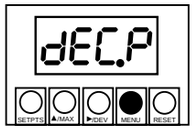
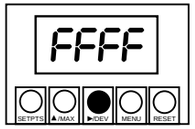
5

To Set the Decimal Point

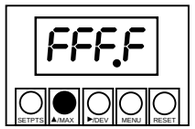
1. If it's not already shown, press **MENU** until the unit displays dEC.P



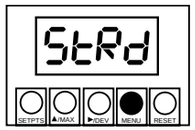
2. Press **▶/DEV** to show the current decimal point location.

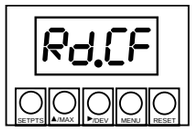


3. Press **▲/MAX** to move the decimal point to the desired location. The choices are FFFF or FFF.F.



4. Press **MENU** to store the value.

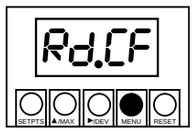




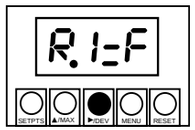
5. Press **RESET** twice to display the current temperature.

To Select Temperature Unit
(Fahrenheit or Celsius):

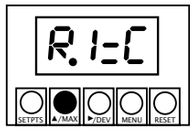
1. Press MENU until the display shows Rd.CF



2. Press ▶/DEV to display the current temperature unit.

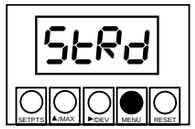


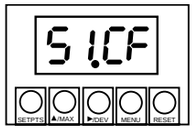
3. Press ▲/MAX to select between °F and °C.



6

4. Press MENU to store the value.

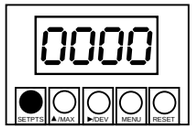




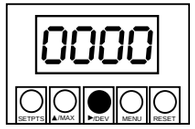
5. Press RESET twice to display the current temperature.

To Enter Setpoints:

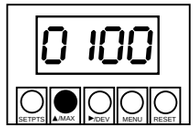
1. Press SETPTS to display the current setpoint. The leftmost digit will flash.



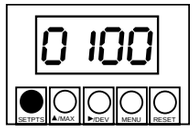
2. Press ▶/DEV to select the digit you want to change.



3. Press ▲/MAX to increase the value of the flashing digit.



4. Press SETPTS to store the setpoint.



5. Repeat steps 1 through 4 to enter the next setpoint.

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

This device is marked with the international caution symbol. It is important to read the Setup Guide before installing or commissioning this device as it contains important information relating to safety and EMC.

It is the policy of Omega 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 Engineering, Inc. accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **61 months** from date of purchase. OMEGA's WARRANTY adds an additional five (5) 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 if 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.

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 or calibration,
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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MQS3732/0722

QUICK START

For complete product manual:
www.omega.com/manuals/manualpdf/M3732.pdf

1 YEAR WARRANTY

DP25-TC and DP25B-TC
Programmable Digital Thermocouple Controller

OMEGA™

omega.com info@omega.com

Omega Engineering, Inc:
800 Connecticut Ave. Suite 5N01, Norwalk, CT 06854, USA
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
Engineering Service: 1-800-872-9436 (USA & Canada only)

Tel: (203) 359-1660
e-mail: info@omega.com
Fax: (203) 359-7700

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1 Omega Drive, Northbank, Irlam Manchester M44 5BD United Kingdom

Omega Engineering, GmbH:
Daimlerstrasse 26 75392 Deckenpfronn Germany

For Other Locations Visit omega.com/worldwide

START HERE

Using This Quick Start Manual

Use this Quick Start Manual with your controller to make changes to the thermocouple type, decimal point, units, and to change the setpoints.

Features with NEW are for the "B" version which has three-color programmable "Big" LED display - All segment characters shown are for the "B" version.

Note: For detailed instructions, refer to the appropriate section in the Operator's Manual.

Before You Begin

In addition to the meter and the related parts, you will need the following items to set up your meter:

- ac power, as listed on meter's ID/Power Label
- Thermocouple
- 1/8" flat blade screwdriver

Safety Consideration

This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with EN61010-1 (Safety requirements for electrical equipment for measurement, control, and laboratory standard). Remember that the unit has no power-on switch. Building installation should include a switch or circuit-breaker that must be compliant to IEC 947-1 and 947-3.

SAFETY:

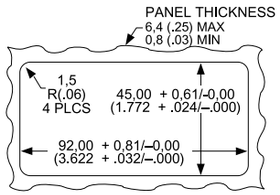
- Do not exceed voltage rating on the label located on the top of the instrument housing.
- Always disconnect power before changing signal and power connections.
- Do not use this instrument on a work bench without its case for safety reasons.
- Do not operate this instrument in flammable or explosive atmospheres.
- Do not expose this instrument to rain or moisture.

EMC:

- Whenever EMC is an issue, always use shielded cables.
- Never run signal and power wires in the same conduit.
- Use signal wire connections with twisted-pair cables.
- Install Ferrite Bead(s) on signal wire close to the instrument if EMC problems persist.

Mount the Unit

1. Cut a panel opening using the dimensions shown to the right.
2. Position the unit in the opening, making sure the front bezel is flush with the panel.
3. Install retaining clip on the meter and tighten against the panel.



NOTE: Dimensions in Millimeters (Inches)

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Wiring

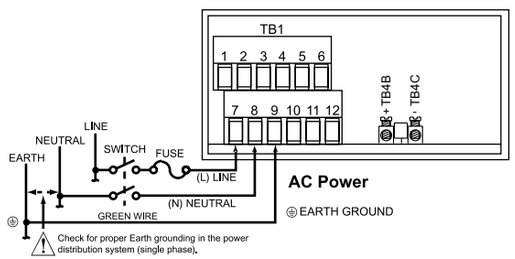
Warning: Do not connect AC power to your device until you have completed all input and output connections. This device must only be installed by a specially trained electrician with corresponding qualifications. Failure to follow all instructions and warnings may result in injury!

1. Remove the panel at the back of the unit.
2. Locate the TB1 connector.
3. Insert the correct wire in each terminal as shown in the following figure and tighten the lockdown screws.
4. Tug gently on the wires to verify the connections.

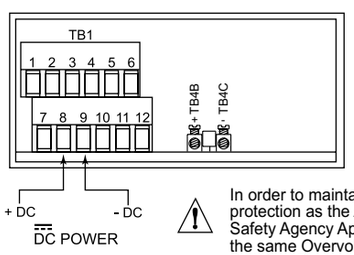
External Fuse Required:

Time-delay, UL 248-14 listed
175 mA (115 Vac line)
80 mA (230 Vac line)

Time-lag, IEC 127-3 recognized
125 mA (115 Vac line)
63 mA (230 Vac line)



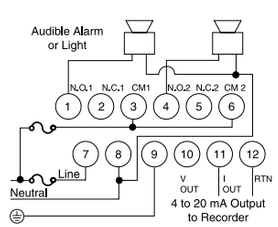
AC Powered Unit Connections



In order to maintain the same degree of protection as the AC units, always use a Safety Agency Approval DC source with the same Overvoltage Category and Pollution Degree.

DC Powered Unit Connections

Wiring the Controller



Typical Wiring of TB1

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Thermocouple Wire Connection

1. Connect positive (+) lead of thermocouple.
2. Connect negative (-) lead of thermocouple.

Note: The negative lead is red.

Example hook up for AC Load

Alarm 1 (Setpoint) Hook-up

1. Connect a jumper from ac Line to Relay 1 Common (Terminal 3).
2. Connect Relay 1 Normally Open (Terminal 1) to External Alarm ac Line.
3. Connect External Alarm to ac Neutral.

Alarm 2 (Setpoint) Hook up

1. Connect a jumper from ac Line to Relay 2 Common (Terminal 6).
2. Connect Relay 2 Normally Open (Terminal 4) to External Alarm ac Line.
3. Connect External Alarm to ac Neutral.

Analog Output Wiring for 4 - 20 mA Current

1. Connect Positive Lead to Terminal 11.
2. Connect Negative Lead to Terminal 12.

For 0 -10 Voltage

1. Connect Positive Lead to Terminal 10.
2. Connect Negative Lead to Terminal 12.

Using the Configuration Menu

To configure the meter, you use the buttons on the front panel.

To:	Take This Action:
Display the Configuration Menu	Press the **MENU** button. The first function on the menu, INPt, displays.
Select a submenu function	1. Press **MENU** until the function you want is shown. 2. Press ▶**/DEV**. The information you can change flashes.
Select a value for that submenu function	1. Press ▲**/MAX** to display the option you want. 2. Press **MENU** to store it. StRd quickly flashes, indicating that the selection has been stored in memory. Then the next menu function displays.
Go back to previous menu function	Press **RESET** once.
Exit the Configuration Menu	Press **RESET** twice. The unit displays rSt as it reinitializes. When a numeric value displays, the unit is in run mode. (Optionally, you can press **MENU** to move through all the menu functions until the unit reinitializes.)

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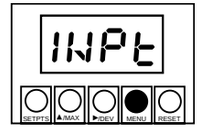
	MENU	SUBMENU ▶/DEV	DESCRIPTION
	INPt	J.tC, K.tC*, dJ.tC, t.tC	Input
	dEC.P	FFFF*, FFF.F	Decimal Point
	Rd.CF	R.1=C, R.1=F*	Reading Configuration
NEW	COLR	GRN, REd, AMbR	Display Color
	S1.CF	S.1=A*, S.1=b S.2=U*, S.2=L	Setpoint 1 Configuration
	S2.CF	S.1=A*, S.1=b S.2=U*, S.2=L	Setpoint 2 Configuration
	S1.db	0003*	Setpoint 1, Deadband
	S2.db	0003*	Setpoint 2, Deadband
	Ot.CF	0.1=E*, 0.1=d 0.2=C*, 0.2=4 0.3=A*, 0.3=P 0.4=d, 0.4=R 0.5=F, 0.5=H	Analog Output Configuration
	P.bAd	0000 shown if 0.3 = P	Proportional Band
	M.RSt	0000 shown if 0.3 = P	Manual Reset
	Ot.S.O	Rd 1, OUt 1, Rd 2, OUt2	Output Scale & Offset
	CJ.OF	0000	Cold Junction Offset
	LW.CF	RS=E*, RS=d SP=E*, SP=d L3=0*, L3=1	Lockout Configuration
NEW	bRIt	A.brt, L.brt, H.brt	Display Brightness

* Factory Default Settings.

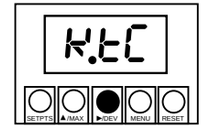
Using the Menus

To Change the Thermocouple Type:

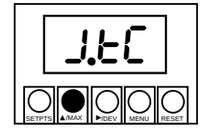
1. Press MENU until the display shows INPt



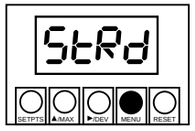
2. Press ▶/DEV to show current thermocouple type:

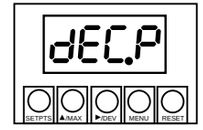


3. Press ▲/MAX to select the setting from J, K, T or DJ.TC.



4. Press MENU to store the value.





5. Press RESET twice to display the current temperature.