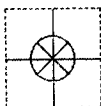
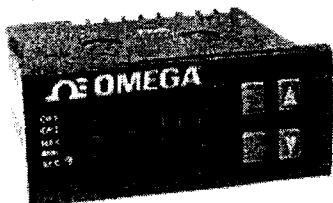


.1 YEAR
WARRANTY



User's Guide



Shop online at

omega.com[®]
— Ω OMEGA[®] —

omega.com

e-mail: info@omega.com

omega.manual.info

PTC-14 **Programmable Timing Controller**

omega.com®

Ω OMEGA®

OMEGAnet® Online Service
omega.com

Internet e-mail
info@omega.com

Servicing North America:

U.S.A.: One Omega Drive, P.O. Box 4047
ISO 9001 Certified Stamford, CT 06907-0047
TEL: (203) 359-1660 FAX: (203) 359-7700
e-mail: info@omega.com

Canada: 976 Bergar
Laval (Quebec) H7L 5A1, Canada
TEL: (514) 856-6928 FAX: (514) 856-6886
e-mail: info@omega.ca

For immediate technical or application assistance:

U.S.A. and Canada: Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA®
Customer Service: 1-800-622-2378 / 1-800-622-BEST®
Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN®

Mexico: En Español: (001) 203-359-7803 e-mail: espanol@omega.com
FAX: (001) 203-359-7807 info@omega.com.mx

Servicing Europe:

Benelux: Postbus 8034, 1180 LA Amstelveen, The Netherlands
TEL: +31 (0)20 3472121 FAX: +31 (0)20 6434643
Toll Free in Benelux: 0800 0993344
e-mail: sales@omegaeng.nl

Czech Republic: Frystatska 184, 733 01 Karviná, Czech Republic
TEL: +420 (0)59 6311899 FAX: +420 (0)59 6311114
Toll Free: 0800-1-66342 e-mail: info@omegashop.cz

France: 11, rue Jacques Cartier, 78280 Guyancourt, France
TEL: +33 (0)1 61 37 2900 FAX: +33 (0)1 30 57 5427
Toll Free in France: 0800 466 342
e-mail: sales@omega.fr





Germany/Austria: Daimlerstrasse 26, D-75392 Deckenfronn, Germany
TEL: +49 (0)7056 9398-0 FAX: +49 (0)7056 9398-29
Toll Free in Germany: 0800 639 7678
e-mail: info@omega.de

United Kingdom: One Omega Drive, River Bend Technology Centre
ISO 9002 Certified Northbank, Irlam, Manchester
M44 5BD United Kingdom
TEL: +44 (0)161 777 6611 FAX: +44 (0)161 777 6622
Toll Free in United Kingdom: 0800-488-488
e-mail: sales@omega.co.uk

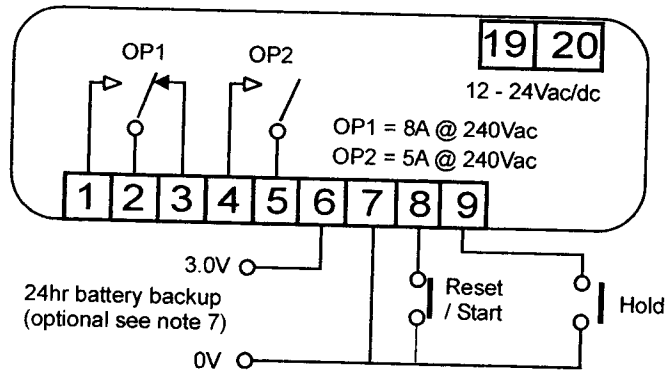
It is the policy of OMEGA Engineering, Inc. to comply with all worldwide safety and EMC/EMI regulations that apply. OMEGA is constantly pursuing certification of its products to the European New Approach Directives. OMEGA will add the CE mark to every appropriate device upon certification. The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.
WARNING: These products are not designed for use in, and should not be used for, human applications.

PTC-14 Programmable Timing Controller

FRONT PANEL FUNCTIONS

-  **PRG mute** : Accesses set points (**SEt1** & **SEt2**) when pressed momentarily. Accesses Password (**PASS**) when pressed for >4 secs. Steps through program functions after password entry. Cancels output buzzer (**bEEP**) when activated but does not reset the timer.
-  **SEL rst** : Restarts the timer when pressed momentarily if **u on** or **t on** reset options have been selected. Enables adjustment of each digit using the **Λ** and **V** buttons when pressed after password entry.
-  : Enables set point 1 (**SEt1**) to be viewed when pressed momentarily. Increments a parameter value or program option if used after PRG and SEL buttons.
-  : Enables set point 2 (**SEt2**) to be viewed when pressed momentarily. Decrements a parameter value or program option if used after PRG and SEL buttons.

WIRING DIAGRAM



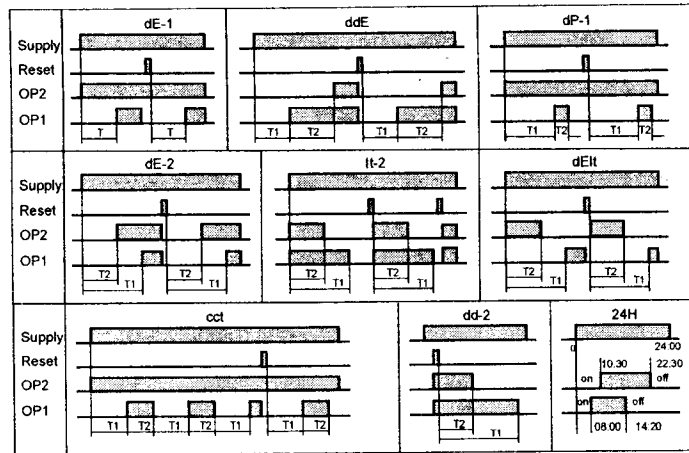
REAR PANEL FUNCTIONS

Hold : Halts timing for as long as the hold input is connected to 0V. Timing re starts from previous value when hold is released.

Reset/start : Resets or starts the timer according to the **rSEt** parameter setting.

3V Battery : Provides battery back up to maintain the 24 hour clock during power failure.

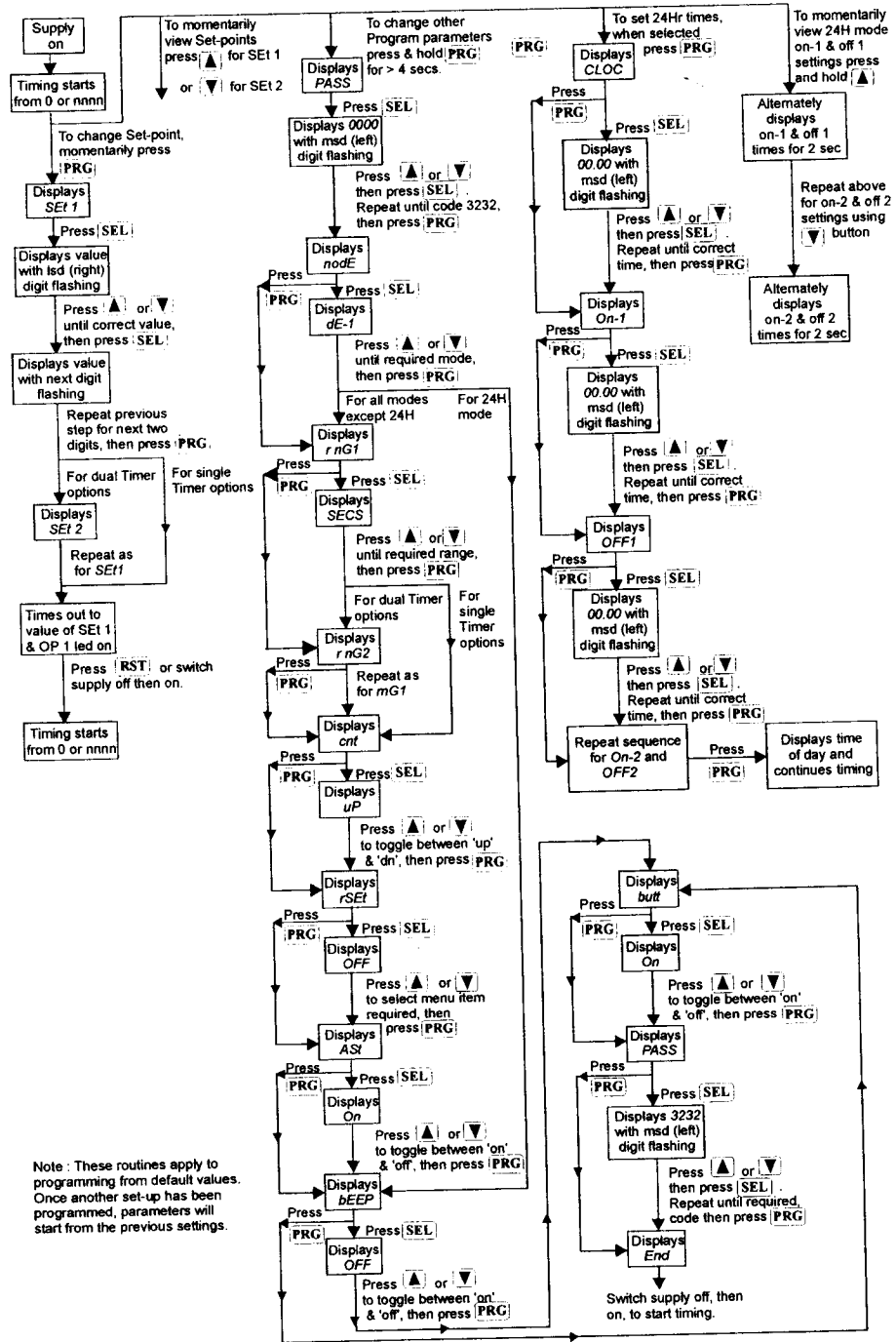
TIMING MODES



PROGRAM PARAMETERS

Parameter	Function	Default	Range/Options
SET 1	Timing set-point 1	9000	0 to Timing Range
SET 2	Timing set-point 2	9000	0 to Timing Range
PASS	Password to access Program	3232	0 to 4999 for adjustable parameters 5000 to 9999 for parameter lock (view only)
MODE	Timing Mode selection	dE-1	dE-1: On-Delay + Instantaneous ddE: 2 dependant On-Delays dP-1: Delayed Pulse + Instantaneous cct: Cycle Timer with adjustable on & off dE-2: 2 independent On-Delays It-2: 2 independent Intervals dEIt: Independent On-Delay + Interval dd-2: 2 independent Off-Delays 24H: 24 hour clock with 2 on & 2 off times
RNG1	Timing Range selection	SECS	0.1-S: 0.1 to 999.9 seconds SECS: 0 to 9999 seconds
RNG2	Timing Range selection	SECS	MINS: 0 to 9999 minutes M-S: 0 to 99 mins 59 secs H-M: 0 to 99 hours 59 mins (23 h 59 m in 24H mode)
CNT	Direction of Timing Countdown	uP	uP, dn
RSET	Reset options with RST button	OFF	OFF: Reset button inactive u on: Unconditional Restart t on: Restart only after time-out Euon: External Unconditional Restart Eton: External Restart only after time-out
AST	Auto-Start mode	ON	ON: Timer starts from switch on. OFF: Timer waits for Start/Reset signal.
BEEP	Action of Buzzer at Time-out	OFF	OFF, on
BUTT	Allows beep on key press to be switched on or off.	ON	OFF, on
CLOC	Sets the 24 hour clock	00:00	0 to 23 hours 59 minutes
ON1, OFF1, ON2, OFF2	On and Off time settings in 24 hour mode	00:00	0 to 23 hours 59 minutes

PROGRAM PARAMETER MAP



PROGRAMMING PROCEDURE

The operating parameters and range should be set before adjusting the set time.

1. Press and hold the PRG button for > 4 secs and the display will show **PASS** (if a password >0 has been set). Press SEL and use the \wedge and \vee buttons to enter each digit of the password. Use SEL to move between password digits. When complete press PRG to access the program functions. NOTE : if no password is set (**PASS=0**) the display will go directly to the first program parameter (**ModE**).
2. Press SEL followed by the \wedge or \vee buttons to change program parameters. Press PRG to store the changes and move to the next parameter. Refer to the parameter map for programming details.
- 3 **End** will be displayed when the program routine is complete. The power must now be removed and reconnected to re start the timer.

ADJUSTING SET TIME

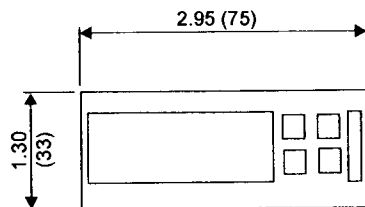
1. Momentarily press the PRG button and the display will show set time 1 (**SEt1**).
2. Press SEL and use the \wedge and \vee buttons to enter the required set time, one digit at a time. Use SET to move between digits.
3. Press PRG to display set time 2 (**SEt2**) if selected. If a single time mode is selected (**de_1** or **dP_1**) then the display will return to normal timer operation.
4. Repeat step 2 to set time 2.
5. Press PRG to return to normal timer operation.

The same procedure is used to set the 24 hour clock time (**CLOC**) and the on and off times (**on_1**, **OFF1**, **on_2**, **OFF2**).

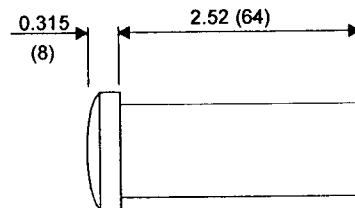
NOTES

1. The RST button can only be used to start the timer if the **rSEt** modes **u on** or **t on** are selected.
2. **RSEt** mode **u on** will allow the timer to re start at any point in the timing cycle but **t on** will allow re start only after the current timing routine is finished.
3. **RSEt** modes **Euon** and **Eton** have the same function as **u on** and **t on** but they are actioned by contact across terminals 7 and 8.
4. If the buzzer sounds during set point adjustment, the set point routine must be exited before the buzzer can be silenced using the PRG/mute button.
5. When the program routine has been accessed timing stops and resets and all outputs are deenergised. Timing continues during set time adjustment but the new times will only take effect when the timer is next started.
6. The buzzer sounds when Time 1 has elapsed if the **bEEP on** option has been selected (not **dd_2** mode).
7. For the 24 hour clock battery back up to function correctly, the battery must be connected after the main power supply is switched on.
8. All time settings and mode settings are stored in EEPROM memory and are retained when the unit is powered down.

DIMENSIONS



Panel cut-out 2.795 x 1.142 (71 x 29)



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.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. **BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).** The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available **BEFORE** contacting OMEGA:

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

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available **BEFORE** contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

OMEGA is a registered trademark of OMEGA ENGINEERING, INC.

© Copyright 2005 OMEGA ENGINEERING, INC. All rights reserved. This document may not be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of OMEGA ENGINEERING, INC.

Where Do I Find Everything I Need for Process Measurement and Control?

OMEGA...Of Course!

Shop online at omega.com

TEMPERATURE

- Thermocouple, RTD & Thermistor Probes, Connectors, Panels & Assemblies
- Wire: Thermocouple, RTD & Thermistor
- Calibrators & Ice Point References
- Recorders, Controllers & Process Monitors
- Infrared Pyrometers

PRESSURE, STRAIN AND FORCE

- Transducers & Strain Gages
- Load Cells & Pressure Gages
- Displacement Transducers
- Instrumentation & Accessories

FLOW/LEVEL

- Rotameters, Gas Mass Flowmeters & Flow Computers
- Air Velocity Indicators
- Turbine/Paddlewheel Systems
- Totalizers & Batch Controllers

pH/CONDUCTIVITY

- pH Electrodes, Testers & Accessories
- Benchtop/Laboratory Meters
- Controllers, Calibrators, Simulators & Pumps
- Industrial pH & Conductivity Equipment

DATA ACQUISITION

- Data Acquisition & Engineering Software
- Communications-Based Acquisition Systems
- Plug-in Cards for Apple, IBM & Compatibles
- Datalogging Systems
- Recorders, Printers & Plotters

HEATERS

- Heating Cable
- Cartridge & Strip Heaters
- Immersion & Band Heaters
- Flexible Heaters
- Laboratory Heaters

ENVIRONMENTAL MONITORING AND CONTROL

- Metering & Control Instrumentation
- Refractometers
- Pumps & Tubing
- Air, Soil & Water Monitors
- Industrial Water & Wastewater Treatment
- pH, Conductivity & Dissolved Oxygen Instruments

M-4238 / 1005

PTC-14/0805