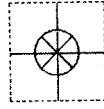
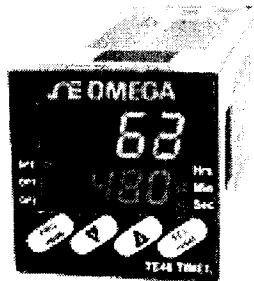


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User's Guide



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PTC-13 Programmable Timing Controller



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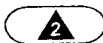
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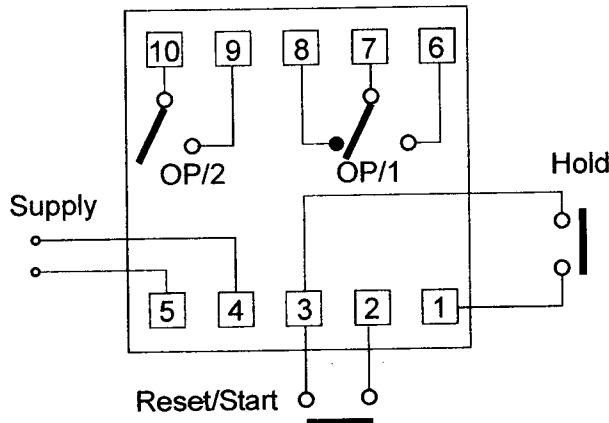
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WARNING: These products are not designed for use in, and should not be used for, human applications.

PTC-13 Programmable Timing Controller

FRONT PANEL FUNCTIONS

-  **PROG mute** Accesses set points (*SEt1* & *SEt2*) when pressed momentarily. Accesses program mode (via password *PASS*) or exits program mode when pressed for >4 secs. Steps forward through program parameters when in program mode. Cancels output buzzer (*bEEP*) when activated but does not reset timer.
-  **START Clear** Steps backwards through program parameters when in program mode. Starts timing when internal start mode (*ItS*) is selected. Resets alarms when in monitor (*Mon*) mode
-  Decreases a parameter value or program option when in set point, password or program mode. Holding down rapidly changes the value. In timing mode, press to change display to timer 1 values.
-  Increases a parameter value or program option when in set point, password or program mode. Holding down rapidly changes the value. In timing mode, press to change display to timer 2 values.

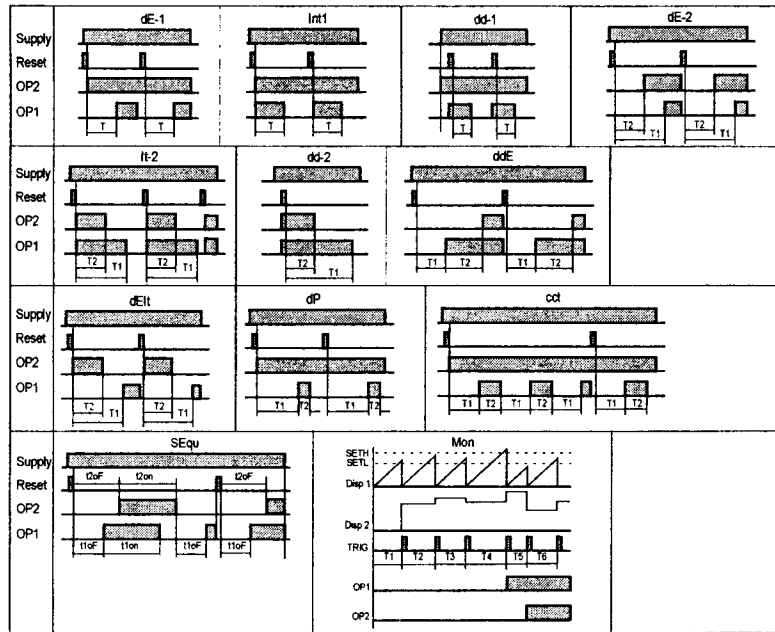
WIRING DIAGRAM



REAR PANEL FUNCTIONS

- Hold :** Holds current time value while the contacts are closed.
- Reset/Start :** In reset mode (*Eur*), closing the contacts returns display and outputs to their status at the start of the timing sequence. Timing restarts on release of contacts. In start mode (*EuS* & *EtS*), closing the contacts returns display and outputs to their status at the start of timing and immediately restarts the timing sequence whether contact are released or not. In monitor mode (*Mon*) acts as the clock input to record the elapsed time in the lower display.

TIMING MODES



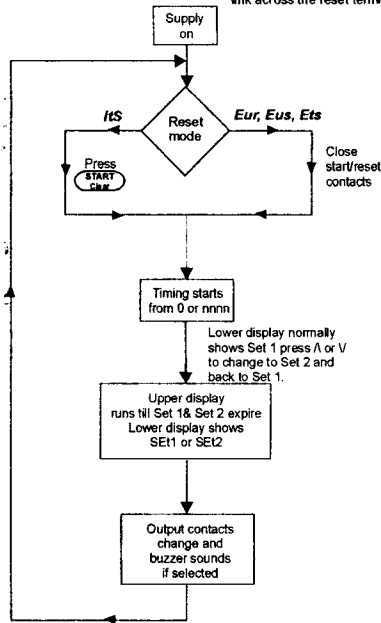
PROGRAM PARAMETERS

Parameter	Function	Default	Range/Options
SET 1(H, t1oF) SET 2(L, t2oF) t1on, t2on	Timing set-points (Values appear when requd)	000.0	0 to timing range
PASS	Password to access program menu	48	00 = no password Direct access to program menu 1 to 49 = Password access to program menu and set-points adjustable 50 to 99 = Password access to program menu and set-points locked (view only)
MODE	Timing Mode	dE-1	dE-1: On-Delay + Inst relay Int1: Interval + Inst relay dd_1: Off-Delay + Inst relay dE-2: 2 independent On-Delays Int2: 2 independent Intervals dd-2: 2 independent Off-Delays ddE: 2 dependant On-Delays dEIt: On-Delay + Interval dP: Delayed Pulse + Inst relay cct: Cycle Timer, variable on & off SEqu: Sequence timer Mon: Cycle time monitor/alarm
RNG1 RNG2 t1oF, t2oF t1on, t2on	Timing Range (Values only appear when required)	SECS	SECS: 0 to 999.9 seconds MINS: 0 to 999.9 minutes M-S: 0 to 99 mins 59 secs H-M: 0 to 99 hours 59 mins
CNT	Direction of Timing count	uP	uP, dn
rSet	Reset options	Eur	Eur: External Universal Reset EuS: External Universal Start EtS: External Time-out Start ItS: Internal Time-out Start
BEEP	Selection of Buzzer option at Time-out	OFF	OFF, on

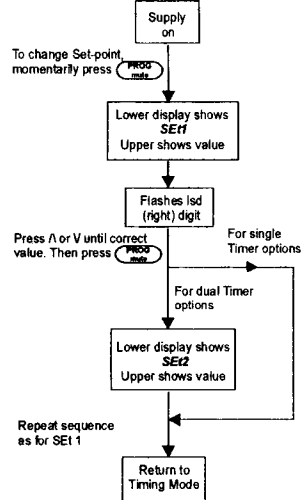
PROGRAM PARAMETER MAP

Timing Mode

Note: To start timing from power on, select reset mode *EuS* and link across the reset terminals.



Set Point Mode

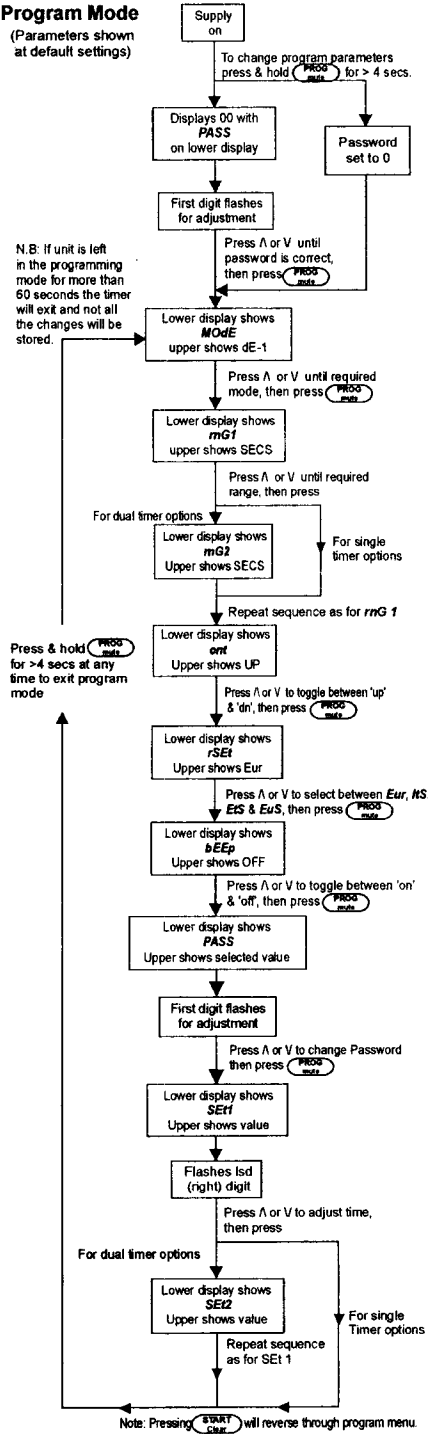


Program Mode (Parameters shown at default settings)

N.B: If unit is left in the programming mode for more than 60 seconds the timer will exit and not all the changes will be stored.

Press & hold PROG for >4 secs at any time to exit program mode

Note: Pressing START Clear will reverse through program menu.



PROGRAMMING PROCEDURE

1. Press and hold the **PROG** button for > 4 secs. The lower display will show **PASS** (if a password >0 has been set) and the right digit of the upper display will be flashing. Use the \wedge and \vee buttons to enter the password (**NB Default password is 48**). If the password is 0, the display will go directly to the program menu at the **mOdE** parameter.
2. Press **PROG** again to access the program menu at the **mOdE** parameter.
3. The **PROG** and **START** buttons are used to move around the program menu and the \wedge and \vee buttons are used to change the parameter settings. In all cases the lower display shows the parameter prompt and the upper the value. See the parameter map overleaf for full programming details.
4. When all parameters are set, press and hold the **PROG** button for > 4 secs to exit the program mode and return to the timing sequence.

ADJUSTING SET TIME

The set time can be adjusted as part of the programming procedure or independently as follows:-

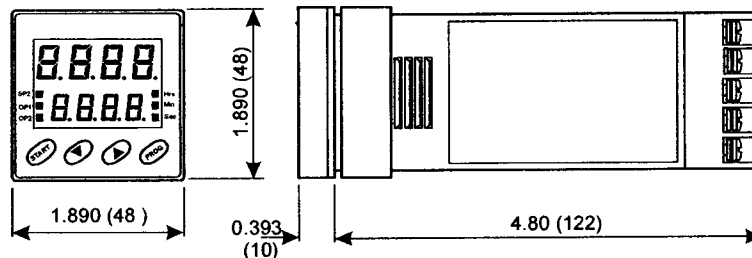
1. Press **PROG** momentarily and the lower display will show **SEt1** with right hand digit in the upper display flashing.
2. Use the \wedge and \vee buttons to set the desired value for set time 1. Hold the button to accelerate the rate of change.
3. Press **PROG** again to access the second set time **SEt2** if a dual timer program has been selected. Adjust set time 2 as in step 2 above. If a single timer program has been selected (**dE-1**, **Int1**, **dd-1** or **dP**) the display will return to normal timer operation.
4. Press **PROG** to return to normal timer operation.

The same procedure is used to set all times for the sequence (**t1On**, **t1Off**, **t2On**, **t2Off**) and monitor (**SEtH**, **SEtL**) modes. The relevant prompts will appear in the lower display.

NOTES

1. Universal reset and start modes (**EUR & EUs**) will reset and start the timer at any point during the timing cycle. Timed start modes (**EtS & ItS**) will only restart the timer after the current timing cycle has ended. The **START** button will only restart the timer if reset mode **ItS** has been selected, the external reset/start contacts function for all other reset modes.
2. If the buzzer sounds during set point adjustment, the set point routine must be exited before the buzzer can be silenced using the **PROG/mute** button.
3. When the program mode is entered, timing stops and all resets and outputs are de-energised. Timing continues during set point adjustment and the new set times will only take effect when the timer is next started.
4. The buzzer sounds when time 1 has elapsed if the **bEEp** function is selected (not **dd-2** mode).

DIMENSIONS



Panel cut-out 1.772 x 1.772 (45 x 45)

All dimensions in inches (mm)

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

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1. Purchase Order number under which the product was PURCHASED,
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3. Repair instructions and/or specific problems relative to the product.

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2. Model and serial number of the product, and
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