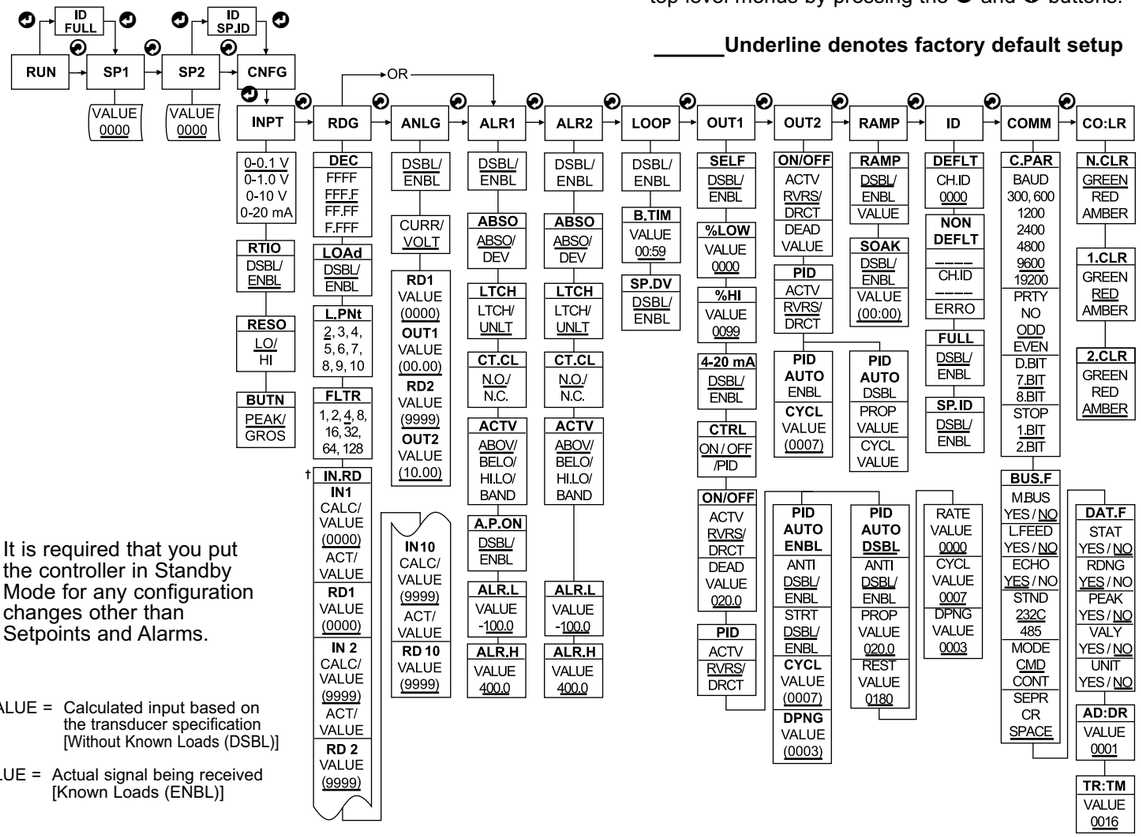
FLOW CHART

Below is a flowchart showing how to navigate through all top level menus by pressing the ◕ and ◕ buttons.

_____Underline denotes factory default setup



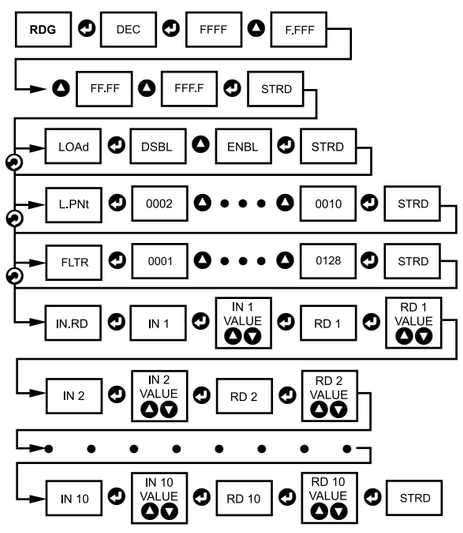
Note It is required that you put the controller in Standby Mode for any configuration changes other than Setpoints and Alarms.

†Where:
CALC/VALUE = Calculated input based on the transducer specification [Without Known Loads (DSBL)]

ACT/VALUE = Actual signal being received [Known Loads (ENBL)]

READING CONFIGURATION SETUP (operation example)

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



DISPLAY COLOR SETUP (examples)

Example 1:
Output 1 & Output 2: SSR
Alarm setup: Absolute, Above, Alarm 2 HI Value "ALR.H" =200, Alarm 1 HI Value "ALR.H"=400
Color Display setup: Normal Color "N.CLR"=Green, Alarm 1 Color "1.CLR"=Amber, Alarm 2 Color "2.CLR"=Red

Display colors change sequences:

GREEN | RED | AMBER

0 AL2.H=200 AL1.H=400

Example 2:
Output 1: Relay, Set Point 1 = 200,
Output 2: Relay, Set Point 2 = 200
Alarm 1 setup: Deviation, Band, "ALR.H" = 20
Alarm 2 setup: Deviation, Hi/Low, "ALR.H = 10", "ALR.L = 5"
Color Display setup: "N.CLR"=Green, "1.CLR"=Amber, "2.CLR"=Red

Display colors change sequences:

AMBER | RED | GREEN | GREEN | RED | AMBER

0 180 195 200 210 220

SPECIFICATION

Accuracy:
0.03% rdg.
Resolution:
10 / 1 µV process
Linearization Points:
10 points
Temperature Stability:
50 ppm/°C process
Display:
4-digit, 9-segment LED,
• 21 mm (0.83") (Single Display)
• 10.2 mm (0.40"): (Dual Vertical)
• 10.2 mm (0.40") and 21 mm (0.83") (Dual Horizontal)
Red, green, and amber programmable colors for process variable, set point and temperature units.
Input Types:
Analog Voltage and Current
Voltage: 0 to 100 mV,
0 to 1 V (±100 mV),
0 to 10 Vdc
Input Impedance:
10 MΩ for 100 mV
1 MΩ for 1 or 10 Vdc
Current:
0 to 20 mA (5 Ω load)
Output 1:
Relay 250 Vac @ 3 A Resistive Load, SSR, Pulse, Analog Voltage and Current
Output 2:
Relay 250 Vac @ 3 A Resistive Load, SSR, Pulse
Options: Communication
RS-232 / RS-485 *or* 10BaseT *or*
Excitation: 5 Vdc @ 40 mA, 10 Vdc @ 60 mA
Exc. not available for Low Power Option
Line Voltage/Power:
90 - 240 Vac ±10%, 50 - 400 Hz*, *or* 110-375 Vdc, **4W** for single display; **5W** for dual display
** No CE compliance above 60 Hz*
Low Voltage Power Option:
12 - 36 Vdc, **3 W**** for single display;
20 - 36 Vdc, **4 W**** for dual display
*** Units can be powered safely with 24 Vac but No Certification for CE/UL are claimed.*
Dimensions:
48 H x 96 W x 127 D mm
(1.89 x 3.78 x 5")
Weight:
295 g (0.65 lb)
Approvals:
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.

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.

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QUICK START

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CNiS8 / CNiS8DH / CNiS8DV Process / Strain Gauge Controller

iSeries®

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OMEGAnet® On-Line Service	Internet e-mail
www.omega.com	info@omega.com

Servicing North America:

USA: ISO 9001 Certified
One Omega Drive, P.O. Box 4047
Stamford CT 06907-0047
TEL: (203) 359-1660 FAX: (203) 359-7700
e-mail: info@omega.com

Canada:
976 Bergar
Laval (Quebec) H7L 5A1
TEL: (514) 856-6928 FAX: (514) 856-6886
e-mail: info@omega.ca

For immediate technical or application assistance:

USA 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 and Latin American:
TEL: (001)800-TC-OMEGA® FAX: (001) 203-359-7807
En Español: (001) 203-359-7803
e-mail: espanol@omega.com

Servicing Europe:

Benelux:
Postbus 8034, 1180 LA Amstelveen, The Netherlands
TEL: +31 20 3472121 FAX: +31 20 6434643
Toll Free in Benelux: 0800 0993344
e-mail: sales@omegaeng.nl

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

France:
11, rue Jacques Cartier, 78280 Guyancourt
TEL: +33 1 61 37 29 00 FAX: +33 1 30 57 54 27
Toll Free in France: 0800 466 342
e-mail: sales@omega.fr

Germany/Austria:
Daimlerstrasse 26, D-75392 Deckenpfronn, Germany
TEL: +49 7056 9398-0 FAX: +49 7056 9398-29
Toll Free in Germany: 0800 639 7678
e-mail: info@omega.de

United Kingdom: ISO 9002 Certified
One Omega Drive
River Bend Technology Centre
Northbank, Irlam Manchester M44 5BD United Kingdom
TEL: +44 161 777 6611 FAX: +44 161 777 6622
Toll Free in England: 0800 488 488
e-mail: sales@omega.co.uk

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 free Software and ActiveX Controls are available at ***www.omega.com/specs/iseries*** or **on the CD-ROM enclosed with your shipment**.

SAFETY CONSIDERATION

This device is marked with the international Caution symbol.

The instrument is a panel mount device protected in accordance with EN61010-1:2001. 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.

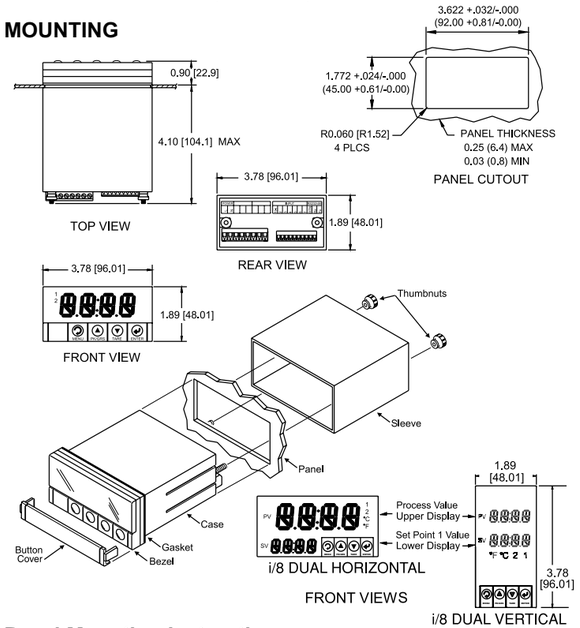
SAFETY:

- 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. Remove sleeve from the rear of the case by removing thumbnuts.
3. 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.
4. Slip the sleeve over the rear of the case.
5. Tighten the thumbnuts to hold the unit firmly in the panel.

Disassembly Instruction:

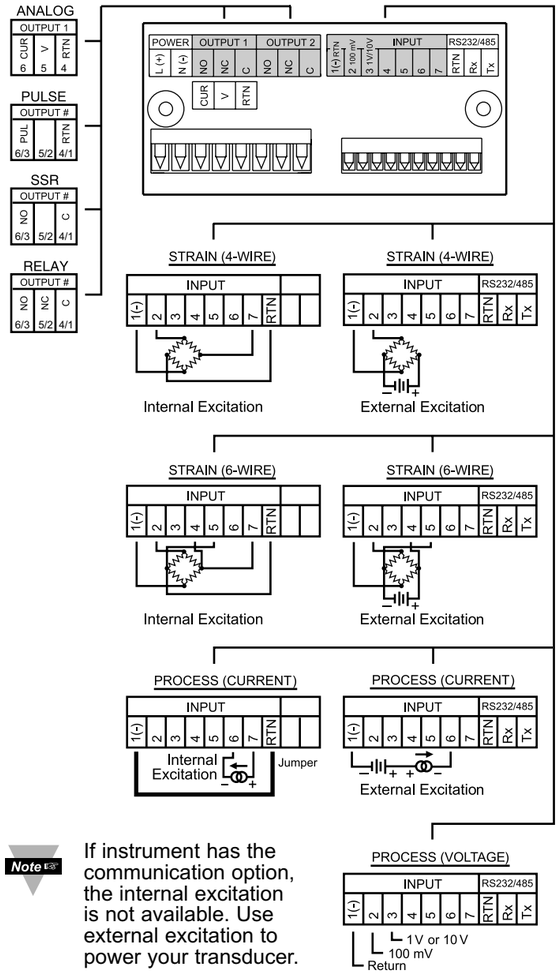
If necessary, the unit may be removed from the panel and opened.

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

1. Remove all wiring connections from the rear of the instrument, by unplugging the power and input connectors.
2. Remove both thumbnuts and set aside.
3. Remove the sleeve and set aside.
4. Remove the meter from the panel and bend the side panel detents on the case outward to release the board. Pull the board assembly out of the case.

WIRING

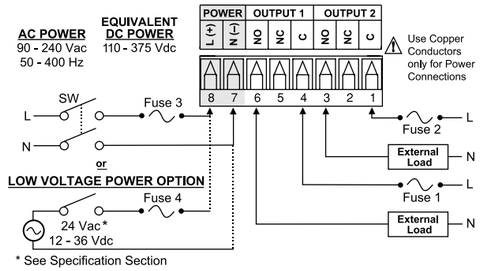
Wire the instrument according to the figure shown below.



Note If instrument has the communication option, the internal excitation is not available. Use external excitation to power your transducer.

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!

Connect the main power connections in the figure shown below.



FUSE	Connector	Output Type	For 115Vac	For 230Vac	DC
FUSE 1	Output 1	Relay	3 A(T)	3 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)

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 ⏎ to escape without saving the parameter.
PK/GRS (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 setpoint value is incremented. • In the Run Mode pressing ▲ causes the display to flash the PEAK or GROSS value – press again to return to the Run Mode.
TARE (DOWN)	• Press the down ▼ button to go back to a previous Top Level Menu item. • Press this button twice to reset the controller to the Run Mode. • When a numerical value is flashing (except setpoint value) press ▼ to scroll digits from left to right allowing the user to select the desired digit to modify. • When a setpoint value is displayed press ▼ to decrease value of a setpoint 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 TARE value to tare your reading (zeroing).
ENTER	• Press the enter ⏎ button to access the submenus from a Top Level Menu item. • Press ⏎ to store a submenu selection or after entering a value — the display will flash a StRd message to confirm your selection. • To reset flashing PEAK or GROSS press ⏎. • In the Run Mode, press ⏎ twice to enable Standby Mode with flashing Stby.

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

DISPLAY ABBREVIATIONS

SP1	Set Point 1 Value	**SP2**	Set Point 2 Value
CNFG	Configuration Menu	**INPt**	Input Type (Range)
INPt	Input Type (range)	**0 - 0.1**	100 mV Input Voltage
0 - 1.0	1 V Input Voltage	**0 - 10**	10 V Input Voltage
0 - 20	20 mA Input Current		
Rtio	Ratiometric Operation	**RESO**	Display Resolution
bUtN	Button Peak/Gross	**PEAk**	Peak Value
GROS	Gross Value		
RdG	Reading Configuration		
dEC	Decimal Point	**F.FFF ..FFFF**	Decimal Point Position
LOAd	Input Load	**EnbL**	Scaling with Known Loads (Actual Value)
DSbL	Scaling without Known Loads (Calculated Value)	**L.PNt**	Linearization Points
0002.. ..0010	Number of Linearization Points	**FLtR**	Filter Constant
0001.. ..0128	Filter Constant Value	**IN.Rd**	Input/Reading Scale and Offset Menu
IN 1	Input 1	**Rd 1**	Reading 1
IN 2	Input 2	**Rd 2**	Reading 2
. . . .	. . . . .	**. . . .**	. . . . .
IN 10	Input 10	**Rd 10**	Reading 10
ANLG	Analog Output	**CURR**	Current Output
VoLt	Voltage Output	**Rd 1**	Reading 1
Out.1	Output 1	**Rd 2**	Reading 2
Out.2	Output 2		
ALR1	Alarm 1 Menu	**AbSo**	Absolute Mode
_dEV	Deviation Mode	**LtcH**	Latched Mode
UNLt	Unlatched Mode	**Ct.CL**	Contact Closure
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	**A.P.oN**	Alarm Enable/Disable at Power On
ALR.L	Alarm Low Value	**ALR.H**	Alarm High Value
ALR.2	Alarm 2 Menu		
LOOP	Loop Break Menu	**b.tIM**	Loop Break Time
R.AdJ	Reading Adjust	**SP.dN**	Set Point Deviation
OUt1	Output 1 Menu	**SELF**	Manual Control
₀ºLO	Percent Low	**₀ºHI**	Percent High
CtRL	Control Type	**ON.OF**	On/Off Control
4 -20	Amplitude Control	**PId**	PID Control
ActN	Action Type	**RVRS**	Reverse Action
dRct	Direct Action	**ANt1**	Anti Integral
AUto	Auto PID	**A.tUN**	Auto Tune PID
StRt	Start Auto Tune PID	**PRoP**	Proportional Band
RESt	Reset Setup	**RAtE**	Rate Setup
CYCL	Cycle Time	**dPNG**	Damping Factor
dEAd	Dead Band		
OUt2	Output 2 Menu		
RAMP	Ramp Time	**SOAk**	Soak Time
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
COLR	Display Color Selection	**N.CLR**	Normal Color Display
1.CLR	Alarm 1 Color Display	**2.CLR**	Alarm 2 Color Display
REd	Display Color is Red	**AMbR**	Display Color is Amber
GRN	Display Color is Green		
dSbL	Disable	**ENbL**	Enable
ERRO	Error	**+ OL**	Input (+) Overload

*** For abbreviations of Communication Option see Communication Manual.**