlight.  
RAM and Real Time Clock with battery back-up. Flash-memory for application program.  
Three slots for application boards.

|                                |  |
|--------------------------------|--|
| <b>Dimensions</b>              | Rack-mounting case 3HU x 28UW (142 x 128 x 230mm)  |
| <b>Power Supply</b>            | 24–60VDC or 230VAC (50/60Hz) +/-10% using AB 5.0.0 or AB 5.0.1   |
| <b>Ambient Temperature</b>     | 0 to 50°C/10–90% relative humidity, non condensing   |
| <b>EMC and Safety Test</b>     | according to EN50081-1 / EN61000-6-2 / EN50121-4 / EN60950   |
| <b>Accuracy</b>                | absolute with radio receiver DCF or GPS, +/- 0.1 s per day at 20°C +/- 5°C (autonomous operation)  |
| <b>Display and Keyboard</b>    | 4x20 characters, alphanumeric, backlight, 17 keys, numerical 0–9   |
| <b>Synchronization Inputs</b>  | 1 x RS 232, 1 x RS 422, 1 x DCF 77 , 3 inputs for twilight switches.   |
| <b>Synchronization Outputs</b> | 1 x 1pps with GPS only, 1 x DCF 77 current-loop synthetic code.<br>Isolated alarm contacts. Internal or external battery back-up is available. |

## Applications



Airports



Railway Stations



Underground Stations



Hospitals



Schools, Administrations



Public Buildings



Industries

## CTC's Application Board

|  | Power Supply | Slot 1 | Slot 2 | Slot 3 | Battery |
|--|--------------|--------|--------|--------|---------|
| <b>AB 4.0.0 4x Impulse Line Driver</b><br>each line selectable as second, half-minute, 1/8-minute, minute impulse or DCF, up to 1A per line  |              | ●      | ●      |        |         |
| <b>AB 4.0.1 2x Impulse Line Driver</b><br>each line selectable as second, half-minute, 1/8-minute, minute impulse or DCF, up to 1A per line  |              | ●      | ●      |        |         |
| <b>AB 4.1.0 2x Serial Communication</b><br>2 independent RS 232 / RS 422 interfaces (mode selectable), plain text script for versatile configurations of the serial time telegrams, time transmission periodically or on request, supervision of the connected device by loop-back of the time information or by checking alive-messages, 2 strobe pulse outputs: photocoupler, 1ps, 1ppm, 1pph or 1ppd, selectable, +/-100µs if synchronized with GPS receiver, adjustable compensation of propagation delay. |              | ●      | ●      | ●      |         |
| <b>AB 4.3.0 2x MOBALine Driver</b><br>to control self-setting analogue and digital clocks, computer interfaces and switching relays, switching program for up to 64 relays (channels).   |              | ●      | ●      |        |         |
| <b>AB 4.2.0 2x Time Code Generator</b><br>Output IRIG-B, AFNOR NFS 87500, DCF-FSK<br>RI < 50Ω, Ua = 0.7 Veff, adjustable ±10 dB  |              | ●      | ●      | ●      |         |
| <b>AB 1.3.3 Network Processor Module</b><br>Connection via TCP/IP, Ethernet to LAN/WAN. Numerous services: SNTP-server, SNTP-client (as CTC's master clock), SNMP/e-mail alarm reporting   |              | ●      | ●      | ●      |         |
| <b>AB 9.0.0 4x Program Module</b><br>4 relays outputs (make contact), 230VAC with up to 1250VA load each.<br>The intelligible operation control allows an easy programming,<br>as an option: download-software for PC  |              | ●      | ●      | ●      |         |
| <b>AB 5.0.0 Mains power supply and battery charging</b><br>Input: 230VAC (50/60Hz) +/-10%, Output 24V / 2.5A   | ●            |        |        |        |         |
| <b>AB 5.0.1 Mains power supply and battery charging</b><br>Input: 230VAC (50/60Hz) +/-10%, Output 48V / 1.2A   | ●            |        |        |        |         |
| <b>AB 5.0.2 Mains power supply and battery charging</b><br>Input: 230VAC (50/60Hz) +/-10%, Output 60V / 1A   | ●            |        |        |        |         |
| <b>AB 2.0.8 Internal battery</b><br>24V / 0.8Ah  |              |        |        |        | ●       |
| <b>AB M24-3.2 Battery supply module</b><br>24V /3.2 Ah, 3x 28 units (external battery)   |              |        |        |        |         |