



BT-M103-WL-NTP/19

19" Master Clock for wireless system

- + Microprocessor master clock, fitted with external radio transmitter for wireless communication with unlimited analogue and digital radio slave clocks of series BTWL
- + Wiring with control cables not necessary!
- + Automatic adjustment of master clock time at installation
- + Automatic adjustment of the wireless clock system after mains failure
- + Automatic summer/winter time changes
- + Radio transmitter for unlimited quantity of radio slave clocks inside reception area
- + Power supply of radio transmitter via master clock
- + Safety in operation through coded time telegram; thus no interferences with other systems
- + 4 different, coded channels for avoiding interferences of several wireless clock systems
- + In case of no radio signal the slave clocks are running with their quartz time base without interruption (max. 24 hours)
- + Code-protected keypad
- + 2-lined LCD display for indication of hours, minutes, seconds and date respectively menu guide in program mode (2x 24 characters)
- + Checking-LED's for power supply (green) and alarm (red)
- + Traditional impulse output 0.5 A for control of hard-wired slave clocks via 24 V DC minutes-, ½minutes- or seconds impulses (connection of up to 50 impulse slave clocks)
- + Slave clock output short-circuit-proof and overload protected
- + Alarm relay
- + Easy, user-friendly menu:
 - + Programming, automatic or manual relay activation
 - + Programming of holidays (vacation program), special days (e.g. school autonomic days, factory free days, or similar), parameterisation of switching outputs and time changes
 - + View of programs, adjustments and signal times
- + 3 free programmable potential free switching outputs 1 A / 240 V (to be hard-wired) for control of breaks signalling devices, heating, air conditioning, building illumination, and so on
- + Programming of relays in different modes possible: weekly, holidays, vacation period, other special days, astronomic or periodic
- + Relay control hard-wired or wireless
- + Including easy and user-friendly PC software:
 - + Compatible to Windows XP and Windows Vista
 - + All functions and programming are available through download, also continuative functions, which cannot be opened from master clock menu directly

- + Software allows hard copy of programming adjustments and alarm messages
- + Help menu
- + NTP Time Server Function in TCP/IP network (RJ45 connection)
- + NTP (Network Time Protocol) protocol for synchronisation of computers in a computer network = international standard for PC time transmission in Internet.
- + NTP is also used for synchronisation of PC servers and PC workstations in smaller networks (LAN).
- + As enlargement, analogue and digital NTP slave clocks can be synchronised via PC network (i.e. the DCF/GPS synchronised BT-M103-WL-NTP master clock acts as NTP server in TCP/IP network and synchronises all other network clients)
- + Alarm messages in case of NTP faults via relay or e-mail possible
- + Input (RJ45) for use of master clock as net client to be synchronised via TCP/IP network time source

Technical specifications:

Master Clock:

Case:	19", aluminium, 1 HE
Accuracy quartz:	TCXO, ± 0.1 s/ 24 h at 20..25 °C (without DCF/GPS)
Power supply:	240 V AC $\pm 10\%$, 50/60 Hz, 35 W
Ambient temperature:	0..50 °C
Dimensions (WxHxD):	483 x 44 x 200 mm
Weight:	2.8 kg

Radio transmitter:

Case:	ABS plastic for wall mounting with 2 screws
Transmitter frequency:	869.525 MHz
Transmitter power:	25, 125 and 500 mW adjustable (via master clock)
Transmission range:	Indoors 100...200 m depending on ambient conditions (for major ranges up to 3 signal amplifiers BTWL-HUV per direction can be used)
Power supply:	12...24 V AC/DC via master clock
Power consumption:	5 W
Protection class:	IP 54
Dimensions (WxHxD):	approx. 80 x 80 x 45 mm
Weight:	approx. 150 g

Options:

BT-DCF-ANT: DCF-77 radio synchronisation antenna

GPS-ANT-BT: GPS synchronisation antenna

BTWL-HUV: External signal amplifier

Different extension cards (max. 4 plug-in cards at style with rack mounting case):

Connection via internal data bus

- + Plug-in card with 2x RS232/422/485 outputs
- + Plug-in card with 1x 24 V DC / 0.5 A minute-, ½minute- or seconds impulse output (Connection of max. 50 other slave clocks)
- + Plug-in card with 3 relays