

START HERE

1

2

3

Using This Quick Start Manual

Use this Quick Start Manual to set up your DP606A/DP616A Multi Zone Monitor. This guide will cover:

- Required Tools and Equipment
- Wiring the device
- Connecting Inputs
- Mounting
- Running the Unit
- Changing the Sensor Type
- Available Functions

For complete information on all setup options see the user manual available at omega.com/manuals.

SAFETY CONSIDERATION

The instrument is a device protected in accordance with UL 61010:2010 Electrical Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory. The device has no power-on switch. Installations must include a switch or circuit breaker that is compliant to IEC 947-1 and 947-3. It must be suitably located to be easily reached and marked as the disconnecting device for the equipment. Use copper conductors only, minimum 20 AWG, UL Rated, for power connection. Insulation must be rated for at least 85C and 600V.



Do NOT connect AC power to your device until you have completed all input and output connections. This device is a panel mount device protected in accordance with Class I of EN61010 (115/230 AC power connections), Class III for the DC power option (9-36Vdc). It must be installed by a trained electrician with corresponding qualifications. Failure to follow all instructions and warnings may result in injury. This device is not designed for use in, and should not be used for, patient-connected applications.

SAFETY:

- Do not exceed the voltage rating on the label located on the device housing.
- Always disconnect power before changing signal and power connections.
- Do not use this instrument on a work bench without its case.
- 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 use shielded cables.
- Never run signal and power wires in the same conduit.
- Use signal wire connections with twisted-pair cables.
- If EMC problems occur Install Ferrite Bead(s) on signal wires close to the instrument.

Required Tool and Equipment

Before Installing the DP600 Series Monitor make sure you have the following Items:

- Suitable Panel with 92x92mm cutout
- Philips and Flathead Screwdriver
- Appropriate wiring and fuses for your installation
- Sensors (TC, RTD, or Process)

Wiring the Device

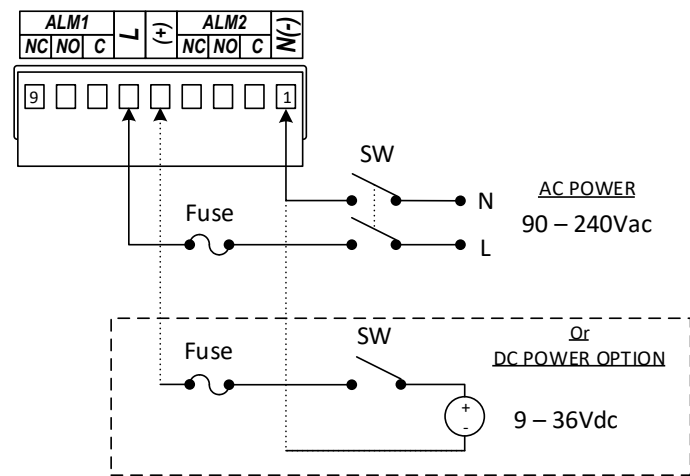


Figure 1 – Main Power Wiring

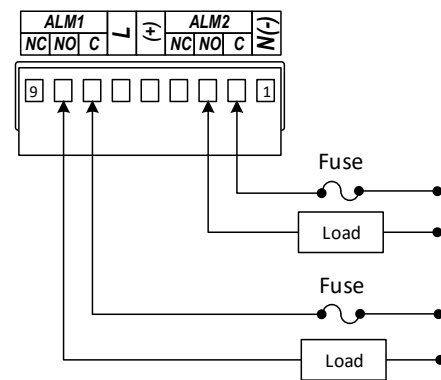


Figure 2 – Alarm Relay Wiring

CAUTION: Use only provided terminals. Torque all connections to 0.5-0.6Nm.

Table 1 – Fuse Values

Input Power	Input Fuse	Alarm Fuse
115Vac	25mA	5A
230Vac	25mA	5A
9-36VDC	300mA	3A

Connecting Inputs

Connect Input sensors to the terminals Marked Zone 1 though Zone 12 (Z1 – Z12) on the rear panel. For the DP606A only Zones 1 through 6 are active and Terminals Z7 – Z12 are only used for 3 Wire RTDs.

When connecting sensors follow the polarity indicated on the rear panel. For Thermocouples the Negative wire is Red (NA) or White (IEC 584-3). For Process Inputs the Negative terminal is ground.

For the RTD 3 wire option the common wires must be connected to the + terminals of both the upper (Z1 – Z6) and lower (Z7 – Z12) input boards. The negative terminal of Z7- Z12 remains unconnected. If a 2 wire RTD needs to be used in 3 Wire mode use a jumper wire to connect the upper and lower terminals together. Refer to the wiring diagram below.

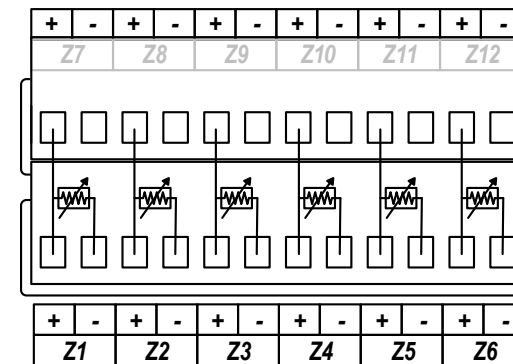


Figure 3 – 3 Wire RTD Connection

Note that all input terminals share a common internal ground connection. Ensure that all sensors share a common ground or are fully isolated.

Note: Absolute Maximum 3.3V (Process Voltage) or 30mA (Process Current).

Mounting

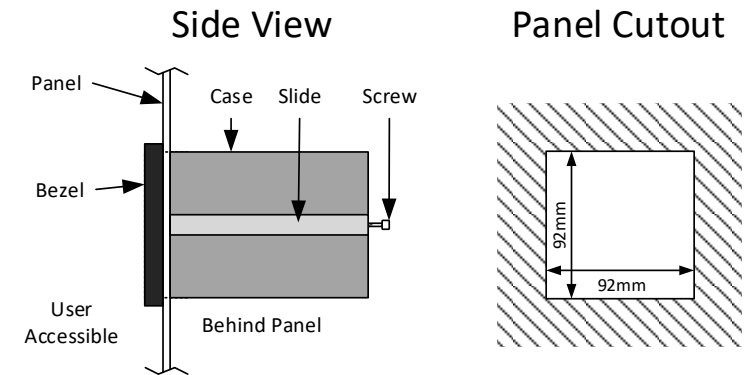


Figure 4 – Panel Mounting

- Using the dimensions from the panel cutout diagram shown above, cut an opening in the front panel
- Remove the two screws that secure the mounting slides and remove the slides.
- Insert the unit into the cutout from the front side of the panel. Reinstall the two slides and two screws.
- Ensure that the unit is properly grounded to the panel which should be earth grounded.
- Use the supplementary ground point indicated on the rear panel if a good ground connection cannot be maintained from the mounting slides alone. A ring terminal is provided for this purpose.

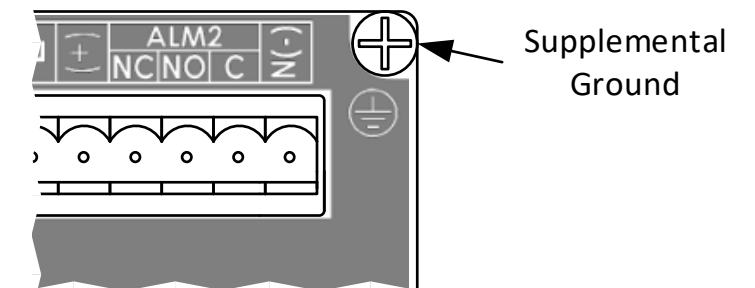


Figure 5 – Supplemental Ground Point

4

Running the Unit

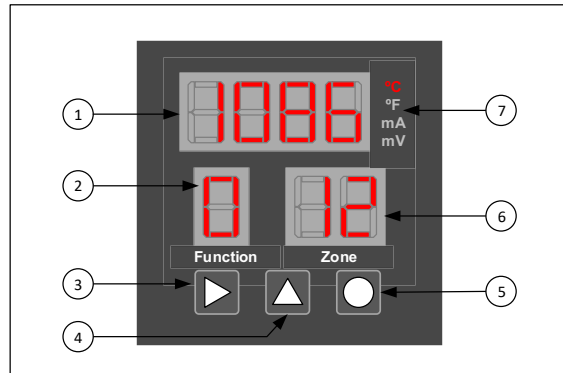


Figure 6 – Front Panel Diagram

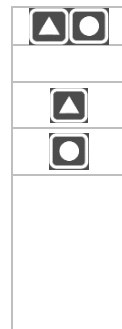
Item	Description	Item	Description
1	Main Display	5	Select Button
2	Function Display	6	Zone Display
3	Advance Button	7	Unit/Mode Indicator
4	Increment Button		

When power is applied to the unit it will automatically enter the RUN mode, sequentially scanning each active zone and activating alarms if required. The Main display shows the measured value of the indicated zone.

On startup the unit will begin scanning all zones using the default sensor settings of K Type Thermocouples in C.

Changing the sensor type:

- Enter Function Select Mode using:
- Zero is shown in the Main display
- Use the increment button to change the selected function to 7
- Enter Function 7 using the Select Button
- Function 7 is shown in the Function Display and the current settings are shown in the Main Display.
- Refer to the Device Configuration table below to determine the desired settings.



- Digit 1 flashes to indicate it can be changed.
- Use the Increment button to change the digit
- Use the Advance button to move to the next Digit
- Once all changes are made use the Select Button to save the settings.
- The unit returns to Function Select Mode and 0 is shown in the Main Display
- Select Function 0 to return to run mode.



Table 2 – Device Configuration

Digit 1		Digit 2		Digit 3		Digit 4		
Alarm Type	Unit	Alarm Latch	Input Type	TC Type	RTD Type	Decimal Points		
0 High	0 C	Latching	0 TC	0 B	Pt100	0		
1 Low	1 F	Latching	1 RTD2	1 C	Ni120	1		
2 High / Low	2 C	Non-Latching	2 RTD3	2 E	Cu10	2		
3 Off	3 F	Non-Latching	3 mA	3 J		3		
4 User			4 mV	4 K				
				5 R				
				6 S				
				7 T				
				8 N				

Please Note: Digit 4 is dependent upon the "Input Type" selected under Digit 3.
Ex: If "TC" is selected under "Input Type" under Digit 3, Digit 4 becomes one of the following "B, C, E, J, etc." under "TC Type."

5

Available Functions

The current Function is always displayed in the Function Menu. While in Run Mode (Function 0) Press **▲** to enter Function select Mode.

Function select mode allows for full configuration of the device. In Function select mode the desired Function to edit is shown in the Main Display. Press **▲** to increment the Function. Press **■** to enter the Selected Menu

Function	Description
0	Return to Run Mode
1	Function Select / Enter Password
2	Set Active Zone
3	Set Low Alarm Values
4	Set High Alarm Values
5	Set Modbus Address
6	Set Scan Time
7	Set Model Options
8	Password Enable and Disable
9	Calibration
A	Set Alarm 1 Options
B	Set Alarm 2 Options
C	Set Low Scale
D	Set High Scale
F	Set Serial Options

For more detailed information on each Function please refer to the user Manual.

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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.

QUICK START

For complete product manual:
www.omega.com/manuals/manualpdf/M5685.pdf



DP606A/DP612A
Universal 6/12
Channel 1/4 DIN
 MQS5806/0718



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