



Master Clock

CompuTime Center CTC

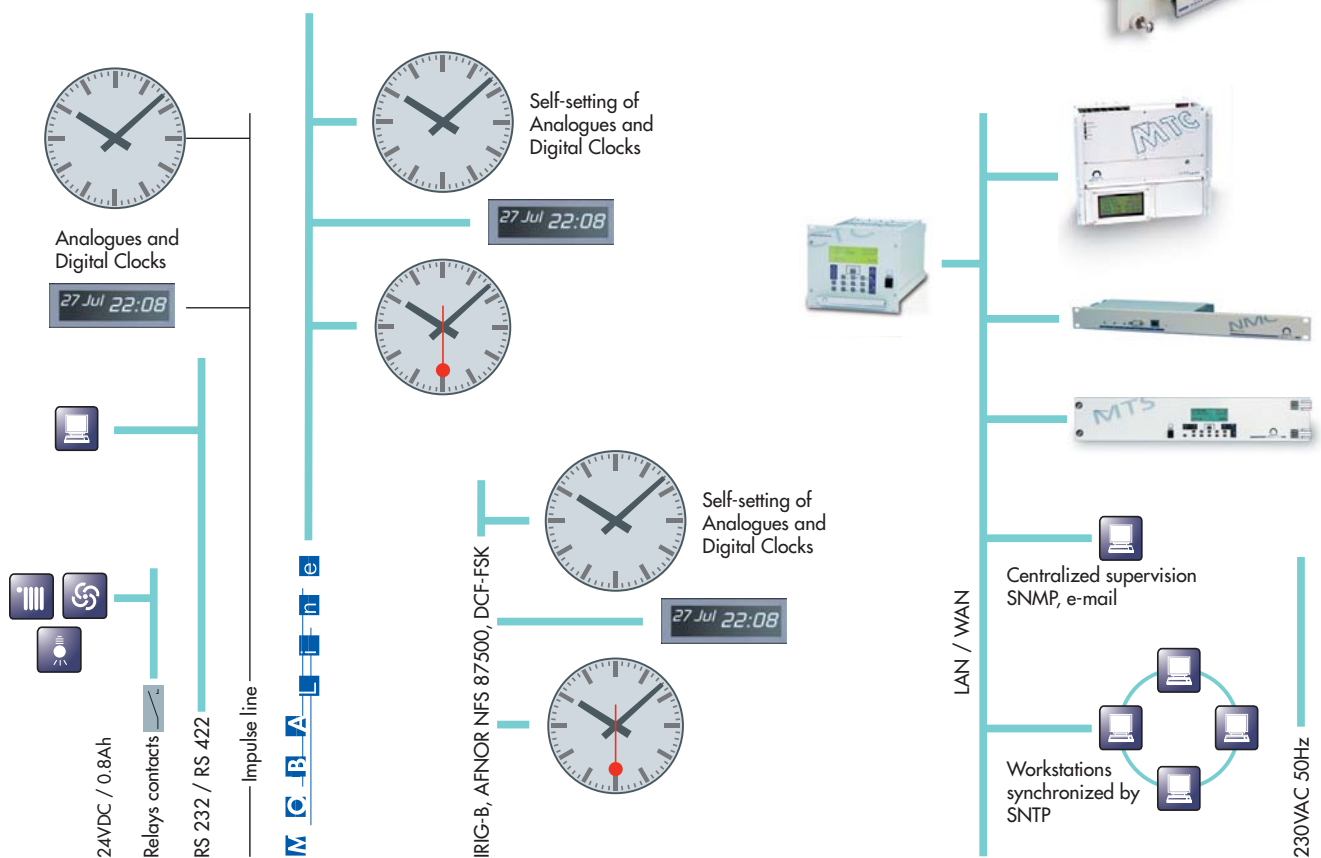
The reliable, modern and modular concept with its configuration flexibility gives an unconditional asset to any new installation. Due to its multi-line architecture the CTC is suitable for a wide range of applications.

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

CompuTime Center CTC

CTC à la carte

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

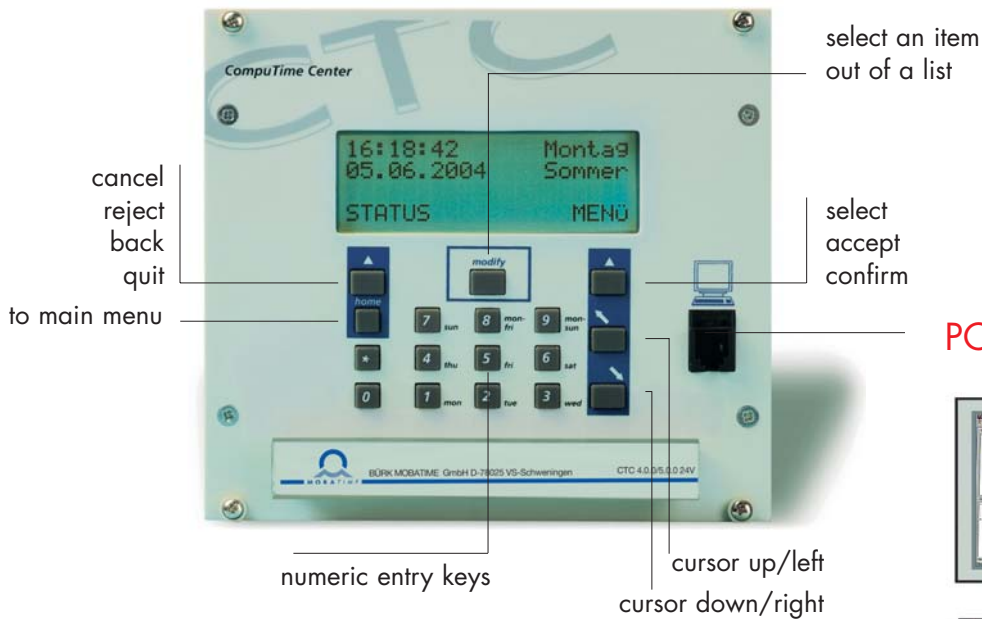


AB 2.0.8 Battery Back-up	AB 9.0.0 Programm Module	AB 4.1.0 Serial Communication	AB 4.0.0 Impulse Line	AB 4.3.0 MOBALine Driver	AB 4.2.0 Time Code Generator	AB 1.3.3 Network Processor	AB 5.0.0 Power Supply
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CTC's Selection of Application Boards

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.

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

CTC's Application Board

	Power Supply	Slot 1	Slot 2	Slot 3	Battery
AB 4.0.0 4x Impulse Line Driver each line selectable as second, half-minute, $\frac{1}{8}$ -minute, minute impulse or DCF, up to 1A per line		●	●		
AB 4.0.1 2x Impulse Line Driver each line selectable as second, half-minute, $\frac{1}{8}$ -minute, minute impulse or DCF, up to 1A per line		●	●		
AB 4.1.0 2x Serial Communication 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, $\pm$ 100 μ s if synchronized with GPS receiver, adjustable compensation of propagation delay.		●	●	●	
AB 4.3.0 2x MOBALine Driver to control self-setting analogue and digital clocks, computer interfaces and switching relays, switching program for up to 64 relays (channels).		●	●		
AB 4.2.0 2x Time Code Generator Output IRIG-B, AFNOR NFS 87500, DCF-FSK RI < 50 Ω , Ua = 0.7 Veff, adjustable $\pm$ 10 dB		●	●	●	
AB 1.3.3 Network Processor Module Connection via TCP/IP, Ethernet to LAN/WAN. Numerous services: SNTP-server, SNTP-client (as CTC's master clock), SNMP/e-mail alarm reporting		●	●	●	
AB 9.0.0 4x Program Module 4 relays outputs (make contact), 230VAC with up to 1250VA load each. The intelligible operation control allows an easy programming, as an option: download-software for PC		●	●	●	
AB 5.0.0 Mains power supply and battery charging Input: 230VAC (50/60Hz) $\pm$ 10%, Output 24V / 2.5A	●				
AB 5.0.1 Mains power supply and battery charging Input: 230VAC (50/60Hz) $\pm$ 10%, Output 48V / 1.2A	●				
AB 5.0.2 Mains power supply and battery charging Input: 230VAC (50/60Hz) $\pm$ 10%, Output 60V / 1A	●				
AB 2.0.8 Internal battery 24V / 0.8Ah					●
AB M24-3.2 Battery supply module 24V / 3.2 Ah, 3x 28 units (external battery)					

Applications



Airports



Railway Stations



Underground Stations



Hospitals



Schools, Administrations



Public Buildings



Industries