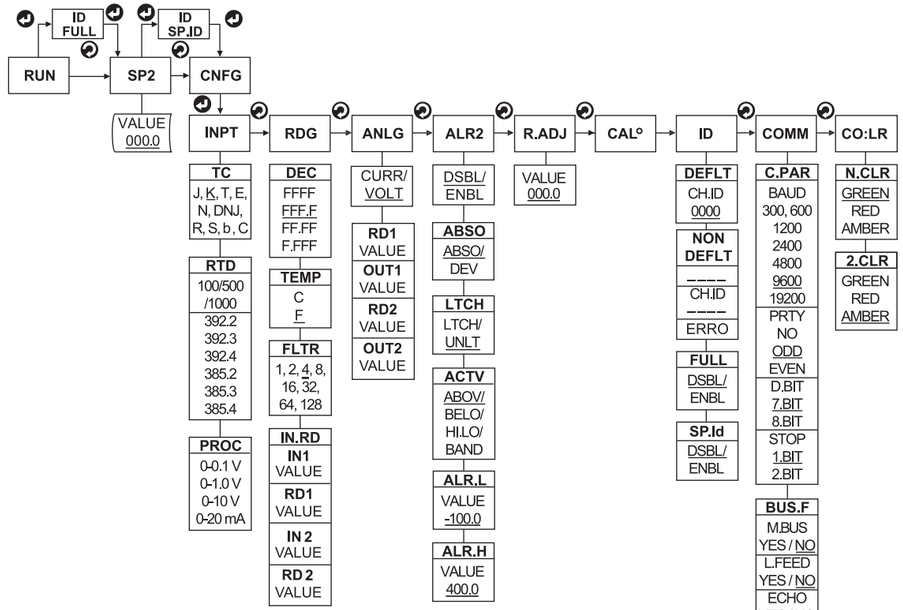
FLOW CHART

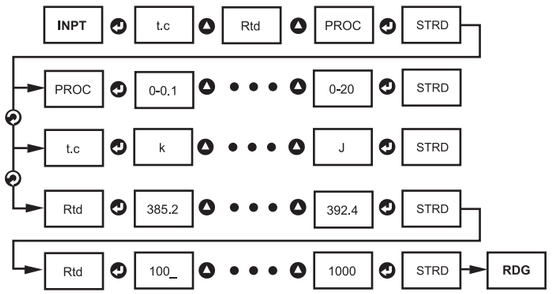
To the right is a flowchart showing how to navigate through all top level menus by pressing the ◴ and ◶ buttons.

_____ **Underline denotes factory default setup**



INPUT MENU SETUP (operation example)

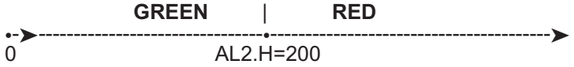
Below is a flowchart showing how to navigate through the submenus of Input menu item by pressing the front buttons.



DISPLAY COLOR SETUP (examples)

Example 1:
Alarm 2 setup: Absolute, Above, Alarm 2 HI Value "ALR.H" =200
Color Display setup: Normal Color "N.CLR"=Green, Alarm 2 Color "2.CLR"=Red

Display color change sequence:



Example 2:
Alarm 2 setup: Deviation, Hi/Low, "ALR.H = 10", "ALR.L = 5"
Color Display setup: "N.CLR"=Green, "2.CLR"=Amber

Display color change sequence:

SPECIFICATION

Accuracy:
±0.5°C temp;
0.03% rdg. process typical

Resolution:
1°/0.1°; 10 µV process

Temperature Stability:
0.04°C/°C RTD;
0.05°C/°C TC @ 25°C (77°F);
50 ppm/°C process

Display:
4-digits, 9-segments LED,
10.2 mm (0.40") with red, green and amber programmable colors

Input Types:
Thermocouple, RTD, Analog Voltage and Current

TC: (ITS 90)
J, K, T, E, R, S, B, C, N, L

RTD: (ITS 68)
100/500/1000 ohm Pt sensor
2-, 3-, or 4-wire; 0.00385 or 0.00392 curve

Input Impedance:
10 MΩ for 100 mV
1 MΩ for 1 or 10 Vdc

Voltage:
0 to 100 mV (±50 mV), 0 to 1 V, 0 to 10 Vdc

Current:
0 to 20 mA (5 Ω load)

Output 1:
not available

Output 2†:
Relay: 250 Vac @ 3 A Resistive Load (SPDT type can be configured as Alarm 2 output); SSR: 20-265 Vac @ 0.05-0.5A (resistive load), continuous;
DC Pulse: non-isolated 10Vdc @ 20mA
† Only with -AL Limit Alarm option

Analog Output 3:
(Retransmission) Isolated Analog Voltage and Current
Current: 10 V max @ 20 mA output
Voltage: 20 mA max for 0 - 10 V output

Options: Communication
RS-232 / RS-485 *or*

Excitation: 24 Vdc @ 25 mA
Exc. not available for Low Power Option

Line Voltage/Power:
90 - 240 Vac ±10%, 50 - 400 Hz* *or*
110 - 375 Vdc, equivalent **5 W**
** No CE compliance above 60 Hz*

Low Voltage Power Option:
20 - 36 Vdc, **4 W****
***Units can be powered safely with 24 Vac but, No Certification for CE/UL are claimed.*

Dimensions:
48 H x 48 W x 127 mm D (1.89 x 1.89 x 5")

Weight:
159 g (0.35 lb)

Approvals:
FM, UL, C-UL, CE per EN61010-1:2001

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 the guide 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. OEMGA 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.

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MQS5063/0213

QUICK START

CE

iSeries Temperature & Process Monitor DPi16A Limit Alarm CNi16A-AL with Isolated Analog Output Board

OMEGA

OMEGAnet® Online Service omega.com	Internet e-mail info@omega.com

Servicing North America:

U.S.A.: ISO 9001 Certified
Omega Engineering, Inc., One Omega Drive, P.O. Box 4047
Stamford, CT 06907-0047 USA
Toll Free: 1-800-826-6342 TEL: (203) 359-1660
FAX: (203) 359-7700 e-mail: info@omega.com

Canada:
976 Berar
Laval (Quebec), H7L 5A1, Canada
Toll-Free: 1-800-826-6342 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/ Latin America: TEL: 001 (203) 359-1660 FAX: 001 (203) 359-7700
e-mail: espanol@omega.com

Servicing Asia:

China:
1698 Yi Shan Road, Unit 102
Min Hang District
Shanghai, China 201103 P.R.C.
Hotline: 800 819 0559/400 619 0559
e-mail: info@cn.omega.com

Servicing Europe:

Benelux: Toll-Free: 0800 099 3344 TEL: +31 20 347 21 21
FAX: +31 20 643 46 43 e-mail: sales@omegaeng.nl

Czech Republic:
Frystatska 184
733 01 Karviná, Czech Republic
TEL: +420-59-6311899 FAX: +420-59-6311114
e-mail: info@omegashop.cz

France: Toll-Free: 0805 541 038 TEL: 01 57 32 48 17
FAX: 01 57 32 48 18 e-mail: esales@omega.fr

Germany/ Austria:
Daimlerstrasse 26
D-75392 Deckenpfronn, Germany
Toll-Free: 0800 8266342 TEL: +49 (0) 7056 9398-0
FAX: +49 (0) 7056 9398-29 e-mail: info@omega.de

United Kingdom: ISO 9001 Certified
OMEGA Engineering Ltd.
One Omega Drive, River Bend Technology Centre, Northbank
Irlam, Manchester M44 5BD United Kingdom
Toll-Free: 0800-488-488 TEL: +44 (0) 161 777-6611
FAX: +44 (0) 161 777-6622 e-mail: sales@omega.co.uk

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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.

START HERE This Quick Start Reference provides information on setting up your instrument for basic operation. The latest complete Communication and Operational Manual as well as as free Software are available at ***www.omega.com/specs/iseries***.

SAFETY CONSIDERATION

This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with EN 61010-1:2001, electrical safety requirements for electrical equipment for measurement, control and laboratory. 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.

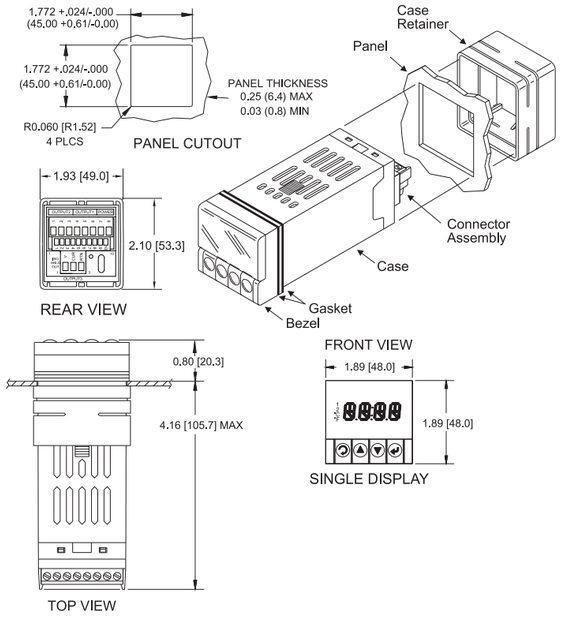
SAFETY:

- 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.

MOUNTING



Panel Mounting Instruction:

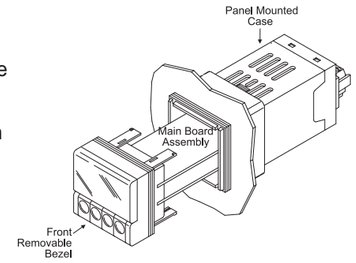
1. Using the dimensions from the panel cutout diagram shown above, cut an opening in the panel.
2. Insert the unit into the opening from the front of the panel, so the gasket seals between the bezel and the front of the panel.
3. Slide the retainer over the rear of the case and tighten against the backside of the mounting panel.

Disassembly Instruction:

If necessary, the board assembly may be removed from the front of the case housing.

Warning: Disconnect all ac power from the unit before proceeding.

1. Remove the board assembly from the case by pulling at the sides of the bezel.
2. The bezel along with the board assembly will unlatch from the case housing.

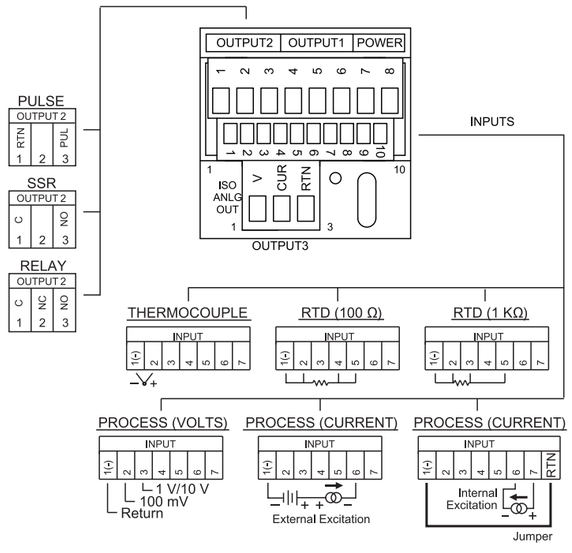


WIRING

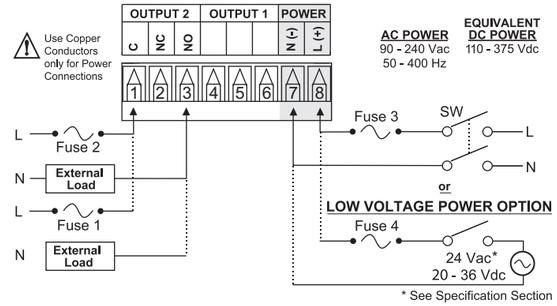
Wire the instrument according to the figure shown below.

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!

Note Output 2 is for -AL Limit Alarm Option only.



Connect the main power connections in the figure shown below.



FUSE	Connector	Output Type	For 115Vac	For 230Vac	DC
FUSE 1	Output 2	SSR	0.5 A(T)	0.5 A(T)	-
FUSE 2	Output 2	Relay	3 A(T)	3 A(T)	-
FUSE 3	Power	N/A	100 mA(T)	100 mA(T)	100 mA(T)
FUSE 4	Power	N/A	N/A	N/A	400 mA(T)

Note Output 2 is for -AL Limit Alarm Option only.

CONFIGURATION

Button Functions in Configuration Mode

MENU	• To enter the Menu, the user must first press ↵ button. • Use this button to advance/navigate to the next menu item. The user can navigate through all the top level menus by pressing ↵. • While a parameter is being modified, press this button to escape without saving the parameter.
(UP)	• Press the up ▲ button to scroll through "flashing" selections. When a numerical value is displayed press this key to increase value of a parameter that is currently being modified. • Holding the ▲ button down for approximately 3 seconds will speed up the rate at which the set point value is incremented. • In the Run Mode pressing ▲ causes the display to flash the PEAK value – press again to return to the Run Mode.
(DOWN)	• Press the down ▼ button to go back to a previous Top Level Menu item. • Press this button **twice to reset the monitor** to the Run Mode. • When a numerical value is flashing (except set point value) press this button to scroll digits from left to right allowing the user to select the desired digit to modify. • When a set point value is displayed press this button to decrease value of a set point that is currently being modified. Holding the ▼ button down for approximately 3 seconds will speed up the rate at which the setpoint value is decremented. • In the Run Mode pressing ▼ causes the display to flash the Valley value - press again to return to the Run Mode.
ENTER	• Press this button to access the submenus from a Top Level Menu item. • Press this button to store a submenu selection or after entering a value — the display will flash a SERd message to confirm your selection. • Press this button to reset flashing PEAK or VALLEY value.

Note Reset: Except for Alarms, modifying any settings of the menu configuration will reset the controller prior to resuming Run Mode.

DISPLAY ABBREVIATIONS

SP2	Set Point 2 Value	**CNFG**	Configuration Menu
INPt	Input Type Menu	**t.c**	Thermocouple Input
k. . .J	Thermocouple Type	**Rtd**	RTD Input
385.2 . . . . 392.4	RTD Curve and Connection Type (2, 3, 4-Wire)	**100 _ 1000**	100 _/500 _/1000 _ RTD Sensor
PROC	Process Input		
0 - 0.1	100 mV Input Voltage	**0 - 1.0**	1 V Input Voltage
0 - 20	20 mA Input Current	**0 - 10**	10 V Input Voltage
RdG	Reading Configuration	**dEC**	Decimal Point
F.FFF. ..FFFF	Decimal Point Position	**FLtR**	Filter Constant
TEMP	Unit of Temperature	**C**	Celcius
F	Fahrenheit		
0001.. ..0128	Filter Constant Value	**IN.Rd**	Input/Reading Scale and Offset Menu
IN 1	Input 1	**IN 2**	Input 2
Rd 1	Reading 1	**Rd 2**	Reading 2
ANLG	Analog Output		
VoLt	Voltage Output	**CURR**	Current Output
Out.1	Output 1	**Rd 1**	Reading 1
Out.2	Output 2	**Rd 2**	Reading 2
ALR2	Alarm 2 Menu	**AbSo**	Absolute Mode
_dEV	Deviation Mode	**LtcH**	Latched Mode
UNLt	Unlatched Mode		
N.o.	Normally Open	**N.c.**	Normally Closed
ActV	Active Type	**AboV**	Active Above
bELo	Active Below	**Hi.Lo**	Above High/Below Low
bANd	Above or Below Band		
ALR.L	Alarm Low Value	**ALR.H**	Alarm High Value
Id	ID Code Menu	**CH.Id**	Change ID Code
FULL	Full ID	**SP.Id**	Set Point ID
COMM	Communication Option*	**NONE**	Communication is Not Installed
C.PAR	Communication Parameters	**bAUd**	Baud Rate
PRtY	Parity	**odd_**	Odd
EVEN	Even	**_No_**	No
dAtA	Data Bit	**7.bit**	7 Data Bit
8.bit	8 Data Bit	**StOP**	Stop Bit
1.bit	1 Data Bit	**2.bit**	2 Stop Bit
bus.F	Bus Format	**M.bus**	Modbus Protocol
_LF_	Line Feed	**ECHO**	Echo
StNd	Communication Standard	**232C**	RS-232
485_	RS-485	**ModE**	Data Flow Mode
CMd_	Command Mode	**CoNt**	Continuous Mode
SEPR	Data Separation Character	**SPCE**	Space
_cR_	Carriage Return	**dAt.F**	Data Format
stAt	Alarm Status	**RdNG**	Transmit Reading Value
PEAk	Transmit Peak Value	**GROS**	Transmit Gross Value
UNit	Units of Measurement	**AddR**	Multipoint Address
tR.tM	Transmit Time Interval		
COLR	Display Color Selection	**N.CLR**	Normal Color Display
2.CLR	Alarm 2 Color Display	**REd**	Display Color is Red
AMbR	Display Color is Amber	**GRN**	Display Color is Green
ENbL	Enable	**dSbL**	Disable
ERRo	Error	**+ OL**	Input (+) Overload

*For abbreviations of Communication Option see Communication Manual