

Impulse Clock Movements

T100, T200, T300 and T400 series

CI/SfB

(64.5)

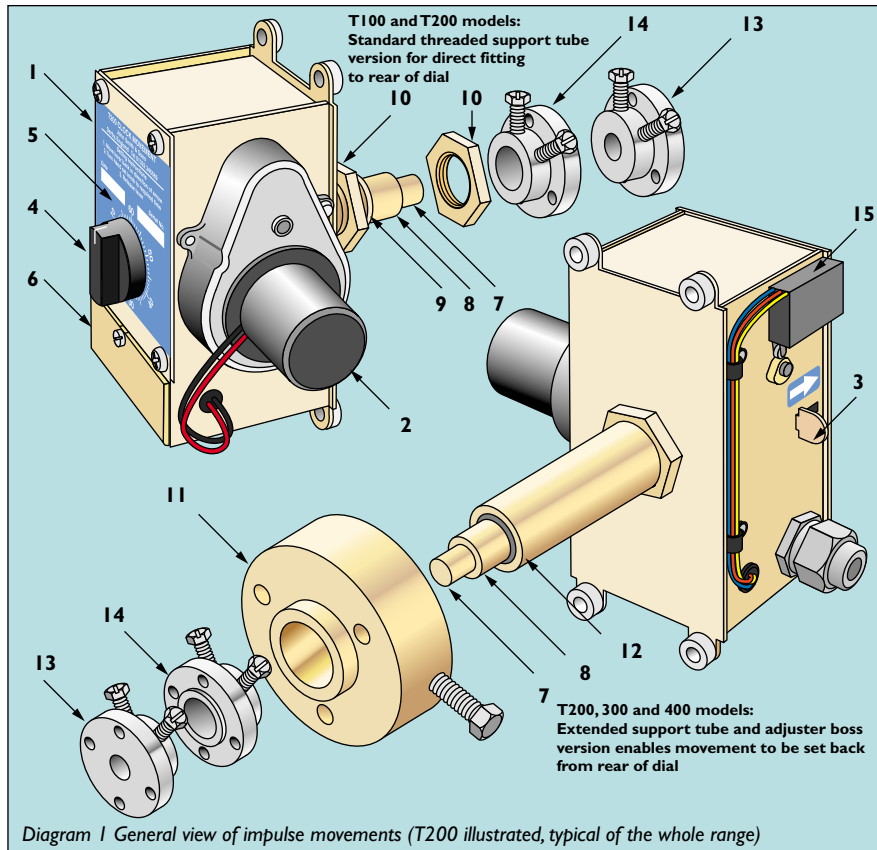


Diagram 1 General view of impulse movements (T200 illustrated, typical of the whole range)

Key to parts: Diagram 1 shows T200 units, typical of the whole range.

- 1 Main casing, houses gears for transmission to minute shaft 13 and hour shaft 14.
- 2 Impulse motor and reduction gear unit. Timekeeping governed by master clock control unit.
- 3 Hands adjustment release lever.
- 4 Hands adjustment knob
- 5 Hands adjustment markers
- 3, 4 and 5 enable manual alteration of the time shown by the clock hands.
- 6 Cover for electrical connections.
- 7 Inner shaft (minute hand).
- 8 Outer shaft (hour hand).
- 9 Threaded support tube.
- 10 Centre fixing locknuts.
- 9 & 10 is standard on T100 and option on T200, for installation directly onto rear of dial. See installation method B on the Clock Dials brochure. Larger movements require mounting on separate brackets.
- 11 Adjuster boss.
- 12 Support tube extension.
- 11 & 12 are for installation on brackets with movement set back from rear of dial with extended support tube, (not T100 models). See installation methods A, C and D on the Clock Dials Brochure.
- 13 Minute hand boss
- 14 Hour hand boss
- 13 and 14 are supplied assembled to the clock hands.

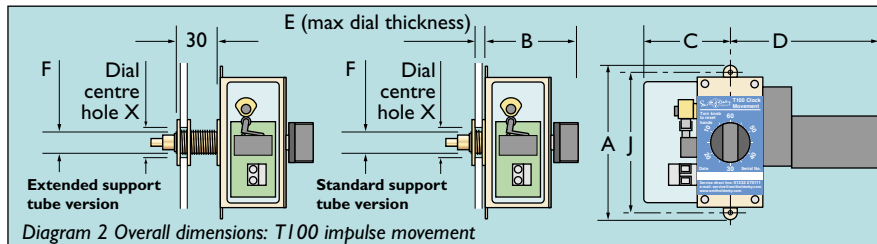


Diagram 2 Overall dimensions: T100 impulse movement

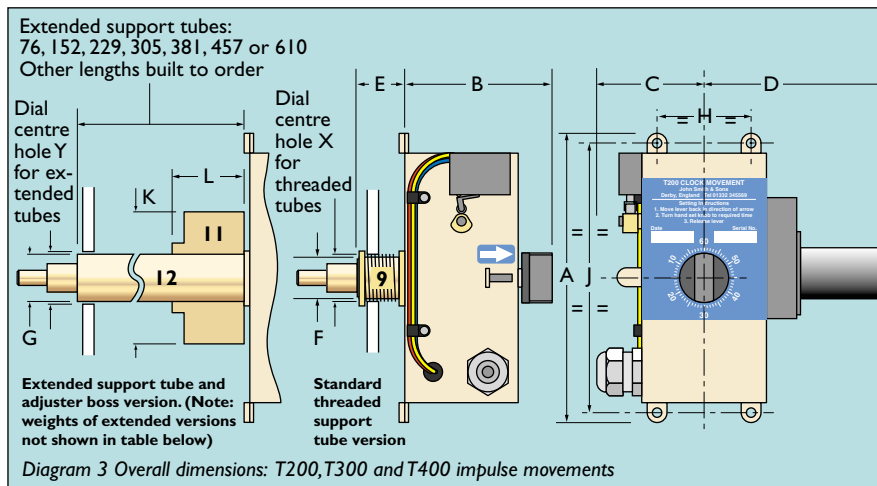


Diagram 3 Overall dimensions: T200, T300 and T400 impulse movements

Materials: Corrosion resistant steel plated casings, pre-lubricated long life bearings, precision machined brass gear wheels and bronze bearings.

Control: Direct from Smith of Derby Master Clock Control Unit.

Options: Sweep seconds hand on T200 (TSS) and T300(S) models. Provision for neon illuminated hands on T300 and T400. All these options affect overall dimensions, details supplied on request.

***Maximum dial diameters:** Interior refers to dial installed inside a building or behind a clear protective cover. Exterior refers to a dial installed outside with no protective cover.

| Approximate overall dimensions (mm) | Hole centres | | | | | | | | | | | | Dial hole X | Dial hole Y | Weight (kg) | *Max. dial dia. | |
|-------------------------------------|--------------|-----|-----|-----|----|----|------|-----|-------|----|----|---|-------------|-------------|-------------|-----------------|----------|
| | Type | A | B | C | D | E | F | G | H | J | K | L | | | | Interior | Exterior |
| T100 | 101 | 60 | 48 | 82 | 8 | 14 | - | - | 92 | - | - | - | 14 | 14 | 0.5 | 900 | 750 |
| T200 | 152.5 | 81 | 73 | 96 | 20 | 20 | 25.4 | 50 | 142.5 | 70 | 34 | - | 22 | 29 | 1.8 | 1,830 | 1,370 |
| T300 | 240 | 132 | 80 | 160 | - | - | 38 | 87 | 216 | 80 | 36 | - | 41 | 60 | 6.0 | 2,600 | 2,300 |
| T400 | 390 | 195 | 120 | 240 | - | - | 57 | 140 | 350 | - | - | - | 60 | 60 | 21.5 | 3,500 | 3,050 |

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Master Clock Control Units

CI/SfB

(64.5)

MC100 & MC200: for T100, T200, T300 & T400 series Impulse Clock Movements



MC100 Master Clock Control Unit



MC200 Master Clock Control Unit



MC200 Control Panel

General specification for MC100 and MC200 models:

- ◆ Specifically designed for Smith of Derby movements.
- ◆ Master unit sends a 12v pulse every half minute.
- ◆ Accuracy +/- 1 second /month (taken over one year).
- ◆ 4 switched outputs (for 4 individual dials).
- ◆ Weather resistant housing to IP65 standard.
- ◆ Internal battery powers clocks during power failure for up to 10 days.

| Controls | MC100 | MC200 |
|--|-------------------------|--------------------------|
| *GMT to BST (winter to summer time): fast forwards the movement/s 1 hour | Manually operated | Pre-programmed automatic |
| *BST to GMT (summer to winter time): stops the movement/s for 1 hour | Manually operated | Pre-programmed automatic |
| Timekeeping memory if a power failure lasts longer than the battery reserve | Must be re-set manually | Automatic |
| Lockable key switch to prevent unauthorised adjustments | Yes | Yes |
| Stop button to stop the clock movements | Yes | Yes |
| Fast forward: advances movements at 20x normal speed (3 mins to advance 1 hour) | Yes | Yes |
| Normal – to start movements after resetting or adjusting (LED flashes once per half minute to indicate normal operation) | Yes | Yes |

*Other countries local time changes are available, details on request.

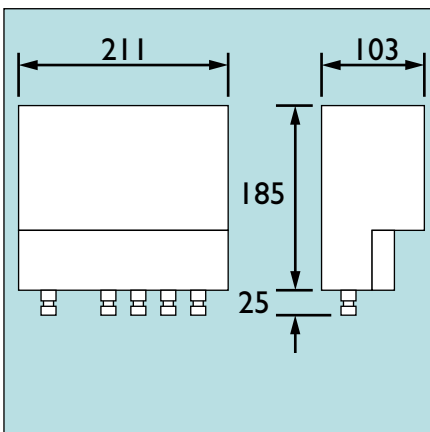
Power failure conditions: 1.2 Amp hours battery drives a single movement for up to 10 days, or 4 movements for up to 3 days. (Assumes a fully charged battery in good condition). In the event of a power failure for longer than the battery capacity, the clock/s will stop. When the external power supply is restored, the master clock will need to be reset by the user on the MC100 and will be automatically restored on the MC200.

Projected battery life: Up to 5 years in temperate climate, eg UK, or up to 1 year in hot /humid climates. Higher capacity batteries can be supplied if required.

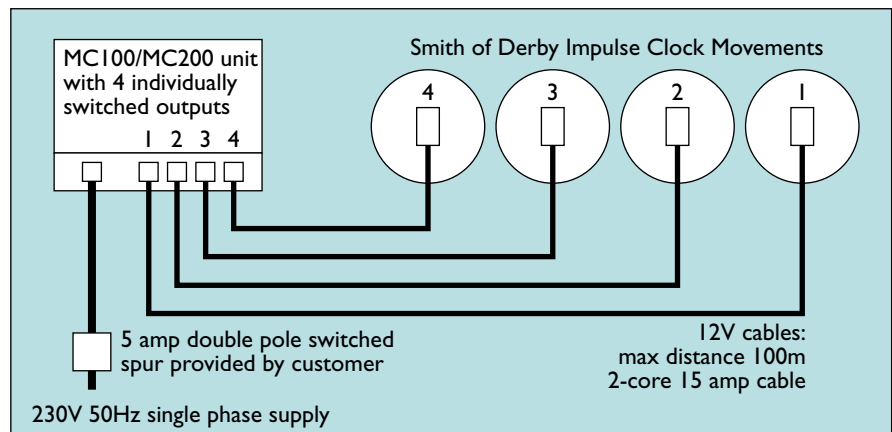
GPS or Radio Synch options: Both units will accept a 24v bi-polar signal, which is then modified to provide the 12v pulse to the movement/s.

Solar power option: 270 x 245mm panel, adequate to trickle charge the master clock battery in the UK all year round. This is an excellent option where an electrical supply is not viable or at best is intermittent and unreliable.

Installation: wall mounted inside a building, positioned for easy access away from direct heat, sunlight and damp. Temperatures limits 0°C to 55°C. Wiring must conform to current electrical regulations. Full instructions and wiring diagrams supplied. Failure to install and connect correctly will invalidate the guarantee.



MC100 & MC200 Overall Dimensions



Basic wiring scheme: for information only - details may vary according to site requirements

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