PTC-13
Programmable Timing Controller
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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**
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**
Steps backwards through program parameters when in program mode. Starts timing when internal start mode (fS) 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

![Wiring Diagram]

REAR PANEL FUNCTIONS

**Hold**
Holds current time value while the contacts are closed.

**Reset/Start**
In reset mode (fR), 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 (fUS & fTS), 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 (fMon) acts as the clock input to record the elapsed time in the lower display.
## TIMING MODES

![Diagram of Timing Modes]

## PROGRAM PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Function</th>
<th>Default</th>
<th>Range/Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET 1(H, 110F)</td>
<td>Timing set-points</td>
<td>000.0</td>
<td>0 to timing range</td>
</tr>
<tr>
<td>SET 2(L, 120F)</td>
<td>(Values appear when requd)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>t1on, t2on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PASS</td>
<td>Password to access program menu</td>
<td>48</td>
<td>Direct access to program menu</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 to 49 = Password access to program menu</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>and set-points adjustable</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50 to 99 = Password access to program menu</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>and set-points locked (view only)</td>
</tr>
<tr>
<td>MODE</td>
<td>Timing Mode</td>
<td>dE-1</td>
<td></td>
</tr>
<tr>
<td>RNG1</td>
<td>Timing Range</td>
<td>SECS</td>
<td>SECS: 0 to 999.9 seconds</td>
</tr>
<tr>
<td>RNG2</td>
<td>(Values only appear when required)</td>
<td></td>
<td>MINS: 0 to 999 minutes</td>
</tr>
<tr>
<td></td>
<td>t1on, t2on</td>
<td></td>
<td>M-S: 0 to 99 mins 59 secs</td>
</tr>
<tr>
<td>CNT</td>
<td>Direction of Timing count</td>
<td>µP</td>
<td>H-M: 0 to 99 hours 59 mins</td>
</tr>
<tr>
<td>/Set</td>
<td>Reset options</td>
<td>Eur</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EUR: External Universal Reset</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EU: External Universal Start</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ES: External Time-out Start</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IS: Internal Time-out Start</td>
</tr>
<tr>
<td>BEEP</td>
<td>Selection of Buzzer option at</td>
<td>OFF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time-out</td>
<td></td>
<td>OFF: on</td>
</tr>
</tbody>
</table>
**Program Parameter Map**

**Timing Mode**

- **Supply on**
- **NS**
- **Reset mode**
- **Press**
- **Enter Eas, Ets**
- **Close shuttle contacts**
- **Timing starts from 0 or mm**
  - **Lower display normally shows Set 1**
  - **Upper display shows Set 1, Set 2, exp 2**
- **Lower display shows SEt1 or SECS**
- **Output contacts change and buzzer sounds if selected**

**Set Point Mode**

- **Supply on**
- **To change Set-point momentarily press**
- **Reset**
- **Lower display shows SEt1**
- **Upper shows value**

Press A or V until correct value, then press

**For single Timer options**

- **Lower display shows SEt1**
- **Upper shows value**

**For dual Timer options**

- **Lower display shows SEt2**
- **Upper shows value**

**N.B:** If unit is left in the programming mode for more than 62 seconds the timer will exit and all the changes will be stored.

**Program Mode**

- **Supply on**
- **To change program parameters press & hold (or A or V) for > 4 secs.**
- **Displays 00 with PRESS on lower display**
- **Password set to 0**
- **First digit flashes for adjustment**
- **Press A or V until required mode, then press**
- **Lower display shows MD00 upper shows SEt1**
- **Press A or V until required range, then press**
- **For dual time options**
- **Lower display shows SEt1, upper shows SECS**
- **For single time options**
- **Repeat sequence as for MD0 1**
- **Press A or V to toggle between %, 2 W, 8 W, 25 W, 85 W, then press**
- **Lower display shows SEt1**
- **Upper shows value**
- **Find digit flashes for adjustment**
- **Press A or V to change Password then press**
- **Lower display shows SEt1**
- **Upper shows value**
- **Flashes led (right digit)**
- **Press A or V to adjust time, then press**

**Note:** Pressing will reume 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 A and V 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 A and V 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 A and V 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, INIT, 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 (ER & EU6) will reset and start the timer at any point during the timing cycle. Timed start modes (EIS & 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)
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