



## MPU-TC408P

# Microprocessor controlled master clock

- + Four independent slave clock lines
- + Connection of up to 350 impulse controlled or up to 350 self-correcting Time Code slave clocks (max. output current 3.5A / max. 1 A each line)
- + Polarised 24 V DC outputs for minutes-, ½ minutes - or seconds impulses respectively time code for operation of self-correcting and self-setting slave clocks
- + Mixed operation of slave clocks and self-correcting clocks possible
- + Impulse length adjustable
- + Impulse to break rate programmable
- + Automatic adjustment of slave clocks after mains failure
- + Electronic impulse memory for min. 5 years
- + Automatic summer-/winter daylight-saving time programmable
- + Everlasting calendar
- + Automatic free programmable holiday calendar with or without holidays depending on Easter
- + Electronic short-circuit protection
- + Electronic low voltage cut-off (18 V)
- + Two-lined liquid crystal display (LCD) with 8.5 mm digit height (20 characters per line)
- + Indication of weekday, hours, minutes, seconds, date, summer-/winter time and DCF reception
- + Synchronisation through:
  - + DCF-77 (for time and summer-/winter time changes)
  - + GPS system (for time and summer-/winter time changes)
  - + 24 V DC polarised minute impulses (master/slave operation)
- + Text message on display in case of missing DCF/GPS synchronisation after 48 hours
- + Error text message in case of short-circuit on a slave line
- + Accuracy  $\pm 0.1$  s/day at 25 °C (without DCF synchronisation)

### Signalling device

- + Eight potential free switchover contacts
- + Dialogue programming with menu navigation
- + 99 day programs with max. 99 program steps each
- + Period table with 99 program lines
- + Copy function for day programs



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- + Switching times per second
- + On/Off- and timer-functions with 1 s ... 59 min. run time
- + 32 different timer lengths programmable
- + Checking of programming via display
- + Single-, partial- and complete deletion of programs
- + Program memory for 99 day programs with totally 9801 (=99x99) program steps
- + Alarm relay function: The relay switches off in case of an alarm condition (short-circuit on slave line or missing DCF/GPS synchronisation after 48 hours).
- + Relay function depending on summer-/winter time status: The relay is only active either at current summer time or winter time.
- + Contact rating 250 V / 4 A (ohmic load)

### Mounting

Plastic case for surface wall mounting and mounting on top hat rail according to DIN 46277 sheet 3

Colour: Upper part light grey, lower part dark grey

Dimensions (WxHxD): 241 x 313 x 87 mm

Power supply: 220...240 V / 47...63 Hz

Power consumption: 110 VA

Ambient temperature: 0...40 °C

### Options:

DCF-ANT02:	DCF-77 radio synchronisation antenna
GPS-ANT8:	GPS reception antenna with DCF output
MPU-AK1.8:	24 V DC / 1.8 Ah power reserve



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