

All Types

Connections

- Pin 1: Common.
- Pin 2: Positive battery charge plus relay current. Min 0.50 mA (No relay).
- Pin 3: Relay connection.
- Pin 4: Output & relay connection. NPN open collector. Max 10 mA, 47 V.
- A Molex 770 4 way connector or similar is recommended.

MEU11 and MEU17 - Typical Usage

The examples in figs 6, 7 and 8 show the module driving a Shrack 48V relay with power derived from the mains. Type RP330018 or RP331048 (Changeover contracts). In these configurations the relay pulls in at 47V and is held at above 24V with mains voltages down to 200V.

MEU11 and MEU17 - Typical Usage

In this case the circuit in fig 6 can be used with a 10K, 3W resistor in place of the 15K, 2W resistor shown and a 1.3W zener must be connected between pins 1 and 2 of the module. The circuit in fig 7 can be used with two 5K1, 1.5W resistors in place of the 7K5, 1W resistors shown and a 1.3W zener must be connected between pins 1 and 2 of the module. The circuit in fig 8 can be used with a 330nF, X 250V ac capacitor instead of the 220nF capacitor shown and a 1.3W zener must be connected between pins 1 and 2 of the module. In all cases the zener is 47V and its cathode is connected to module pin 2.

Capacitor PSU (MEU11 & MEU17 only)

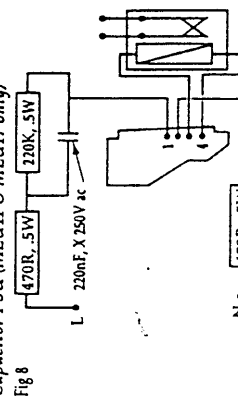
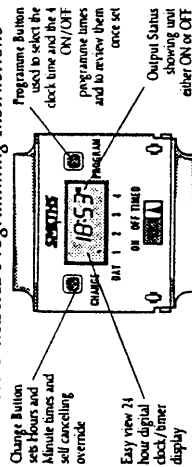


Fig 8

It is possible to operate these modules from other voltages. Please contact Technical Service on 0181 450 8944 for advice.

3- EMU11 & MEU11-Programming Instructions



Charge Button
Sets hours and minutes times and self cancelling override.

Programme Button
Used to select the clock time and the 4 ON/OFF programme times and to review them once set.

Output Status
showing unit either ON or OFF.

Easy view 24 hour digital clock/other display

Battery

This product has a factory fitted rechargeable battery. If the time controller is left with its mains power switched off for more than 1 month the display may go blank. In this case switch mains on, wait 30 minutes, and apply reset - see 1 before programming.

Programming

Only two setting buttons are required, Change and Program. In normal use the Change button is used to switch ON or OFF, overriding the timeswitch until the next programmed OFF or ON time. During programming the Change button is used to set the hours and minutes. The Program button is only used when setting or adjusting the clock time or the 4 programmed ON/OFF times, although it can also be used to review the ON/OFF times once they have been set. Each time the Program button is pressed the display will flash either the hours or minutes in turn, starting with the clock then the first ON time, first OFF time, second ON time etc. Whenever the hours or minutes are flashing they may be set using the Change button. Once set the Program button is pressed again to proceed to the next stage.

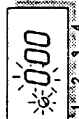
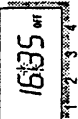
Normal Operating Mode

In normal operation the PanelMaster will display the correct time with the colon flashing. The output status will be shown by either ON or OFF on the display.

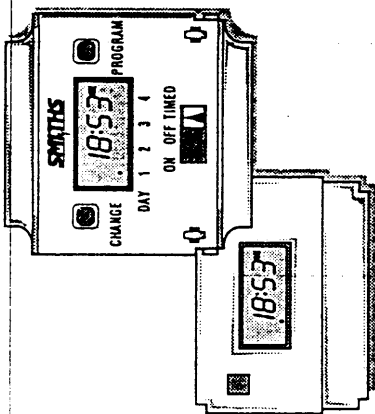
1. To Reset Display

To clear programmes from memory and reset the time controller press and hold down both buttons until the display goes blank. Release buttons and display will fill with its complete range of characters and then clear to show clock and hour digit flashing.

You are now in the clock setting mode at the beginning of the programme sequence



INSTALLATION & OPERATING INSTRUCTIONS



PanelMASTER

Timer Modules

Without Housing
MEU11 (24 Hour) MEU17 (7 Day)

With Housing
(Giving Panel Mount Capability)
EMU11 (24 Hour) EMU17 (7 Day)

SMITHS
Technology you can depend on

678 340 | 351 | 363 | 375

Programming sequence

Setting clock	Programme 3 ON
Programme 1 ON	Programme 3 OFF
Programme 1 OFF	Programme 1 ON
Programme 2 ON	Programme 1 OFF
Programme 2 OFF	Operating Mode

Note: Button pauses greater than 1 minute during programming will result in automatic return to the operating mode.

2. Setting Clock (after reset)

- Hour Setting - Press the <Change> button to advance the hour setting. Note: For rapid hour selections press and hold down <Change> button.

- Minute Setting - Press the <Program> button once to select the minutes - display shows clock symbol and minute digits flashing. Press the <Change> button to advance the minutes setting. Note: For rapid minute selection press and hold down <Change> button. (Note: 16 hrs shown as example of hrs set)

- Press <Program> button once - clock is now set and display shows ready for the first ON programme time with ON and hours digits flashing.

3. To Set Programme ON/OFF Times (after clock setting)

Programme 1 ON time

- Press <Change> button to advance the hour setting.

- Press <Program> button once to select minute time - display shows minute digits and ON flashing. Press <Change> button to advance minute setting. (Note: 16 hrs shown as example of hours set)

- Press <Program> button once - the first ON time is now set and display shows ready for the first OFF programme time.

- Now set the hrs and minutes as before.

- Repeat steps i to iv to set the remainder of the ON/OFF times as required. Note: Any unused ON/OFF programme should be skipped until the display shows normal operating mode. Do not programme '0' into unused programmes.

- IMPORTANT** After setting a clock time which falls within a programmed ON period, the unit will not switch ON. Use the Change button to switch unit ON. After this the unit will operate normally to the programmes set.

4. Programme Review

- To fast review the set programmes or for quick exit to normal operating mode - press and hold the <Program> button.

5. Initiating Programme Mode

- This can be initiated any time during the normal operating mode. Press <Program> button and the Clock symbol, hrs and minutes symbols on the display will flash - this is review mode. If any change to programmes is required press <Change> button to initiate programme mode and then follow steps 2 and 3.

6. Cancelling Programmes

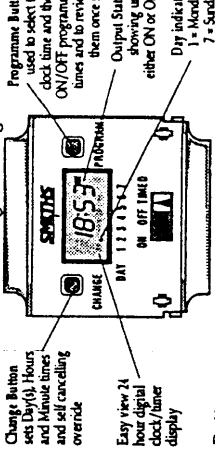
- Any ON/OFF programme can be cancelled by clearing its ON and OFF time. Follow step 5 and when into the ON or OFF programme to be cancelled press the <Change> button until the hour digits show ...

- then press the <Program> button to clear the programme. The display will show the hour and minute digits and ON or OFF flashing.

Self Cancelling Override

- To change the output status from ON to OFF or vice versa during normal operation press the <Change> button. The output status will change and indicate override is in operation by flashing.

4. EMU17-MBU17 Programming Instructions



Battery
This product has a factory fitted rechargeable battery. If the time controller is left with its mains power switched off for more than 1 month the display may go blank. In this case switch mains on, wait 30 mins, and apply reset - see 1 before programming.

Programming
This is a seven day (weekly) timeswitch which has six programmes, each of which can be block programmed to work on all of the five weekdays, both weekend days, or all seven days (24 hour operation). Programmes can also be designated to operate on individual days.

Only two setting buttons are required, Change and Program. In normal use the Change button is used to switch ON or OFF, overriding the timeswitch until the next programmed OFF or ON time. During programming the Change button is used to set the hours, minutes and days. The Program button is only used when setting or adjusting the clock time and day or the 6 programmed ON/OFF times and days, although it can also be used to review the ON/OFF times and days once they have been set. Each time the Program button is pressed the display will flash either the days, hours or minutes in turn, starting with the clock then the first ON time and day(s), first OFF time, second ON time and day(s) etc. Whenever the days, hours or minutes are flashing they may be set using the Change button. Once set the Program button is pressed again to proceed to the next stage.

Normal Operating Mode

In normal operation the PanelMaster will display the correct day and its time with the colon flashing. The output status will be shown by either ON or OFF on the display.

1. To Reset Display

To clear programmes from memory and reset the time controller press and down both buttons until the display goes blank. Release buttons and dial fill with its complete range of characters and then clear to show clock and day 1 symbol flashing.

You are now in the clock setting mode at the beginning of the programming sequence

Programming sequence

Setting clock	Programme 1 ON
Programme 1 ON	Programme 1 OFF
Programme 1 OFF	Programme 2 ON
Programme 2 ON	Programme 2 OFF
Programme 2 OFF	Programme 3 ON
Programme 3 ON	Programme 3 OFF
Programme 3 OFF	Operating Mode

Note: Button pauses greater than 1 minute during programming will result in automatic return to the operating mode.

2. Setting Clock (after reset)

- Day Setting - Press <Change> button to advance to the day required. Day 1 = Monday and Day 7 = Sunday.

- Hour Setting - Press the <Program> button once to select the hour - display shows clock symbol and the hrs digit flashing.

- Press the <Change> button to advance the hour setting. Note: For rapid hour selections press and hold down <Change> button.

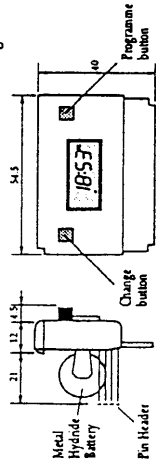
- Minute Setting - Press the <Program> button once to select the minutes - display shows with clock symbol and minute digits flashing. Press the <Change> button to advance the minutes setting. Note: For rapid minute selection press and hold down <Change> button. (Note: 16 hrs shown as example of hrs set)

- Press <Program> button once - clock is now set and display shows ready for the first ON programme time.

1. Physical Arrangements & Installation Instructions

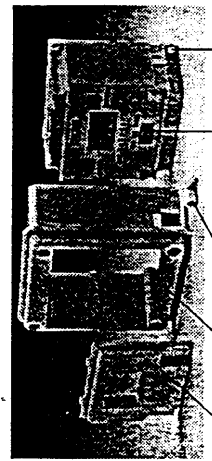
MEU 11 & MEU 17

Figure 1



Engineering drawing can be supplied on request

EMU 11 & EMU 17



Tamper proof cover Bezel for panel mounting Slide switch allowing continuous ON or OFF or programmed operation

Contents

- 1 EMU11 (A1 hour) or EMU17 (7 day)
- 1 Panel mount bezel
- 1 Tamper proof cover
- 1 Surface mount stand offs (length 10mm)
- 2 Panel mount bolts
- 2 Self-tapping screws (No. 4 x 5/8 in) for panel mount bolts
- 2 Self-tapping screws (No. 6 x 3/8 in) for attaching bezel to EMU11/17

Installation - Panel Mounting

For panel mounting (in panels up to 10mm thick with the cut-out as shown in figure 2) the EMU11/17 should be snapped into the bezel supplied and secured in place by the use of the 2 No. 6 x 3/8in self-tapping screws provided as shown in figure 3.

When selecting a position for the unit it should be born in mind that a clearance behind the front panel surface of 25.0mm is required over the full area of the panel cut-out.

The unit is designed to be mounted from the front of the panel by the following procedure:

1. Insert the 2 bolts provided in the locations shown in figure 4.
2. Then insert the 2 No. 4 x 5/8 in self-tapping screws into the bolts and engage thread.
3. Make connections to the unit by wires terminated in a Molex 4 way 7700 or similar connector from behind the panel.
4. Insert the EMU11/17 complete with bezel into the panel and tighten up the 2 No. 4 self-tapping screws. The ears on the bolts will rotate under the tightening action to clamp the unit to the panel.

Surface Mounting

The EMU11/17 without bezel can be surface mounted using the 4 securing holes as shown in figure 5. The unit can be stood off from the mounting surface by 10mm using the 4 spacers if required. Screws are not provided and it must be remembered that if used in this way the EMU11/17 must be installed within a housing or cubicle to prevent access to the main terminations.

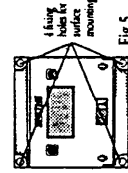


Fig 5

2. Specifications

MEU11 & EMU11

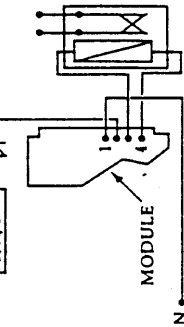
- 4 ON/OFF programmes
- Easy 2 button programming
- Change/Override until next programme
- Rechargeable Metal Hydride battery back-up with 1000 hours reserve
- Requires only an external diode, resistor and relay to switch mains
- Temperature range 0° to 55°C

Operation

The programme button advances programme steps and the change button the hours and minutes which flash. Time of day is set first and is updated during the programming period. Programmes 1 to 4 follow. If, during programming, no button is pressed over a period of one minute then the display will revert to normal operation. In normal operation, pressing the change button changes the output until the next programme step.

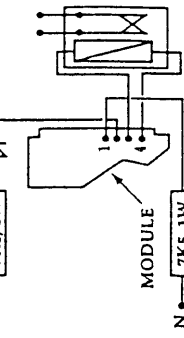
Single Resistor PSU (MEU11 & MEU17 only)

Fig 6



Two Resistor PSU - gives Optimum EMC Performance (MEU11 & MEU17 only)

Fig 7



MEU17 & EMU17

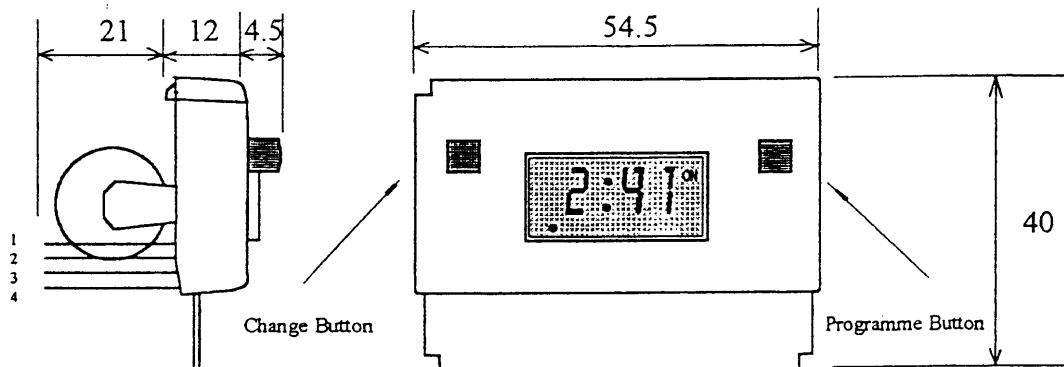
- 6 ON/OFF programmes, daily, weekly, weekend or weekday options
- Easy 2 button programming
- Change/Override until next programme
- Rechargeable Metal Hydride battery back-up with 1000 hours reserve
- Requires only an external resistor, diode and relay to switch mains
- Temperature range 0° to 55°C

Operation

The programme button advances programme steps and the change button then updates the item selected. Day/days of week is first to be programmed followed by hours and minutes. The 6 ON/OFF programmes then follow, each in the sequence day/days, hours and minutes. If, during programming, no button is pressed over a period of one minute then the display will revert to normal operation. In normal operation, pressing the change button changes the output until the next programme step.

DATA SHEET

MEU11 24 hour industrial time controller module



- * 4 ON /OFF Programmes
- * Easy 2 button programming.
- * Change/Override until next programme.
- * Rechargeable Metal Hydride battery back-up with 1000 Hr reserve.
- * Requires only an external diode, resistor and relay to switch mains.
- * Temperature range 0° to 55° C.

Operation

The programme button advances programme steps and the change button the hours and minutes which flash. Time of day is set first and is updated during the programming period. Programmes 1 to 4 follow.

If, during programming, no button is pressed over a period of one minute then the display will revert to normal operation.

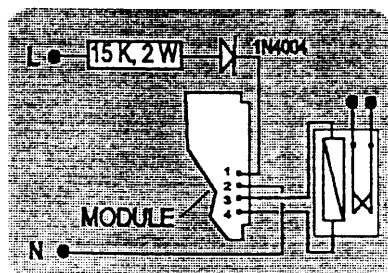
In normal operation, Pressing the change button changes the output until the next programme step.

Connections

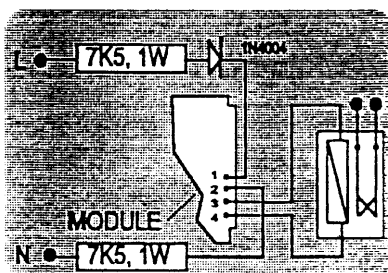
- Pin 1 Positive battery charge plus relay current. Min 0.50 mA (No relay)
- Pin 2 Common
- Pin3 Relay connection.
- Pin 4. Output and relay connection. NPN open collector. Max. 10 mA, 47 V.

Typical Usage

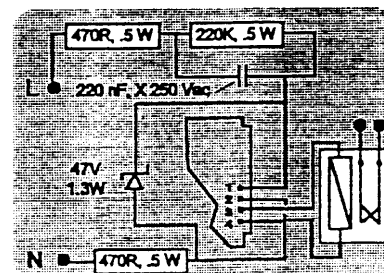
The following examples show the module driving a Shrack 48 V relay with power derived from the mains. Type RP330048 or RP331048 (Changeover contacts). In these configurations the relay pulls in at 47 V and is held at above 24 V with mains voltages down to 200 V.



Single Resistor PSU



Two Resistor PSU - gives
Optimum EMC Performance

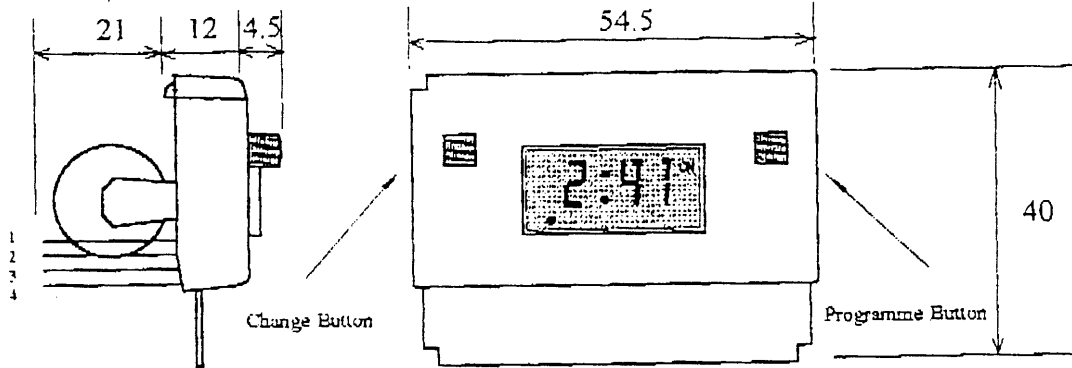


Capacitor PSU

Timeguard Ltd

DATA SHEET

MEU17 7 day industrial time controller module



- * 6 ON /OFF Programmes, daily, weekly, weekend or weekday options.
- * Easy 2 button programming.
- * Change/Override until next programme.
- * Rechargeable Metal Hydride battery back-up with 1000 Hr reserve.
- * Requires only an external resistor, diode and relay to switch mains.
- * Temperature range 0° to 55° C.

Operation

The programme button advances programme steps and the change button then updates the item selected. Day / days of week is first to be programmed followed by hours and minutes. The 6 ON/OFF programmes then follow, each in the sequence day / days, hours and minutes.

If, during programming, no button is pressed over a period of one minute then the display will revert to normal operation.

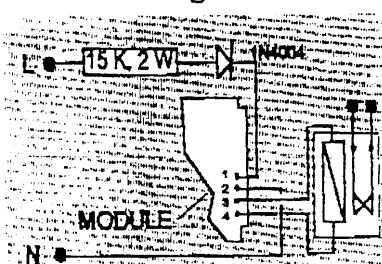
In normal operation, Pressing the change button changes the output until the next programme step.

Connections

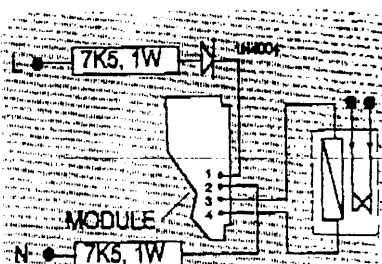
- Pin 1 Positive battery charge plus relay current. Min 0.50 mA (No relay)
- Pin 2 Common
- Pin3 Relay connection.
- Pin 4. Output and relay connection. NPN open collector. Max. 10 mA, 47 V.

Typical Usage

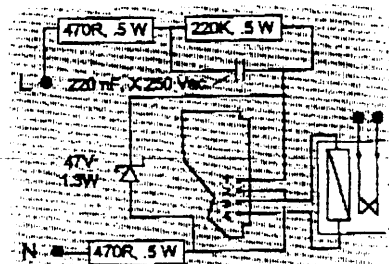
The following examples show the module driving a Shrack 48 V relay with power derived from the mains. Type RP330048 or RP331048 (Changeover contacts). In these configurations the relay pulls in at 47 V and is held at above 24 V with mains voltages down to 200 V.



Single Resistor PSU



Two Resistor PSU - gives Optimum EMC Performance



Capacitor PSU

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