ClockMasters Australia Pty Ltd

EuroTime Center ETC

»Versatile Master Clock - ideal for Clock Systems of small or medium size.«

The EuroTime Center ETC operates conventional clock systems with impulse controlled slave clocks as well as modern, self-setting MOBALine installations. Easy and intuitive operation control due to ETC's intelligible user interface. ETC's power relays control light, heating, signalling-bells and other devices by weekly periodic and/or date related programs. Absolute precision of ETC's internal clock can be achieved by synchronization to an external time-reference such DCF77 or GPS.

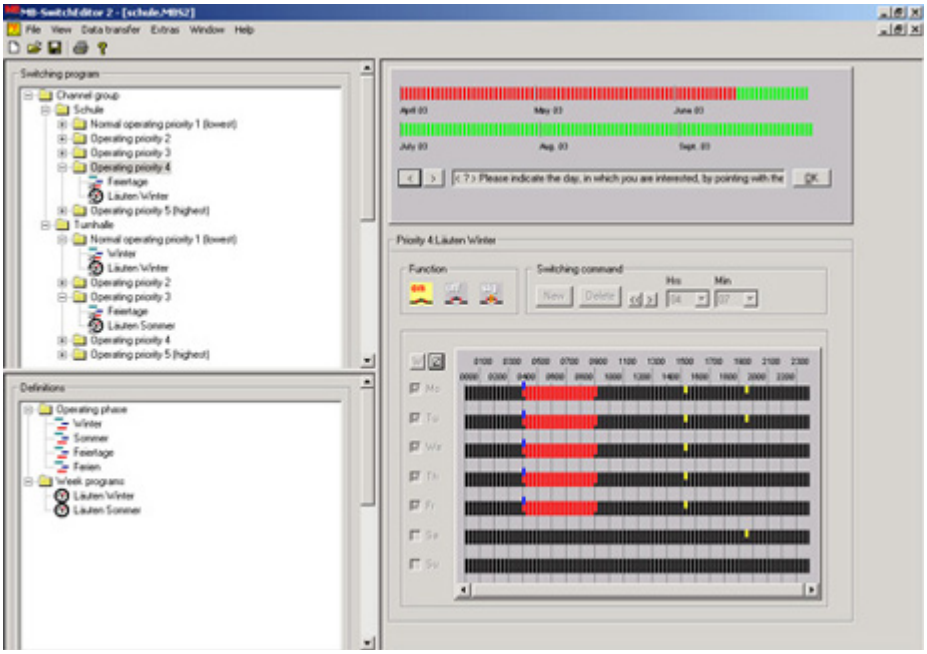
Technical Data	ETC 12 (R)	ETC 14 (R)	ETC 24 (R)
Slave Clock Lines	1	1	2
Slave clock lines, configurable as 1 minute-, 1/2 minute-, 1 second-impulse and DCF-time-code.	✔	✔	✔

Each slave clock line configurable separately as impulse- or MOBALine-output		✓	✓
Output voltage, alternating polarity	24 V	24 V MOBALine	24 V MOBALine
Output current, impulse line, sum of all slave clock lines	500 mA	700 mA	1000 mA
Maximal number of slave clocks (at 6 mA load per clock - impulse line)	80	110	160
Output current, MOBALine, sum of all slave clock lines		500 mAeff	700 mAeff
Maximal number of slave clocks (at 6 mA load per clock - MOBALine)		80	110
Adjustable minimal- and maximal-current-limit (Alarm, if current exceeds, respectively drops below the set limit)			✓
Line outputs overload and short-circuit protected. Automatic adjustment of the slave clocks after recovering from an overload, short-circuit or power failure	✓	✓	✓
Switching Circuits	2	4	4
Switch-over contacts 230 VAC / 10A	✓	✓	✓
64 external switching circuits on MOBALine Channel Relays (option)		✓	✓
Inputs with logical AND / OR combination for allocateable channels (for example to connect twilight sensors).			3
Weekly periodic and/or date dependent switching programs	✓	✓	✓
Switching commands are activated on the minute. Short-time activations (signaling functions) are adjustable within 1 to 99 sec.	✓	✓	✓
Capacity: 1000 commands, consisting of time, function and day(s) of week	✓	✓	✓
Editing switching programs on the keyboard	✓	✓	✓
Editing switching programs on a Pc. Software ""Switch Editor"" required (option). Program download over a serial interface into the master clock (connector terminal on the front panel).	✓	✓	✓
DCF 77 - Time-Code Output (current loop passive)	✓	✓	✓
ASCII-string Time-Code Output (RS 232, RS 422, once a second, definition IF 482)			✓
Operational Control	**ETC 12 (R)**	**ETC 14 (R)**	**ETC 24 (R)**
Alphanumeric display with 4 lines and backlight. Numeric keyboard. User friendly menu guidance. Language English ar German (selectable)	✓	✓	✓
Calculation of the Local Time according to the Time Zone	**ETC 12 (R)**	**ETC 14 (R)**	**ETC 24 (R)**
Automatic, pre-programmed daylight-saving-time change	✓	✓	✓
80 pre-defined Time Zone entries, 20 entries freely programmable on a PC for download into the Master Clock	✓	✓	✓
Any Time Zone entry can be allocated to each input and output separately. For example local time and UTC on different slave clock lines	✓	✓	✓
20 local times on MOBALine (according to allocateable Time Zone entries) with individually pre-programmed daylight-saving.time changes		✓	✓

Internal Quartz time-base	ETC 12 (R)</B< p>	ETC 14 (R)</B< p>	ETC 24 (R)</B< p>
Automatic calibration of the quartz time-base to an external time-reference	✓	✓	✓
Accuracy without external time reference ± 0.1 sec. / day	at 20...25°C	at 20...25°C	at 20...45°C

External Time Reference	ETC 12 (R)	ETC 14 (R)	ETC 24 (R)
Input for DCF 77 & MSF 60-time-code-receivers (current loop, DCF 450, AM 10)	✓	✓	✓
Input for GPS-time-code-receiver (current coop, GPS 3148)	✓	✓	✓
RS 422 Interface to connect a GPS 3048 time-signa l-receiver (NMEA, TSIP)		✓	✓
IF 482 serial time telegrams		✓	✓
Potential-free make-contact to signalize alarms			✓
Dimensions, wall & DIN bar mounting version, w x h x d (mm)	202 x 145 x 64	202 x 145 x 64	202 x 145 x 64
Dimensions, 19" rack version, 2 height units, w x h x d (mm)	483 x 88 x 80	483 x 88 x 80	483 x 88 x 80
Operating temperature, max. 95% rel. humidity, non condensing	0...50°C	0...50°C	0...50°C
CE conformity, EN 60950, security, protection class I EN 61000-6-3, emissions EN S0121-4, immissions (increased requirements for railways)	✓	✓	✓
Power supply / power consumption	230 VAC ± 10% 50 Hz max. 20 VA	85...250 VAC ± 10% 50/60 Hz max. 45 VA	85...250 VAC ± 10% 50/60 Hz max. 60 VA
DC-power supply 22 ... 30 V (instead of mains power)	< 600 mA	< 1,5 A	< 2 A
Battery-Pack (option) 2,3 Ah /24V	✓	✓	✓

Programming the switching circuits on a PC



Optional software running in the familiar WINDOWS environment enable even complex switching and signalling programs to be produced in a clear way and then loaded in the master clock via the serial interface.