



○ OMEGA[™]

User's Guide

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CS8DPT SERIES Benchtop Controllers



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CS8DPT Series Benchtop Controllers

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NOTES:

Section 1 Introduction

Your CS8DPT series Benchtop Controller is ideal for laboratory use and applications requiring portable temperature measurement and control. The CS8DPT features a universal input that can be reconfigured by you for use with a thermocouple, RTD or Voltage/Current signal. These controllers are factory configured and calibrated. It is important that you read this manual and additional manuals outlined in Section 6 completely and follow all safety precautions in both manuals before operating your unit.

1.1 Precautions

- Follow all safety precautions and operating instructions outlined in this manual.
- Keep unit out of reach of all children.
- Do not operate in flammable or explosive environments.
- Never operate with a power cord that is not properly rated for use with your unit.
- Remove and or disconnect main power cord before attempting any maintenance or fuse replacement.
- Do not connect and or operate this unit to a non-grounded, non-polarized outlet or power source.

There are no user serviceable parts inside your unit. Attempting to repair or service your unit may void your warranty.



This product is not designed for use in human medical or nucleur applications.

1.2 Safety Warnings and IEC Symbols

This device is marked with international safety and hazard symbols in accordance with EN61010-1. It is important to read and follow all precautions and instructions in this manual before operating or commissioning this device as it contains important information relating to safety and EMC. Failure to follow all safety precautions may result in injury and or damage to your calibrator. Use of this device in a manor not specified by the manufacturer may impair protection devices and safety features provided by the unit.





Caution, risk of electric shock

Caution, refer to accompanying documents Figure 1.IEC symbols



All electrical connections and wiring should be performed by suitably trained personnel only.

1

Section 2 Installation

2.1 Unpacking

Remove the packing list and verify that you have received all your equipment. If you have any questions about the shipment, please call our Customer Service Department at

1-800-622-2378 or 203-359-1660.

We can also be reached on the Internet at omega.com e-mail: info@omega.com

When you receive the shipment, inspect the container and equipment for any signs of damage. Note any evidence of rough handling in transit. Immediately report any damage to the shipping agent.



The carrier will not honor any damage claims unless all shipping material is saved for inspection. After examining and removing contents, save packing material and carton in the event reshipment is necessary.

The following items are supplied with your unit:

- CS8DPT Series Benchtop Controller (1 each)
- Main Power Cord (See Section 2.2.2 Power Cords)
- Output Power Cord (2 each)
- This Users Guide and Controller Manual #M3355 (1 each), Quick Start Manual #MQS3355 (1 each)
- Communications Manual #M-3629 (1 each) with Ethernet models only.
- Communications Manual #M-3397 (1 each) with RS-232/485 models only.
- Warranty Extension Card (1 each)

2.2 Main Power Connection

2.2.1 Operation

Your Benchtop Controller will operate from 90 to 240VAC, 50/60 Hz, 2400W.



All power line connections to your unit are fused. When operating on single-phase power source such as 120VAC in the U.S.A, the main neutral line is also fused.

2.3 Power Cords

A main power cord has been included with your unit. The following optional power cords are also available for use with your Benchtop Controller.

Omega Part No.

POWER CORD-UK

(United Kingdom, Ireland, 250V)

POWER CORD-DM

(Denmark, 250V)

POWER CORD-NA

(USA, Canada, Mexico, 120V)

POWER CORD-IT

(Italy, 250V)

POWER CORD-E-10A

(Continental Europe, 250V)

POWER CORD-SE

(Striped Leads, 250V)



All electrical connections and wiring should be performed by suitably trained personnel only.

Section 3 Operation

3.1 Front Panel Controls, Indicators



Figure 3.1 Front Panel Controls, Indicators

3.2 Rear Panel Controls and Connections



Figure 3-2 Rear Panel Controls and Connections

3.3 Universal Input, Sensor Wiring

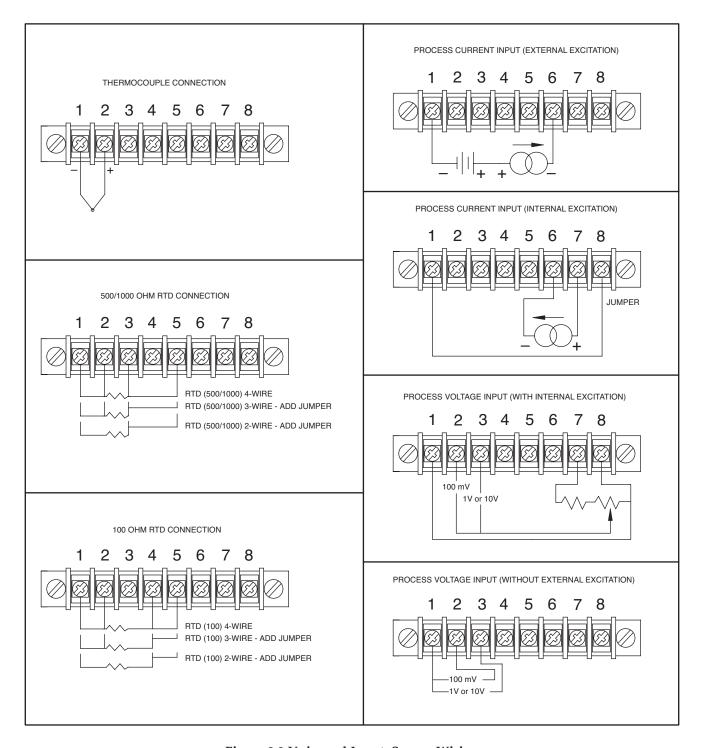


Figure 3.3 Universal Input, Sensor Wiring

3.5 Controller Setup and Programming

3.5.1 Factory Configuration

All units are factory configured and calibrated for Type-K thermocouple unless a different setup was requested when you ordered your unit. Your unit can be reconfigured in the field to a different input type without the need to recalibrate the controller. The procedure for changing the controllers programming can be found in the accompanying manual M3355.

Section 4 Communication Option

4.1 Communication (Ethernet, RS-232/485)

Your controller has been factory pre-wired and configured for ease of use with your communication option. Connections are made on the rear panel.

4.2 Ethernet

The RJ45 connection on the back of the controller has been extended out to the rear panel on your Benchtop meter. Connection and use of the ethernet option is outlined in manual #M3629 that was included with your unit.

4.3 RS-232/485

Your controller has been factory pre-wired and configured for ease of use with a standard DB9 female connector on the rear panel. Page 6 of your communication manual #M3397 shows how your rear panel connector has been wired. Connections to your PC should be straight through wiring as shown below.

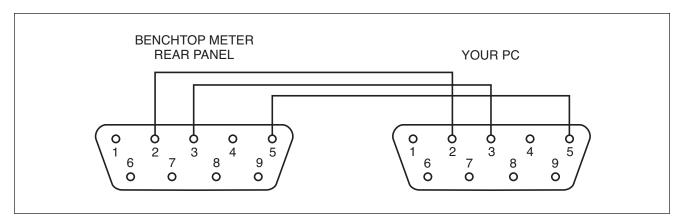


Figure 4.3 Wiring Diagram

Section 5 Maintenance

5.1 Calibration

This unit has been fine-tuned and factory calibrated to give optimum performance over its full operating range. Refer to manual M3355 for additional information on meter calibration and setup.

CAUTION:

Remove all electrical connections and power before attempting any maintenance or cleaning.

5.2 Cleaning

Lightly dampen a soft clean cloth with a mild cleaning solution and gently clean the benchtop meter.

5.3 Fuse Specifications and Replacement



Disconnect all power from source before attempting fuse replacement.

CAUTION:

For continued protection against the risk of fire, replace fuses with only the same size, type, rating and safety approvals indicated here and on the rear panel of your unit.



All power line connections to your unit are fused. When operating on single-phase power source such as 120VAC in the USA, the neutral line is also fused.

5.3.1 All Models - 90 to 230VAC 50/60 Hz, 4W

Main Power Fusing: 2ea, T0.1A, 250 VAC, (Time-Lag)

(Rear Panel) F1,F2 UL./CSA/VDE Approved (5mm dia. x 20mm

long).

Section 6 Specifications

6.1 Benchtop Configuration



All other specifications are located in your accompanying manual(s)

Model CS8DPT: Manual #M3355, MQS3355

with Ethernet: Manual #M3629 with RS232/485: Manual #M3397

Sensor Input(s)/Channels:

Model CS8DPT Single Channel, Universal Input

Power:

All Models: 90 to 240 Vac, 50/60 Hz, 2400W

Fused: Time-Lag, 0.1A, 250V

Output:

All Models: 90 to 240 Vac, 50/60 Hz, 1200W

Fused: Fast-Blow, 5A, 250V

Enclosure:

Material: Case - Painted Aluminum, Handle – Anodized

Aluminum

Size: 20.95 W x 9.525 Hx 20.32 cm D

(8.25 W x 3.75 H x 8" D)

Weight: 1.36 kg (3 lbs.)



NOTES:

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 one (1) month grace period to the normal **five (5) 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.

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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:

- 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:

- 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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