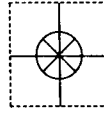


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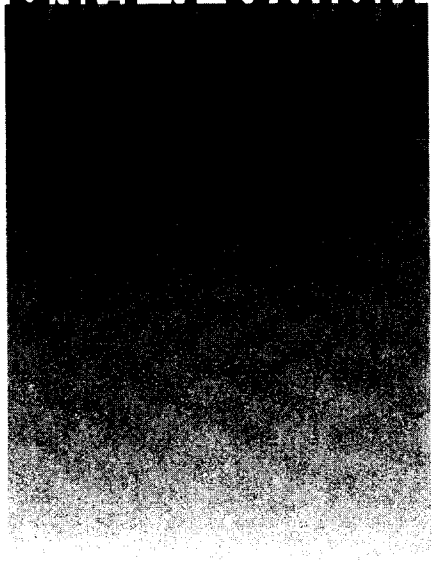
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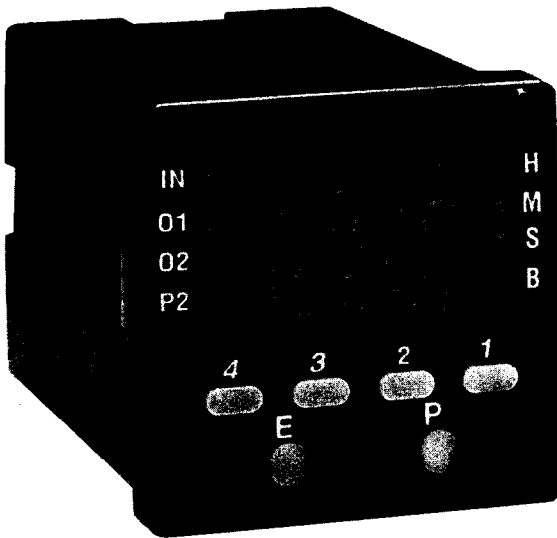


User's Guide



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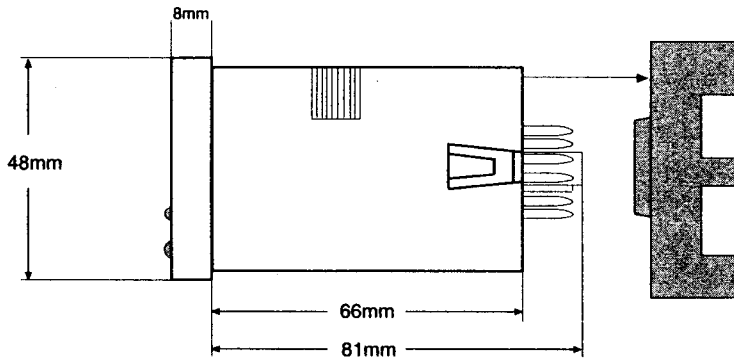
www.omega.com
e-mail: info@omega.com



PTC-23 SERIES **1/16 DIN Multi-Programmable** **Dual Display Timers**

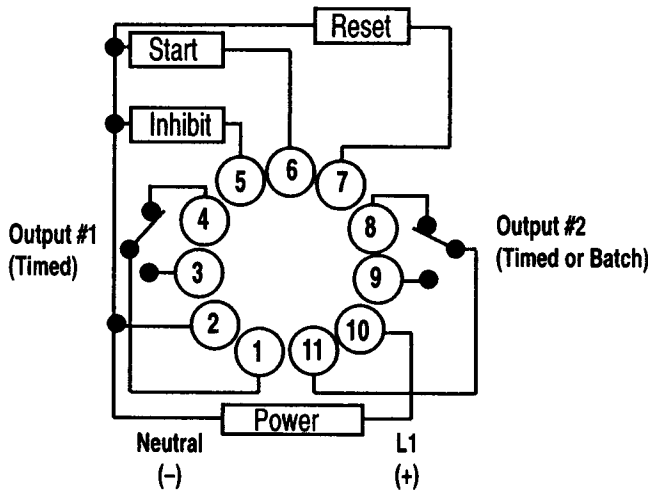
O V E R V I E W

INSTALLATION

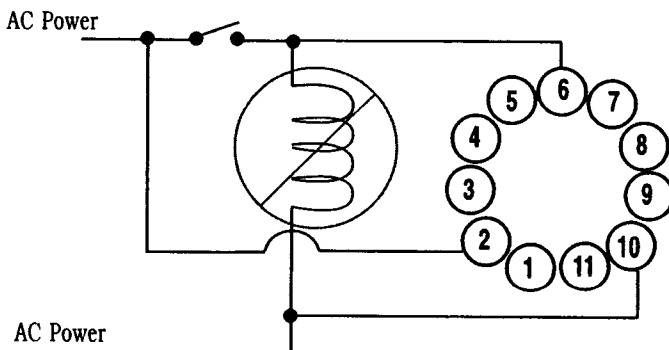
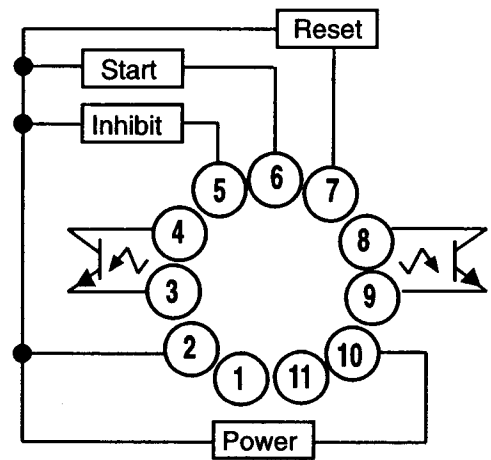


To wire the unit, an 11 pin socket is required. The unit can either be DIN rail mounted or panel mounted using the supplied mounting bracket. For panel mounting, place the unit in the cutout, then slide the bracket forward over the rear of the unit so that the tabs catch in the grooves on the housing and the bracket is as far forward as possible. Tighten the panel mount screws until there is a snug fit against the panel. Do not overtighten.

PTC-23/PTC-23-LV



PTC-23-OC/PTC-23-LV-OC



Warning: Do Not connect a coil in parallel with the start signal as pictured at left. Such a connection will cause the start signal to be continuously active. This situation also applies to the Reset and Inhibit inputs.

FRONT PANEL OPERATION

I/O Status Indicators

Illuminates to display when an input or output is active: "IN" for the start input, "O1" and "O2" for the timed outputs.

Preset 2 Indicator

Illuminates to indicate that Preset 2 is being shown on the lower display.

Numeric Keys

Each of the number keys is used to increment the value of the corresponding digit of the preset or parameter value.

Edit Key

In Control Mode: With "P" key, resets the displayed value.

In Program Mode: Scrolls between the applicable choices for the currently displayed parameter.

Primary Display

In Control Mode: Displays the current time value associated with the displayed preset or the batch value (if configured).

In Program Mode: Displays the Parameter Description.

Time Range Indicator

Illuminates to show the time base: H for hours, M for minutes, S for seconds. Multiple indicators will be illuminated when the time base is Hours:Minutes or Minutes:Seconds. During timing operation the illuminated LED will flash.

Batch Indicator

Illuminates to indicate that the Batch Count Value and Batch Preset are being displayed.

Set Value

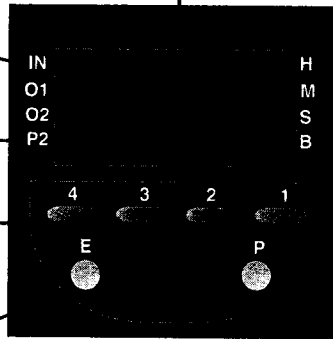
In Control Mode: Displays the settable value used to trigger the timed output(s) and the batch count (if configured).

In Program Mode: Displays the current selection for the chosen parameter.

Program Key

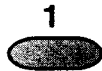
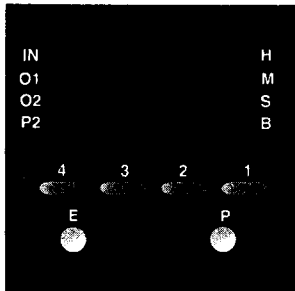
In Control Mode: Depressing the key will scroll the display among the preset and batch displays. Holding the key down for 3 seconds will shift the unit into Program Mode. With the "E" key, resets the displayed value

In Program Mode: Depressing the key will scroll the display from one parameter to the next. Holding the key down for 3 seconds will shift the unit to Control Mode.

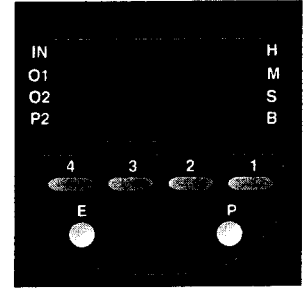
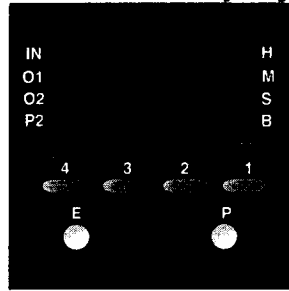


OPERATION

CONTROL MODE



Preset 1 Display

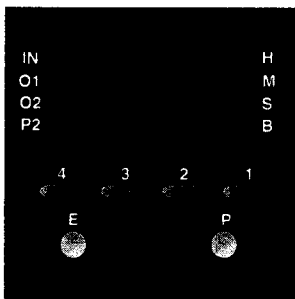


Top display: Time Value for P1 Operation
Bottom display: Preset 1
Annunciators: Time Range

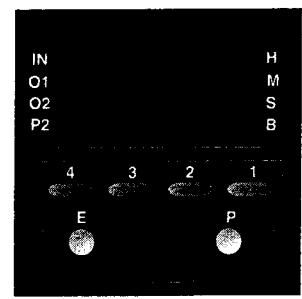
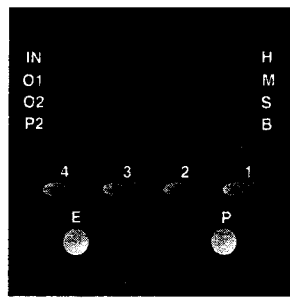
Pressing the numeric keys will cause the corresponding digit to increment by a value of one (i.e. the "1" key increments the rightmost digit, the "2" key the 2nd digit from the right, etc.). It is not necessary to press any other keys to enter the change, the new set point value will become effective immediately.



Please Note that based on the Operating Mode and Output 2 selection, Preset 2 may not be an available display.



Preset 2 Display

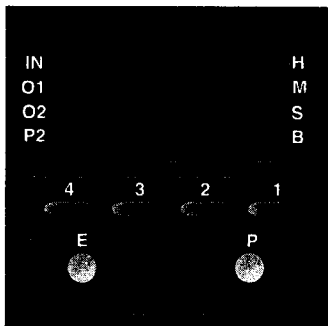


Top display: Time Value for P2 Operation
Bottom display: Preset 2
Annunciators: Time Range & P2

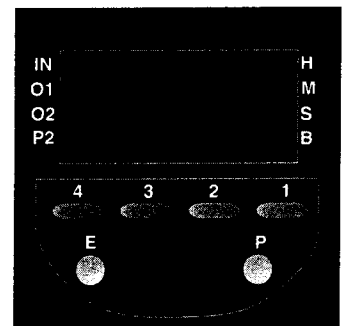
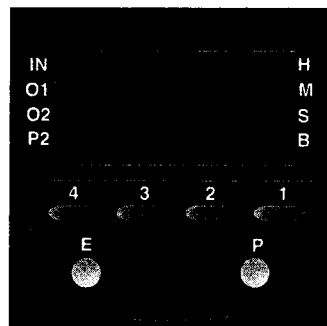
Changes are made in the same manner as for Preset 1 (detailed above).



Please Note that based on the Operating Mode and Output 2 selections, Batch may not be an available display.



Batch Display



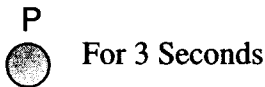
Top display: Batch Count Value
Bottom display: Batch Count Preset
Annunciators: Batch

Changes are made in the same manner as for Preset 1 (detailed above).

CONFIGURATION

PROGRAM MODE

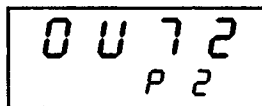
- Enter the Program Mode by holding down the "P" key for 3 seconds
- Press the "P" key to move the top display from one parameter to the next
- Press the "E" key to scroll the bottom display through the available choices for that parameter
- While in Program Mode, the unit will halt operation. Changes only become effective after returning to Control Mode by holding down the "P" key for 3 seconds



Operating Function: Determines how output 1 will operate in relation to the Preset 1. Choices are:

- On Delay (*OnDL*)
- Off Delay (*OffDL*)
- Interval 1 (*Int 1*)
- Interval 2 (*Int 2*)
- On/Off Delay (*OnOff*)
- Delay/Interval (*dInt*)
- Accumulative (*Acc*)

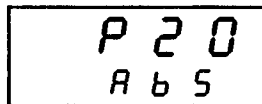
A complete explanation, with timing diagrams, of each function can be found on pages 7 - 11.



Note: The following parameter will not appear if "Operating Function" is set to Off Delay, Delay/Interval or On/Off Delay. In these instances Output 2 automatically defaults to Batch Count.

Output 2 Operation: Determines the functionality of the 2nd output. Choices are:

- Preset 2 (*P2*): The unit will function as a dual setpoint timer, with output 2 linked to Preset 2.
- Batch Count (*bC*): Output 2 will be activated after a preset amount of Operations is completed. The preset value is input in the Batch Count screen in Control Mode.



Note: The following parameter will only appear if "Output 2" is set to Preset 2.

Preset 2 Operation: Determines how Preset 2 will operate in relation to Preset 1. The available choices vary based upon the selected "Operating Function":

For On-Delay and Accumulative:

- Absolute (*Ab5*): Preset 2 is input as an absolute value, and the unit operates like two independent On-Delay timers.
- Prewarn (*PrE*): Preset 2 is set as a value relative to Preset 1. The input value for P2 is equal to the amount of time that Output 2 will activate prior to Output 1. Ex: If P1 = 20 seconds, and P2 equals 5, then output 2 will activate 15 seconds (20 - 5), after the timing cycle is initiated.

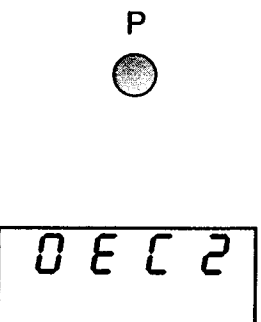
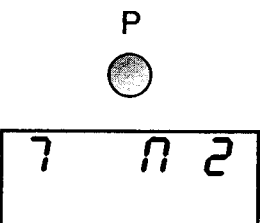
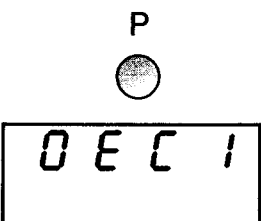
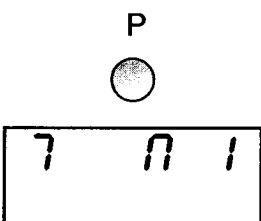
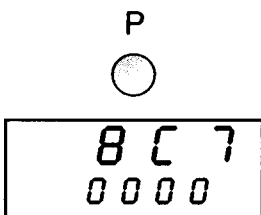
CONFIGURATION

For Interval 1 and Interval 2:

Begin Together (bt): Preset 2 is set as an independent time interval which will begin timing and activate Output 2 upon initiation of the start signal .

End Together (Et): Preset 2 is set as a value relative to Preset 1. The timing sequence for P2 will initiate at the appropriate time so that the timing sequences for P1 and P2 will end simultaneously and Output 1 and Output 2 will deactivate together.

Sequential (SE): Preset 2 is set as an independent time interval which will begin its timing sequence upon completion of the P1 interval.



Note: The following parameter will only appear if "Output 2" is set to Batch Count.

Batch Count Output: Sets the duration of Output 2, within a range from 1 second to 9999 seconds. A setting of 0000 will latch the output until a reset signal is received

Time Range 1 : Sets the unit of measure for the time values that will be used for Preset 1. The choices will not appear on the bottom display, but will be signified with the annunciator lights. Choices are:

- Seconds
- Minutes
- Hours
- Minutes:Seconds
- Hours:Minutes

Note: The following parameter will not appear if "Minutes:Seconds" or "Hours:Minutes" is chosen for Time Range 1.

Decimal Position for Time Range 1: Determines the resolution of the selected time range. Settable from 0000 to 0.000

Note: The following parameter will only appear for those configurations that provide a Preset 2 display.

Time Range 2 : Sets the unit of measure for the time values that will be used for Preset 2. The choices will not appear on the bottom display, but will be signified with the annunciator lights. Choices are:

- Seconds
- Minutes
- Hours
- Minutes:Seconds
- Hours:Minutes

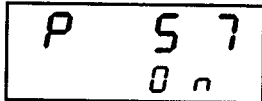
Note: The following parameter will not appear if "Minutes:Seconds" or "Hours:Minutes" is chosen for Time Range 2.

Decimal Position for Time Range 2: Determines the resolution of the selected time range. Settable from 0000 to 0.000.

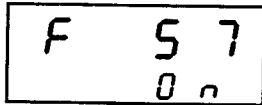
CONFIGURATION



Timing Direction: Determines whether the time values for Preset 1 and 2 will increment from zero and change the state of the output at the set value (uP) or decrement from the set value and change the state of the output at zero (dn).



Power Reset Enable: After a loss of power, the unit can be programmed to either reset upon reapplication of power (0n) or continue from the point of power interruption (OFF).



Front Panel Reset Enable: When active (0n), the timing operation can be reset in Control Mode by simultaneously pressing the "E" and "P" keys. If inactive (OFF), the timing operation can only be reset through the remote input.



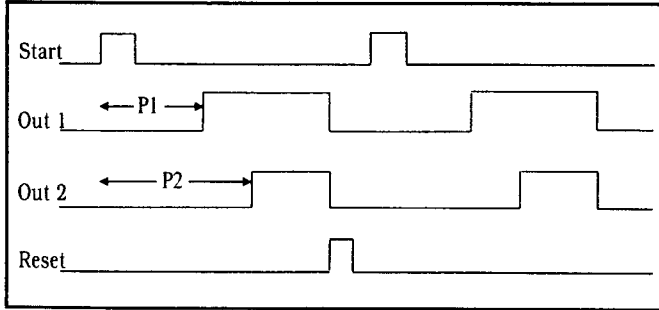
Security Level: 4 different levels of security are available:

- 0 = Full Access
- 1 = SP Locked Out
- 2 = Access to Program Mode only by holding the "P" key for 10 seconds
- 3 = SP Locked Out and access to Program Mode only by holding the "P" key for 10 seconds

CONFIGURATION

TIMING DIAGRAMS

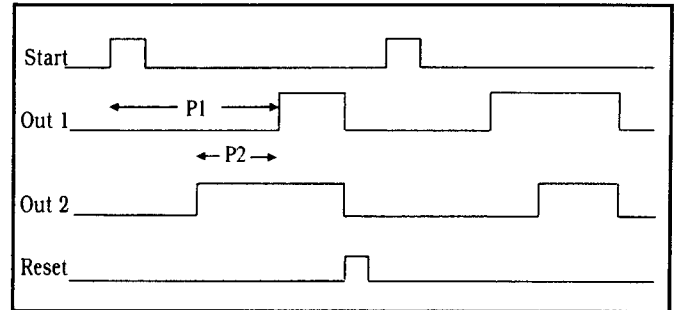
On Delay - Absolute



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1 or Reset
Preset 2 Timing	On leading edge of start signal	On completion of P2 or Reset
Output 1	Upon completion of P1	On Reset
Output 2	Upon completion of P2	On Reset

An Inhibit input will halt all timing functions, but leave the outputs in their current state. If the start input is applied during Reset, a new timing cycle will begin on the trailing edge of the Reset signal.

On Delay - Prewarn

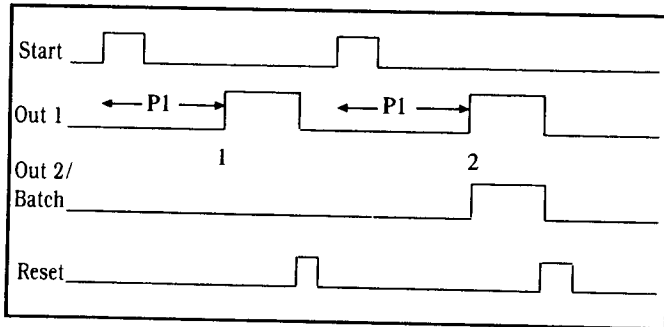


	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1 or Reset
Preset 2 Timing	Prior to completion of P1 by the amount of time set in P2	On completion of P2 or Reset
Output 1	Upon completion of P1	On Reset
Output 2	Prior to completion of P1 by the amount of time set in P2	On Reset

P1 must be set to a value greater than P2. An Inhibit input will halt all timing functions, but leave the outputs in their current state. If the start input is applied during Reset, a new timing cycle will begin on the trailing edge of the Reset signal.

CONFIGURATION

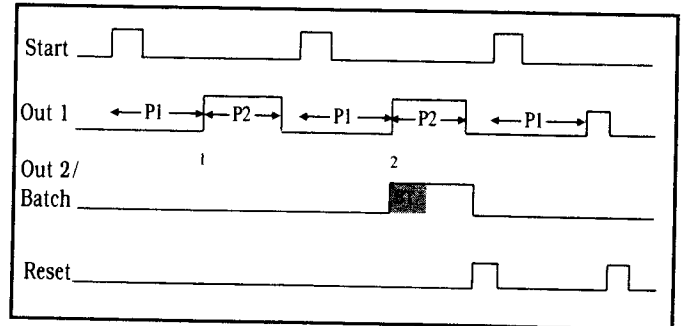
On Delay w/Batch



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1 or Reset
Batch Count	Accumulates on activation of Output 1	On Reset, only after the Batch Count Preset is reached
Output 1	On completion of P1	On completion of P1 or Reset
Output 2	When the Batch Count value equals the Batch Preset	On completion of Batch Output time or Reset

An Inhibit input will halt all timing functions, but leave the outputs in their current state. If the start input is applied during Reset, a new timing cycle will begin on the trailing edge of the Reset signal. The Remote Reset will only reset the Batch Count value after the Batch Preset has been reached, however, the Batch Count value can be reset at anytime via Front Panel Reset.

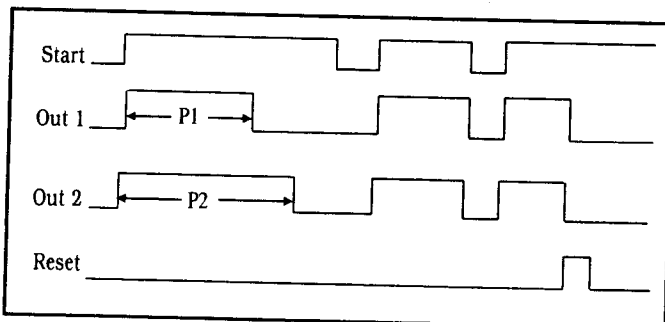
On Delay/Interval w/Batch



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1 or Reset
Preset 2 Timing	On activation of Output 1	On completion of P2 or Reset
Batch Count	Accumulates on falling edge of Output 1	On Reset, only after the Batch Count Preset is reached
Output 1	On completion of P1	On completion of P1 or Reset
Output 2	When the Batch Count value equals the Batch Preset	On completion of Batch Output time or Reset

An Inhibit input will halt all timing functions, but leave the outputs in their current state. A reset signal is not required to start a new P1 cycle. The Remote Reset will only reset the Batch Count value after the Batch Preset has been reached, however, the Batch Count value can be reset at anytime via Front Panel Reset.

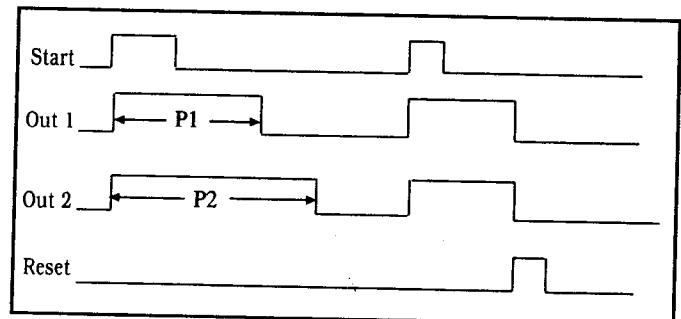
Interval 1 - Begin Together



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Preset 2 Timing	On leading edge of start signal	On completion of P2, deassertion of the Start Signal or Reset
Output 1	On leading edge of start signal	On completion of P2, deassertion of the Start Signal or Reset
Output 2	On leading edge of start signal	On completion of P2, deassertion of the Start Signal or Reset

An Inhibit input will halt all timing functions, but leave the outputs in their current state.

Interval 2 - Begin Together

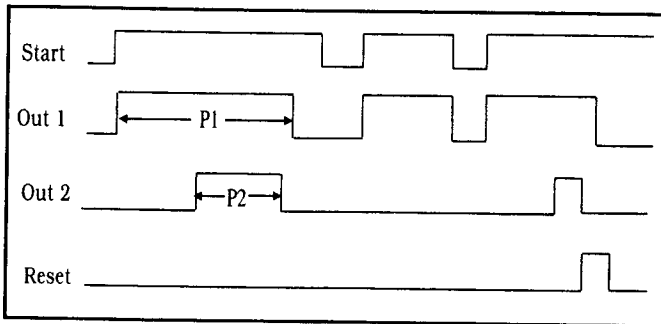


	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, or Reset
Preset 2 Timing	On leading edge of start signal	On completion of P2 or Reset
Output 1	On leading edge of start signal	On completion of P1 or Reset
Output 2	On leading edge of start signal	On completion of P2 or Reset

Operates the same as the Interval 1 - Begin Together mode, except the start input does not have to be sustained to continue operation. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

CONFIGURATION

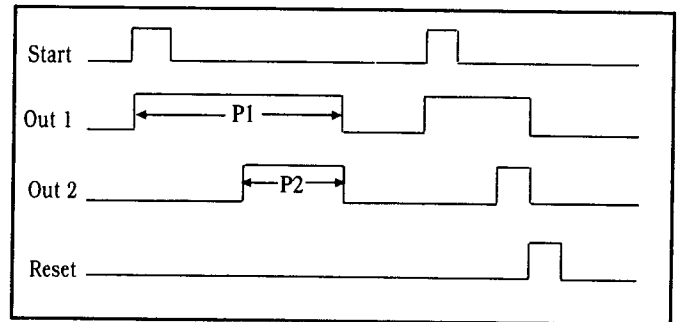
Interval 1 - End Together



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Preset 2 Timing	Prior to completion of P1 by the amount of time set in P2	On completion of P2, deassertion of the Start Signal or Reset
Output 1	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Output 2	Prior to completion of P1 by the amount of time set in P2	On completion of P2, deassertion of the Start Signal or Reset

An Inhibit input will halt all timing functions, but leave the outputs in their current state.

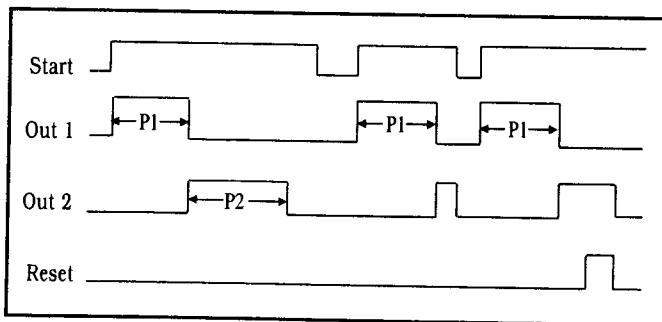
Interval 2 - End Together



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Preset 2 Timing	Prior to completion of P1 by the amount of time set in P2	On completion of P2, deassertion of the Start Signal or Reset
Output 1	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Output 2	Prior to completion of P1 by the amount of time set in P2	On completion of P2, deassertion of the Start Signal or Reset

Operates the same as the Interval 1-End Together mode, except the start input does not have to be sustained to continue operation. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

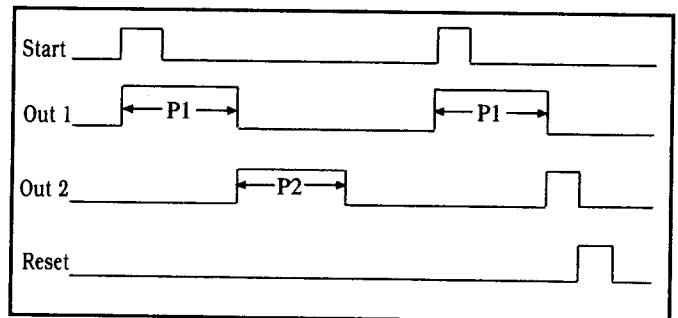
Interval 1 - Sequential



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Preset 2 Timing	On completion of P1	On completion of P2, deassertion of the Start Signal or Reset
Output 1	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Output 2	On completion of P2	On completion of P2, deassertion of the Start Signal or Reset

An Inhibit input will halt all timing functions, but leave the outputs in their current state.

Interval 2 - Sequential

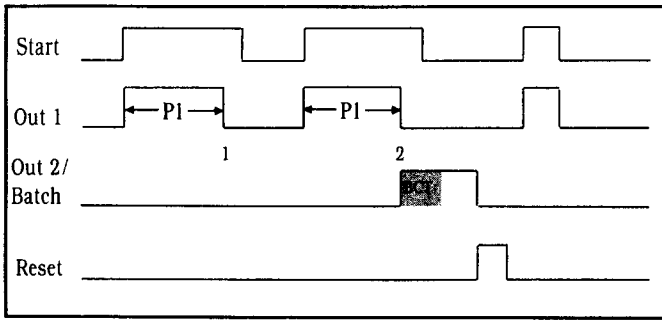


	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, or Reset signal
Preset 2 Timing	On completion of P1	On completion of P2, or Reset
Output 1	On leading edge of start signal	On completion of P1 or Reset
Output 2	On completion of P2	On completion of P2, or Reset

Operates the same as the Interval 1-Sequential mode, except the start input does not have to be sustained to continue operation. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

CONFIRMATION

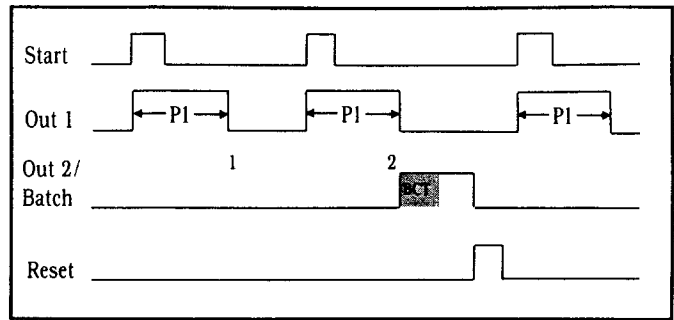
Interval 1 - Batch



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Batch Count	On trailing edge of Output 1	On Reset
Output 1	On leading edge of start signal	On completion of P1, deassertion of the Start Signal or Reset
Output 2	When the Batch Count Value equals the Batch Preset	On completion of the Batch Count Time or Reset

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

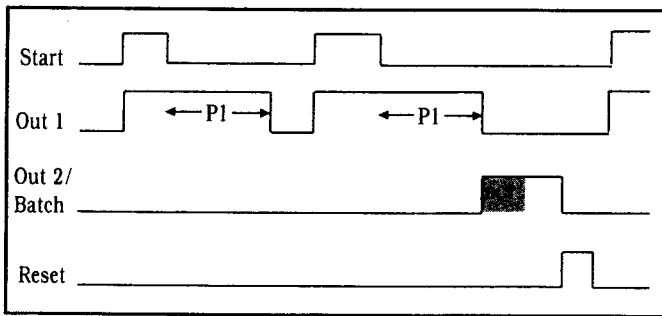
Interval 2 - Batch



	Activates	Deactivates
Preset 1 Timing	On leading edge of start signal	On completion of P1 or Reset
Batch Count	On trailing edge of Output 1	On Reset
Output 1	On leading edge of start signal	On completion of P1 or Reset
Output 2	When the Batch Count Value equals the Batch Preset	On completion of the Batch Count Time or Reset

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

Off Delay - Batch Count

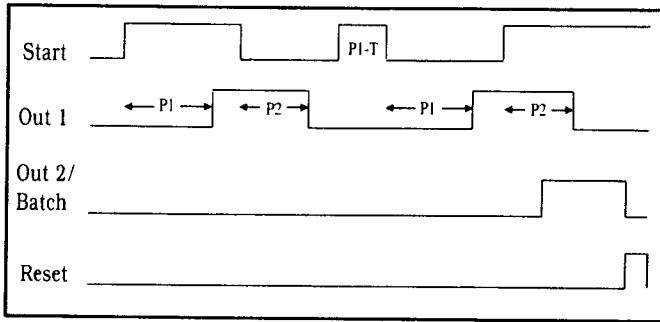


	Activates	Deactivates
Preset 1 Timing	On trailing edge of start signal	On completion of P1 or Reset
Batch Count	On trailing edge of Output 1	On Reset
Output 1	On leading edge of start signal	On completion of P1 or Reset
Output 2	When the Batch Count Value equals the Batch Preset	On completion of the Batch Count Time or Reset

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state. Start signals will be accepted while the Batch Count Output is active.

CONFIGURATION

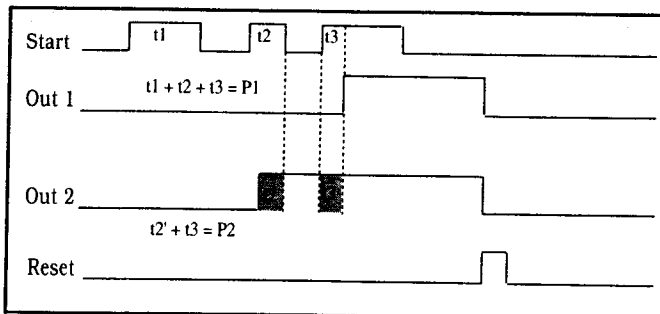
On/Off Delay - Batch Count



	Activates	Deactivates
Preset 1 Timing	On change of state of the start signal	On change of state of the start signal or reset
Preset 2 Timing	On change of state of the start signal after P1 has elapsed	On change of state of the start signal after P2 is active, or Reset
Batch Count	Accumulates on falling edge of Output 1	On expiration of the Batch Count Time or Reset
Output 1	On completion of P1	On completion of P2 or Reset
Output 2	When the Batch Count value equals the Batch Preset	On completion of Batch Output time or Reset

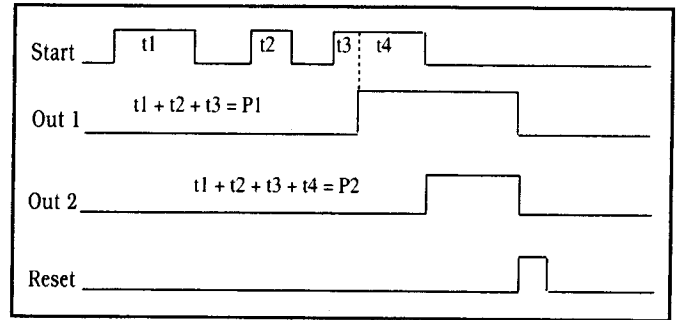
Any transition of the start signal will effect the timing operation: During the timing cycle for P1 a transition will cause P1 to restart. A transition of the start signal after P1 has completed will cause P2 to begin. Any transition of the start signal prior to the completion of P2 (and the deactivation of Output 1) will cause P2 to restart. An Inhibit input will halt all timing functions, but leave the outputs in their current state.

Accumulative - Prewarn



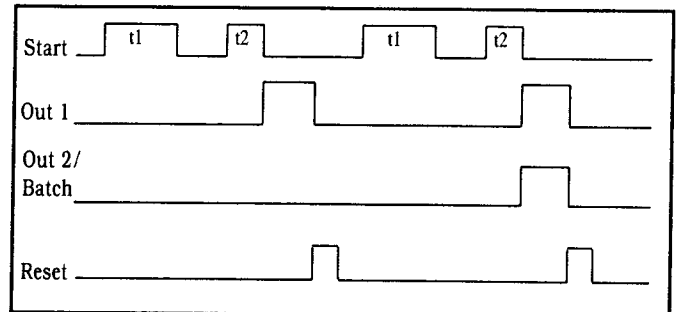
	Activates	Deactivates
Preset 1 Timing	On leading edge of each start signal	On completion of P1 or Reset
Preset 2 Timing	Prior to completion of P1 by the amount of time set in P2	On completion of P2 or Reset
Output 1	On completion of P1	On Reset
Output 2	Prior to completion of P1 by the amount of time set in P2	On Reset

Accumulative - Absolute



	Activates	Deactivates
Preset 1 Timing	On leading edge of each start signal	On completion of P1 or Reset
Preset 2 Timing	On leading edge of each start signal	On completion of P2 or Reset
Output 1	On completion of P1	On Reset
Output 2	On completion of P2	On Reset

Accumulative - Batch

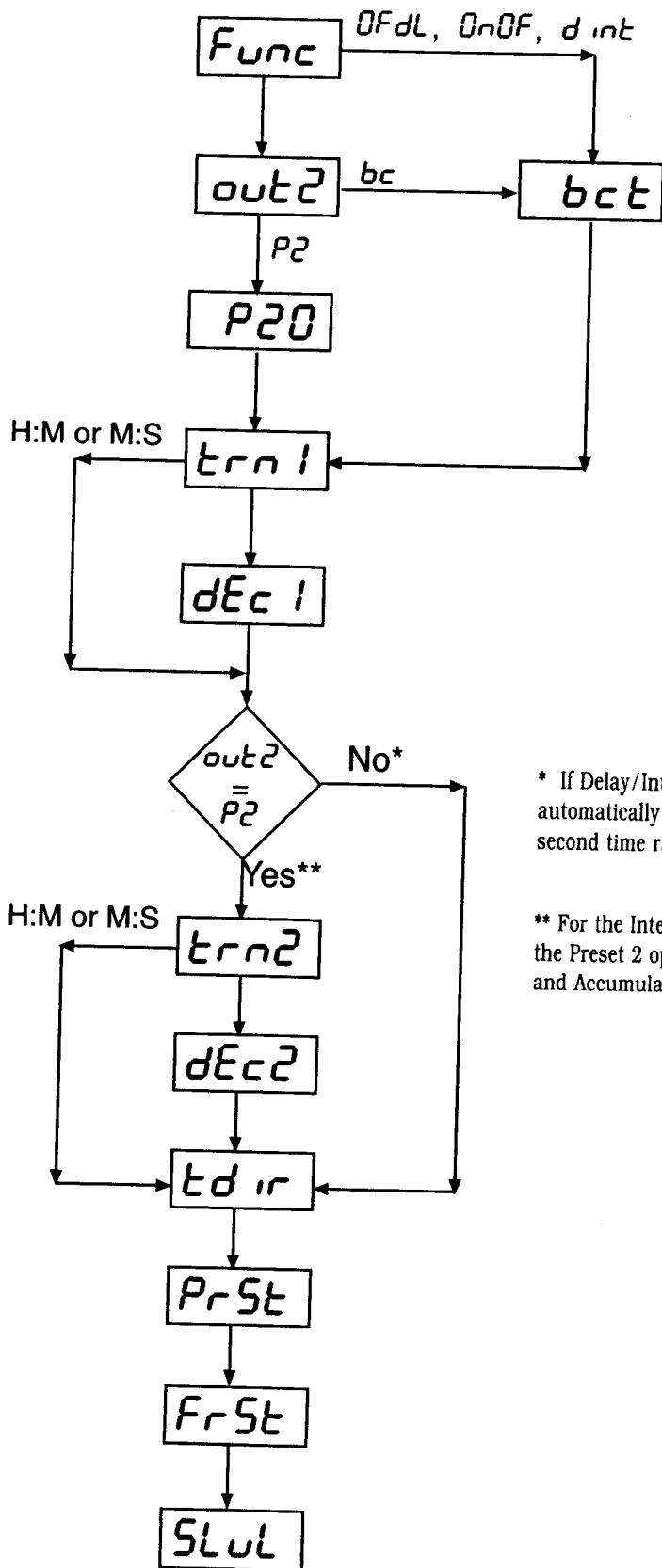


	Activates	Deactivates
Preset 1 Timing	On leading edge of each start signal	On completion of P1 or Reset
Batch Count	On leading edge of Output 1	On Reset, only after the Batch Count Preset is reached
Output 1	On completion of P1	On Reset
Output 2	When the Batch Count Value equals the Batch Preset	On Reset, only after the Batch Count Preset is reached

It is not necessary to reset the timer to begin a new interval, however reset is required to set the batch count value back to 0. An Inhibit input will halt all timing functions, but leave the outputs in their current state. Start signals will be accepted while the Batch Count Output is active

CONFIGURATION

PROGRAMMING OVERVIEW



* If Delay/Interval or On/Off are selected as the Operating Function, Out2 is automatically set to Batch. However, the P2 setting is still available, and the second time range is available.

** For the Interval 1 & Interval 2 modes, a second time range will not appear if the Preset 2 operation is set to End Together. This is also true for the On Delay and Accumulative Modes if Prewarn is the selection for Preset 2 Operation.

GENERAL

SPECIFICATIONS

Inputs

Start:	NPN or Dry Contact
Reset:	NPN or Dry Contact
Inhibit:	NPN or Dry Contact
Activation Time:	4 ms (*), 21 ms (**)
Impedance:	10 K Ω
	* PTC-23-LV & PTC-23-LV-OC
	** PTC-23 & PTC-23-OC

Outputs

Relay:	2 SPDT (5 amp) - 15 ms max latency
Transistor:	NPN Open Collector - 30 VDC, 30 mA max, opto isolated

Physical

Dimensions:	48mm x 48mm, 85mm deep
Mounting:	Panel Mounting 45mm x 45mm cutout or DIN rail
Wiring Connection:	Via 11 pin plug in socket
Weight:	100 grams (3.5 ounces)

Operation

Supply Voltage:	85 - 264 VAC 50/60Hz, or 24 VAC/VDC
Power Consumption:	< 10 VA max @ 240 VAC, 200 mA @ 24 VDC
Time Ranges:	Hours, Minutes, Seconds, Hours:Minutes, Minutes:Seconds
Resolution:	Settable from XXXX to X.XXX for Hours, Minutes, and Seconds ranges
Repeat Accuracy:	\pm 0.01%
Display:	Dual line, 4 digit, 7 segment LED - 8mm high
Memory:	Nonvolatile retains settings when power is disengaged
Electrical Service Life:	100,000 cycles at full load
Mechanical Service Life:	10 million cycles at min. load

Environmental

Front Panel Rating:	IEC IP65
Operating Temperature:	0° to 55° C (32° to 131° F)
Storage Temperature:	-40° to 90° C (-40° to 194° F)
Humidity:	5% to 95% RH non-condensing
Approvals:	UL, CUL recognized - File #97337, CE certified

ORDERING INFORMATION

Description

High Performance Timer, Relay Out, 90-240 VAC
High Performance Timer, Relay Out, 24 VDC/AC
High Perf Timer NPN trans Out, 90-240 VAC
High Perf Timer, NPN trans Out, 24 VAC/DC

Model

PTC-23
PTC-23-LV
PTC-23-OC
PTC-23-LV-OC



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 which wear are not warranted, including but 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 it will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESS 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.

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- Infrared Pyrometers

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