FLOW CHART
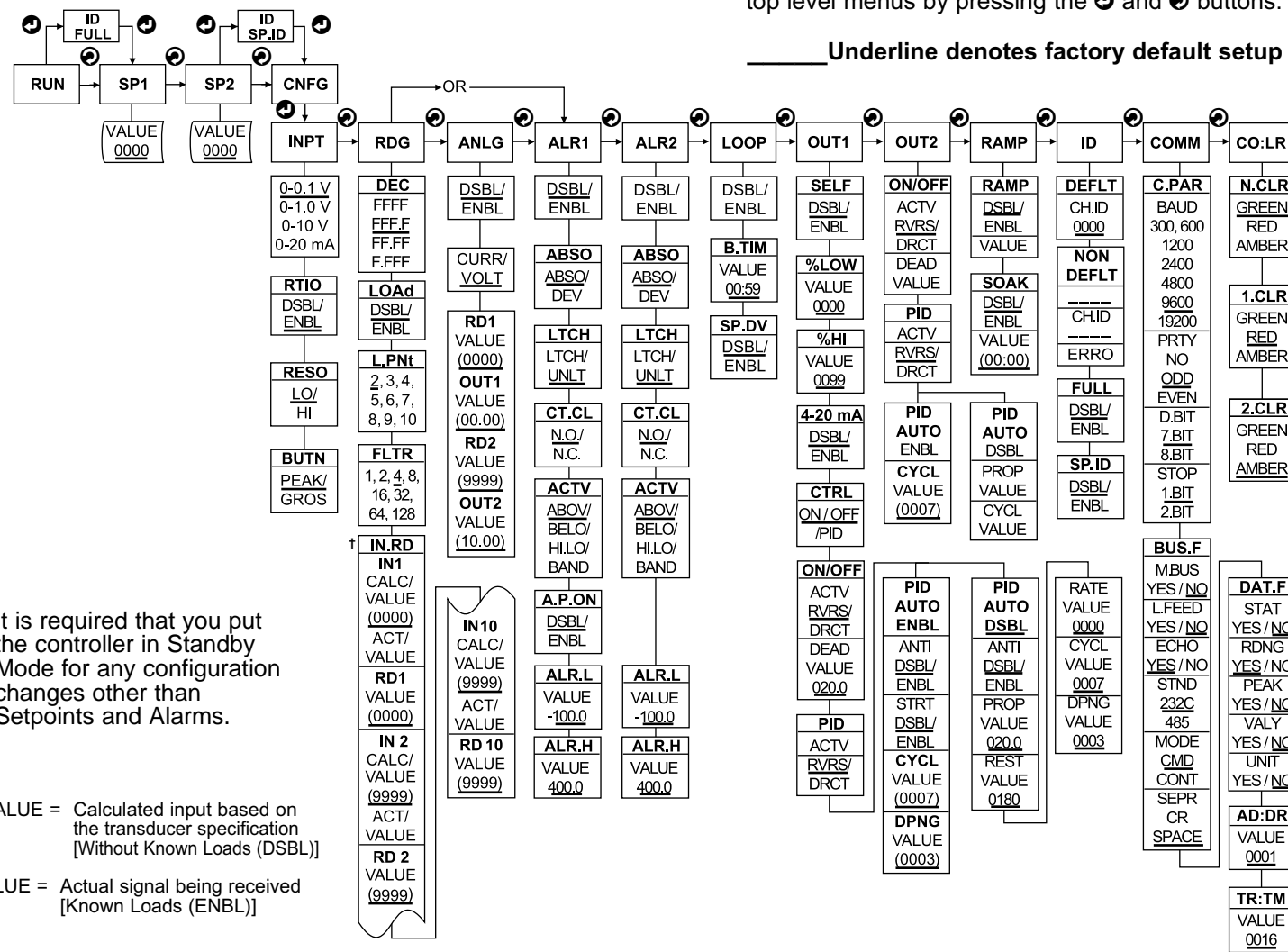
Below is a flowchart showing how to navigate through all top level menus by pressing the ▲ and ▼ buttons.

_____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.
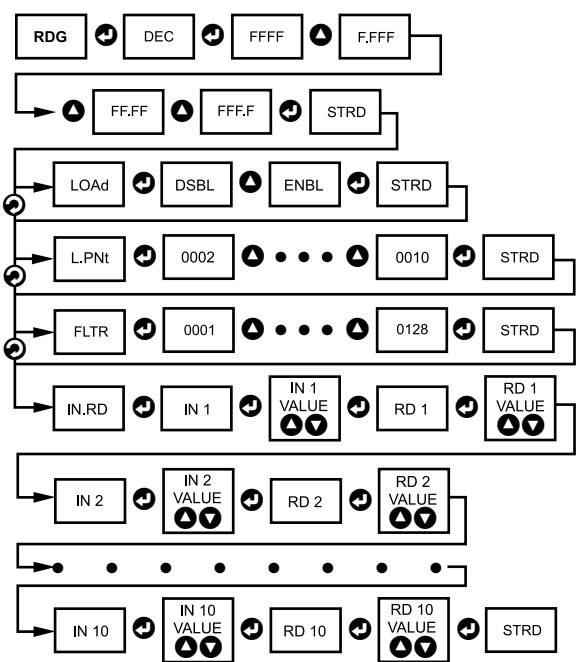
DISPLAY COLOR SETUP (examples)

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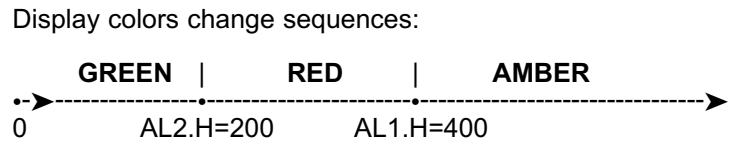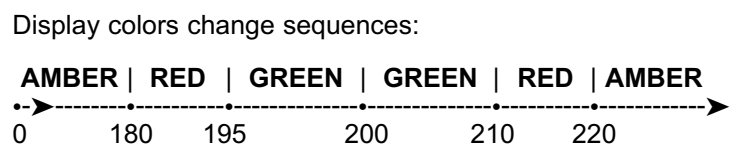Output 1: Relay, Set Point 1 = 200,
Output 2: Relay, Set Point 2 = 200
Alarm 1 setup: Deviation, Band, "ALR.H" = 20
Alarm 2 setup: Deviation, Hi/Low, "ALR.H = 10", "ALR.L = 5"
Color Display setup: "N.CLR"=Green, "1.CLR"=Amber, "2.CLR"=Red

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") with red, green and amber programmable colors
Input Types:
Analog Voltage and Current
Voltage:
0 to 100 mV,
0 to 1 V ($\pm$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
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, **4 W**
* No CE compliance above 60 Hz
Low Voltage Power Option:
12 - 36 Vdc power option, **3 W**
** Units can be powered safely with 24 Vac but No Certification for CE/UL are claimed.
Dimensions:
48 H x 96 W x 74 D mm
(1.89 x 3.78 x 2.91")
Weight:
295 g (0.65 lb)
Approvals:
UL, C-UL, CE per EN61010-1:2001

QUICK START

C E   MADE IN USA

CNiS8C Compact Process & Strain Gauge Controller

iSeries

omega.com®
ΩE OMEGA®

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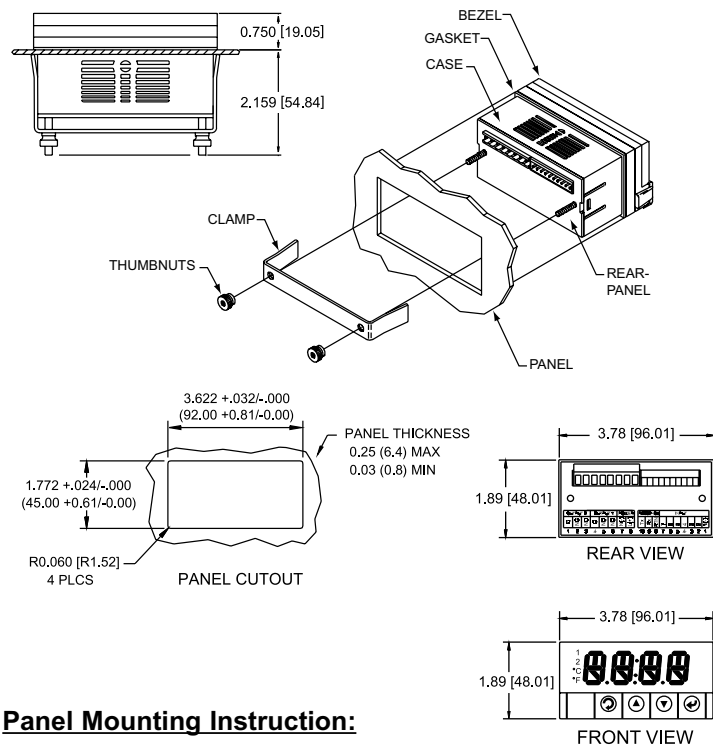
SAFETY:
- Do not exceed voltage rating on the label located on the top of the instrument housing.
- Always disconnect power before changing signal and power connections.
- Do not use this instrument on a work bench without its case for safety reasons.
- Do not operate this instrument in flammable or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

0.750 [19.05]
2.159 [54.84]

BEZEL
GASKET
CASE

CLAMP
THUMBNUTS
REAR-PANEL
PANEL

3.622 +.032/-.000 (92.00 +0.81/-0.00)
1.772 +.024/-.000 (45.00 +0.61/-0.00)
R0.060 [R1.52] 4 PLCS
PANEL CUTOUT

PANEL THICKNESS 0.25 (6.4) MAX 0.03 (0.8) MIN

3.78 [96.01]
1.89 [48.01]
REAR VIEW

3.78 [96.01]
1.89 [48.01]
FRONT VIEW

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:

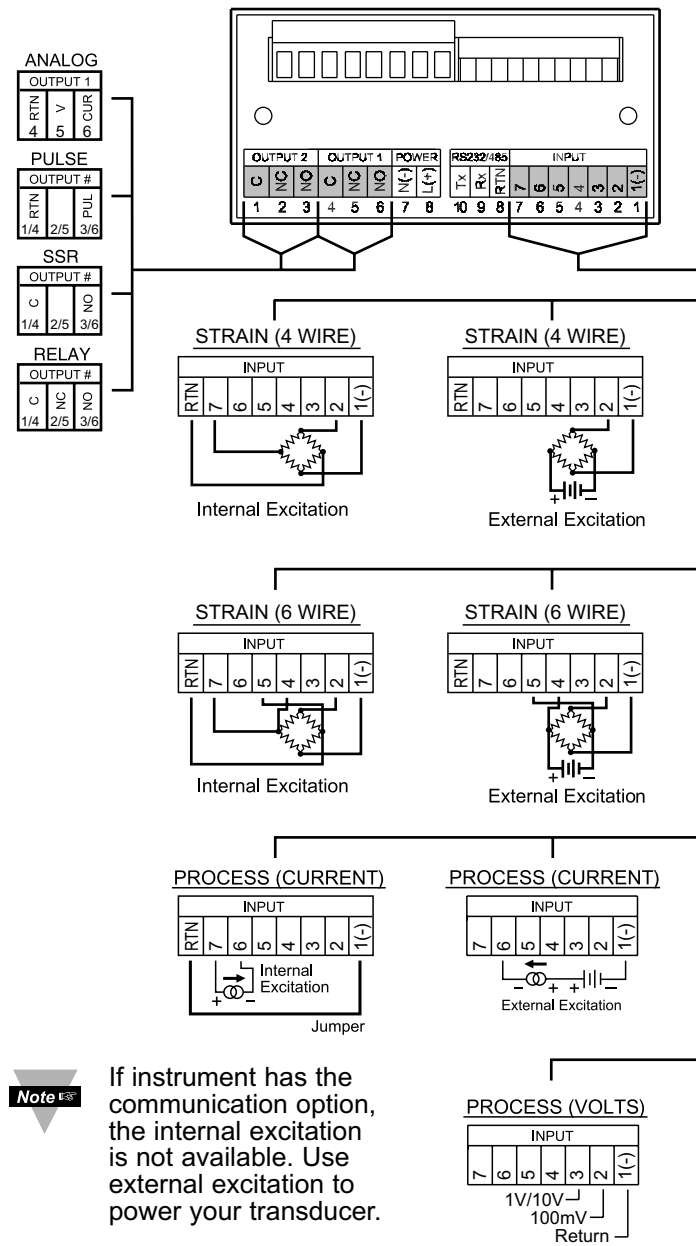If necessary, the unit may be removed from the panel and opened.

⚠ **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
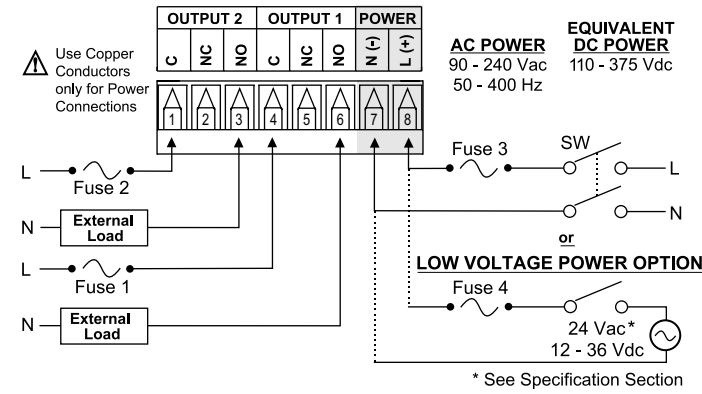
Wire the instrument according to the figure shown below.

ANALOG
OUTPUT 1
PULSE OUTPUT #
SSR OUTPUT #
RELAY OUTPUT #

STRAIN (4 WIRE) — Internal Excitation
STRAIN (4 WIRE) — External Excitation
STRAIN (6 WIRE) — Internal Excitation
STRAIN (6 WIRE) — External Excitation
PROCESS (CURRENT) — Internal Excitation Jumper
PROCESS (CURRENT) — External Excitation
PROCESS (VOLTS) — 1V/10V 100mV Return

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.

OUTPUT 2 | OUTPUT 1 | POWER

AC POWER
90 - 240 Vac
50 - 400 Hz

EQUIVALENT DC POWER
110 - 375 Vdc

Fuse 2
Fuse 1
External Load

Fuse 3
SW

LOW VOLTAGE POWER OPTION
Fuse 4
24 Vac*
12 - 36 Vdc
* See Specification Section

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
oLO	Percent Low	oHI	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.