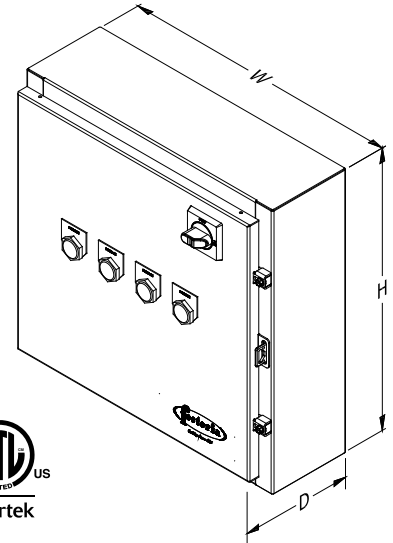




MADE IN THE U.S.A.

**ICP SERIES**  
INDUSTRIAL CONTROL PANEL



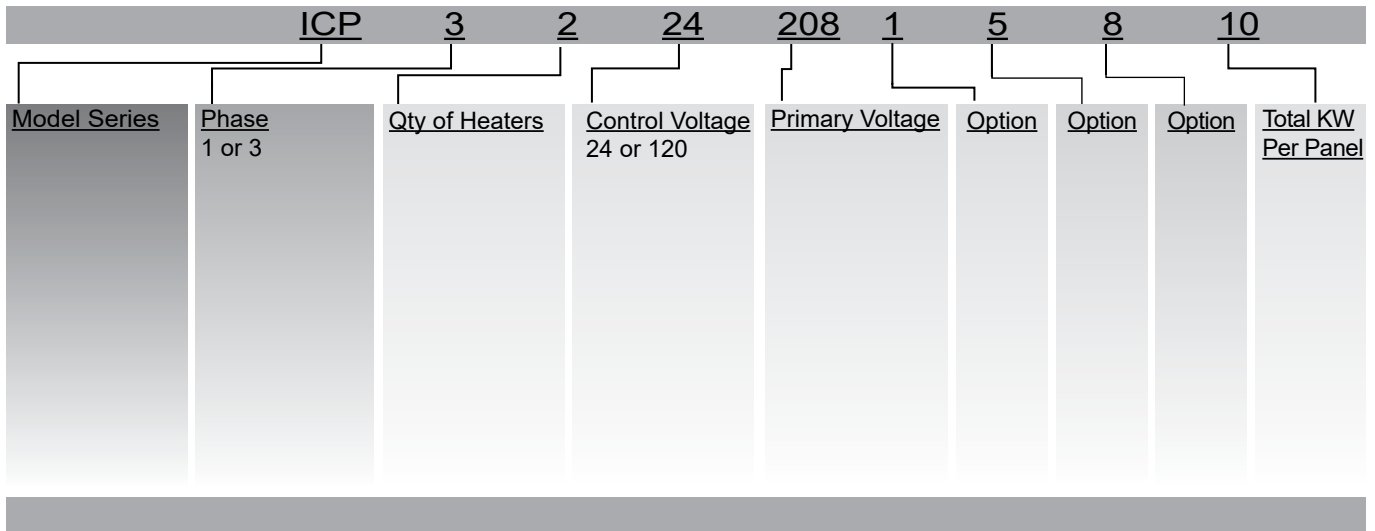
CUSTOMER		DATE:	
PROJECT			
LOCATION			
ARCHITECT			
ENGINEER			
CONTRACTOR			
SUBMITTED BY			
APPROVED BY			
APPROVED BY			

**SUBMITTAL DATA SHEET**

QTY	TAG	MODEL	PHASE	CIRCUITS	CONTROL VOLTAGE	HEATER VOLTAGE	OPTIONS	TOTAL KW	SIZE (IN)		
									H	W	D

NOTES/SPECIAL INSTRUCTIONS:

HOW TO DESIGNATE A MODEL:



## SUMMARY OF OPTIONS FOR ICP PANELS

1 - INDICATOR LIGHT, PANEL ENERGIZED – *A colored light that is on when power is applied to the panel by switching on the integral disconnect switch.*

2 – INDICATOR LIGHT, CIRCUIT ENERGIZED – *A colored light that is on when a single circuit is energized by a switch provided on the front of the panel.*

3 – SWITCH, ON/OFF PER PANEL – *A switch on the front of the panel that will de-energize the control circuit for the entire panel. All heaters will switch on and off simultaneously.*

4 – SWITCH, PER CIRCUIT – *A switch on the front of the panel that will de-energize each individual control circuit. This will allow manual on/off control for each heater.*

5 – EMERGENCY STOP/START WITH PILOT LIGHT – *A mushroom style push to stop / pull to start button that de-energizes all heaters simultaneously. A colored indicator light is included with this option. This option is included with SCR controls.*

6 – SCR, ONE CONTROL FOR ALL CIRCUITS PER PANEL – *One SCR control will be sized to operate all the heaters connected to the panel simultaneously. One rotary dial control will be installed on the front of the panel that will give the user simultaneous variable control of all the heaters wired to the panel.*

7 – SCR, 4-20 mA CUSTOMER INPUT PER PANEL – *One SCR control will be sized to operate all the heaters connected to the panel simultaneously. The SCR will require a customer supplied 4-20 mA control signal to operate all the heaters simultaneously.*

8 – SCR, INDIVIDUAL CONTROL FOR EACH CIRCUIT – *Multiple SCR controllers will be installed (one for each heater) for individual variable control of each heater. Multiple rotary dial controls (one for each heater) will be installed on the front of the panel. This will give the user separate variable control of each heater wired to the panel.*

9 – SCR, 4-20 mA CUSTOMER INPUT PER CIRCUIT - *Multiple SCR controllers will be installed to operate all the heaters connected to the panel individually. Each SCR will require a customer supplied 4-20 mA control signal to operate each heater individually.*

## SUMMARY OF OPTIONS FOR ICP PANELS

10 – STEP CONTROLLER AND WALL THERMOSTAT – *A step controller will be installed to energize each heater circuit in succession with a customer selected time between each step. A thermostat that works in conjunction with the step controller is included.*

11 – STEP CONTROLLER W/ 4-20 mA CUSTOMER INPUT – *A step controller will be installed to energize each heater circuit in succession with a customer selected time between each step. The step controller will require a customer supplied 4-20 mA control signal to operate.*

12 – TIMER PER PANEL – *A timer will be installed with a selectable count down time. A push button will be supplied to energize the heaters and start the countdown for the panel to de-energize all heaters wired to the panel.*

13 – TIMER PER CIRCUIT – *A timer will be installed with a selectable count down time for each individual heater wired to the panel. A push button will be supplied to energize each heater and start the countdown for that heater to de-energize.*

14 – REMOTE MOUNTED ROTARY CONTROL – *A rotary control will be installed in a NEMA 4 enclosure to be remotely mounted by the customer. You must have OPTION 6 or OPTION 8 TO select this option.*

15 - REMOTE MOUNTED PUSH BUTTON - *A single push button will be installed in a NEMA 4 enclosure to be remotely mounted by the customer. The push button can start a timer and/or energize a circuit from a remote location.*

16 - SCR, 0-10VDC CUSTOMER INPUT PER PANEL – *One SCR control will be sized to operate all the heaters connected to the panel simultaneously. The SCR will require a customer supplied 0-10vdc control signal to operate all the heaters simultaneously.*

17 - SCR, 0-10VDC CUSTOMER INPUT PER CIRCUIT - *Multiple SCR controllers will be installed to operate all the heaters connected to the panel individually. Each SCR will require a customer supplied 0-10VDC control signal to operate each heater individually.*

18 - TOUCHSCREEN CONTROL - *A front panel mounted touch screen for control of individual or multiple heaters.*

**STANDARD CONTROLS:**

- NEMA 4 outdoor rated industrial gray powder coated
- Door interlock disconnect switch
- Circuit breaker sized for heater load per stage
- Disconnecting magnetic contactor per stage
- Terminal block for field connection to heater per stage
- 24 Volt transformer (120 Volt transformer optional for snow/ice detectors)
- Control terminal block for connection to staging control

**OPTIONAL CONTROLS:**

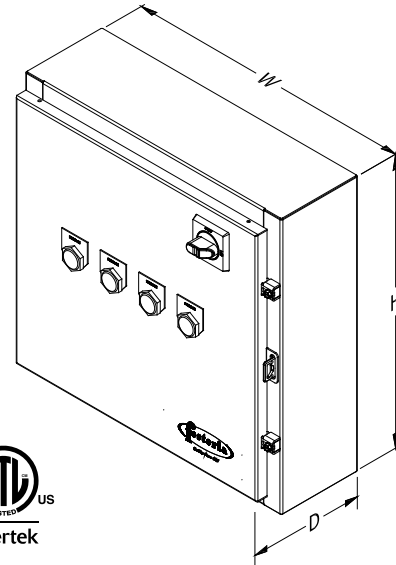
- Snow and ice melting controllers:
  - TPI controller - 120V field connection to controller
  - Field supplied controllers must specify required voltage
- SCR proportional controllers:
  - Potentionmeter for manual control of infrared heaters
  - 4-20 MA signal field supplied for control of infrared heaters

**OPTIONAL ACCESSORIES:**

- Power on indicator pilot lights
- Staging energized pilot lights
- Pilot switches for manual control per heaters
- Timer for internal control of heater cycle

**SNOW/ICE DETECTION INFORMATION:**

- Snow and ice units activate the system and melts any snow and ice accumulations until conditions subside based on detection of temperature and moisture.
- 120 Volt control required for use with TPI supplied snow and ice melting options. This can be indicated by selecting 120 for control voltage option in the model number designator.
- Snow/Ice control switch: APS-3C (capability of monitoring 6 snow sensors) NEMA 3R Enclosure is UL Listed and houses timers and switching electronics to operate the system.



ICP panels are custom made and designed to be used with any TPI infrared heating product. Each panel requires an individually wired circuit for field connection to the panel from the heater. ICP panels are designed and constructed with all controls, factory wired, and ETL listed.

NUMBER OF STAGES	PANEL SIZE
1	24" x 24" x 8"
2	
3	
4	30" x 30" x 8"
5	
6	36" x 36" x 8"
7	
8	48" x 36" x 8"
9	

Note: Panel size subject to change depending on options selected  
 Note: Products listed in this section are custom built and subject to 100% cancellation/restock charges