3-Phase SCR Power Control Panel

- Color Touchscreen Operator Panel
- 8 Points of Temperature Monitoring
- Temperature & Alarm Display for all 8 Temperature Sensor Inputs
- 4 Control Modes: Single Loop, Temperature Differential, and 2 Cascade Modes
- Temperature Range Selection of 0-250°F, 0-500°F, 0-1000°F, 0-1500°F, 0-2000°F
- Programmable Setpoint Ramping
- Adjustable Deadband and HI-HI, HI, LO, & LO-LO Setpoints for each point
- Input Sensor Type, Engineering Unit, & Open Sensor-Selection (in groups of 4)
- Ground Fault Alarm / Trip, adjustable from 30 - 300mA with Graphical Trending
- 4 Alarm Outputs, Programmable as Normally Open or Normally Closed
- Temperature and Discrete Alarm Mapping to any of the 4 Alarm Outputs

Description

While basic low cost temperature controllers may be appropriate for some process heat applications, most require more sophisticated control systems. With the Chromalox IntelliPANEL™ you’ll have the benefit of advanced diagnostics, trending, and monitoring right at your fingertips. This revolutionary new concept in process/power control utilizes touch-screen programming technology.

With simplified configuration settings and local monitoring, set-up time is greatly reduced. Users have quick access to measurement instruments, alarm configurations, control algorithms, start-up, and troubleshooting. IntelliPANEL comes loaded with standard features. It brings the power of several instruments to your application: voltmeters, ammeters, wattmeter, watt/hr meter, ground fault monitoring and trending.

Additional Features

- 4 User-Definable Discrete Interlocks including 1 with Time-Adjustable Delay
- 20 Character Text Entry Identification for all Temperature Inputs and 16 Character Text Entry Identification for all Interlocks
- 4 Levels of Security with User-Defined Numeric Passwords
- Programmable Setpoint Entry Range Limits
- Programmable Open Sensor Protection
- Virtual Six-Pen Trending Chart
- Alarm History Logging
- Time and Date Stamp on Alarms
- RS-485 / 422 Configurable Network Communications with option for MODBUS, Device Net, Profibus, and Ethernet
- Languages - Multiple Language Options
- NEMA 12 Enclosure Construction
- Operating Environment 32 - 104°F
Smart Control Options

Chromalox understands your need for temperature sensing that meets application requirements. In addition to a "smart" display, IntelliPANEL provides smart control options. IntelliPANEL offers four selectable control algorithms: Single-Loop PID, Differential, Cascade Process to Sheath, Cascade Outlet to Sheath, and an input for a customer supplied 4-20 mA remote command signal. These options include selectable manual or auto-tuning.

Security

IntelliPANEL offers four levels of security with user-defined numeric passwords: Manager, Engineer, Supervisor, and Maintenance.

Monitoring and Alarming

The IntelliPANEL system has the ability to monitor up to eight temperature inputs for any one of four conditions: HI-HI, HI, LO, and LO-LO alarms. Additionally, each alarm can be programmed as either latching or non-latching, and can be mapped to any or all of the four alarm outputs. All IntelliPANEL alarms are identified and logged with time/date stamp, count, and action taken.
Status Panel Board

In addition, to the temperature alarms, there are eight status indicators for key system elements. These indicators include Alarm Input 1 (or Purge Alarm), Alarm Input 2, Ground Fault, Disconnect Switch Status, Breaker Status, Heatsink Over-Temp, SCR Status, Hand / Off / Auto Status, and High Limit status.

A pop-up System Master Screen is automatically displayed any time a shutdown event occurs within the system. The shutdown conditions are listed on the System Master and the event(s) that caused the shutdown are indicated by flashing red text.

Sensor Inputs

IntelliPANEL offers eight temperature inputs which can be programmed for thermocouple or RTD sensor types. Temperature inputs in the IntelliPANEL system are configured in groups of four. Thermocouple inputs can be configured as: J, K, or E thermocouples. RTD inputs can be configured as either 100 ohm Platinum 385, or 100 ohm 392, or 1000 ohm. The IntelliPANEL System supports both Celsius and Fahrenheit units of indication along with Up-Scale or Down-Scale sensor burnout.

Tagging

All eight temperature inputs have text identification fields that allow the user to name the sensors for ease of recognition. The character fields are each 20 characters long and will accept alpha-numeric data.
Interlocks

IntelliPANEL offers four programmable process interlocks with a text identification feature. The interlocks can be programmed for flow, pressure, Time Delay or any variable required for your process. All interlocks can be Enabled or Disabled and can be programmed for an Open / Closed logic state.

Trending

IntelliPANEL offers two virtual trending monitors. The six pen temperature trending monitor is a visual indication of your system status: cabinet temperature, ambient temperature, heater inlet/outlet temperatures, heater shell temperature, and process set-point. Additionally, IntelliPANEL trends system ground fault leakage.

Real-Time Process Indicators

IntelliPANEL offers Continuous Built-In Monitoring on Heater Duty Cycle, Power in Kilowatts, Kilowatt/Hr, Element Resistance, Time/Temperature, Ground Fault Monitoring, Volts/Phase, and Amps/Phase,
**Specifications**

**INPUTS:**

4-channel RTD input module

**Input Ranges**

- **Type Pt100**: -200.0/850.0ºC, -328/1562ºF
- **Type Pt1000**: -200.0/595.0ºC, -328/1103ºF
- **Type jPt100**: -38.0/450.0ºC, -36/842ºF

**RTD Excitation Current**: 200 µA

**Notch Filter**: >50 db notches at 50/60 Hz

**Maximum Setting Time**: 100 ms (full-scale step input)

**Common Mode Range**: 0-5 VDC

**Absolute Maximum Ratings**: Fault protected inputs to ±50 VDC

**Sampling Rate**: 140 ms per channel

**Notes:**

1. The three wires connecting the RTD to the module must be the same type and length. Do not use the shield or drain wire for the third connection.
2. Unused channels require shorting wires (jumpers) installed from terminals CH+ to CH– to COM to prevent possible noise from influencing active channels.
3. If a RTD sensor has four wires, the plus sensor wire should be left unconnected.

**4-Channel Thermocouple Input Module**

**Input Ranges**

- **Type J**: -190 to 760ºC (-310 to 1400ºF)
- **Type E**: -210 to 1000ºC (-346 to 1832ºF)
- **Type K**: -150 to 1372ºC (-238 to 2502ºF)

**General Specifications**

**Number of Channels**: 4, differential

**Common Mode Range**: -1.3VDC to +3.8VDC

**Common Mode Rejection**: 100dB min. @ VDC 50/60Hz.

**Input Impedance**: 5M

**Absolute Maximum Ratings**: Fault-protected inputs to ±50 VDC

**Update Rate**: 4 channels per scan

**Open Circuit Protection**: Upscale or Downscale

**Display Resolution**: ±0.1ºC or ±0.1ºF

**Cold Junction Compensation**: Automatic

**Conversion Time**: 270ms per channel

**Warm-Up Time**: 30 minutes typically ±1ºC repeatability

**Linearity Error**

- **End to End**: ±1ºC maximum, ±0.5ºC typical
- **Maximum Inaccuracy**: ±3ºC (excluding thermocouple error)
- **Linearity Error (All Input Ranges)**: 0.05% @ 0-60ºC;
  Typical: 0.03% @ 25ºC

**Notes:**

1. Shields should be grounded at the power source only.
2. All CH- terminals must be connected together.
3. Unused channels should have a shorting wire (jumper) installed from CH+ to CH-.

**Permissive Digital Inputs**: All ............... Dry contact or triac rated for 120 Vac at 20 mA.

**Relay Operating Cycles:**

<table>
<thead>
<tr>
<th>Voltage and Type of Load</th>
<th>Load Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 VDC Resistive</td>
<td>1A: 600K</td>
</tr>
<tr>
<td>110 VAC Resistive</td>
<td>1A: 900K</td>
</tr>
<tr>
<td>220 VAC Resistive</td>
<td>1A: 1200K</td>
</tr>
<tr>
<td>110 VAC Solenoid</td>
<td>1A: 350K</td>
</tr>
<tr>
<td>220 VAC Solenoid</td>
<td>1A: 600K</td>
</tr>
</tbody>
</table>

**Relay Output Specifications**

- **Output Voltage Range**: 6-240VAC, 47-63Hz, 6-27 VDC
- **Maximum Voltage**: 264VAC, 30VDC
- **Maximum Current**: 2A/point
- **Maximum Leakage Current**: 0.1mA @ 246VAC
- **Smallest Recommended Load**: 5mA @ 5VDC

**Chromalox**

© Chromalox, Inc.

• 1382 Heil Quaker Blvd. • LaVergne, TN 37086 • PH: 1-888-996-9258 • FX: 615-793-3563 • www.chromalox.com
Specifications (Cont’d.)

**Touch Screen Display:**
- Screen Size: 5.7 in. dia.
- Resolution: 320 x 240
- Touch Grid: 8 x 6

**Communications:**
- Protocol: ModBus Slave
- Baud Rate: 2.4, 4.8, 9.6, 19.2, 38.4 Kbaud
- Stop Bits: 1 or 2
- Parity: odd, even, none
- On Delay: 5, 10, 20 ms.
- Address: 1 – 128
- Max. network distance: 4000 feet
- Max. number of devices: 32 per network
- Max. baud rate: 38.4 Kbaud
- Max. driver load: 62 ohms
- Driver voltage: ±1.5V minimum
- No load current: 80mA
- Max. current: 100mA (62 ohms)
- Isolation resistance: >1014 ohms/7pF
- Voltage withstand: 1.2KVrms/1s, 1.0KVrms/1 minute
- Termination: Dipswitch selectable
- Bias resistors: Dipswitch selectable
- RS485/RS422 Operation: Dipswitch selectable
- Connections: Plug in removable terminals for field termination

**CONTROL AND ALARM**

**Control Modes:**
- Single Loop PID
- Differential PID
- Cascade PID/PID

**PID Parameters:**
- Proportional Band: 20 to 2000 degrees
- Reset: 0.61 to 60 repeats per minute
- Rate: 0 to 99.99 seconds
- Reset Windup Limit: 100% fixed
- Rate Limit: X10 fixed
- Manual Output: 0 to 100%, 1% steps
- Control Setpoint: full range, 0.1 deg. setting
- Setpoint Limits: high and low full range, 0.1 deg setting
- Alarm Setpoint: full range, 1 deg. Setting
- Alarm Deadband: 0 to 50.0, 0.1 deg. Setting
- Ramp to Setpoint: 0 to 2000 deg. per minute, 1 deg. setting
- Time delay on interlock: 0 to 9999 seconds, 1 second settable

**Ground Fault Monitor**
- Trip setting range: 6 to 600 mA
- Current indication: 0-100% of trip set point
- Password: 4 levels settable
- Time: 24 Hr. clock hrs/min format
- Date: mon/day/yr format

**Power Train Components**
- Main Disconnect Switch: load rated shunt trip
- FT fusing: >125% load with 100 kaic
- Load Circuit Breakers: >125% load rated with 25 kaic
- Contactors (if supplied): load rated
### Ordering Information

**Model** IntelliPANEL Series 1

**IPZ2** Three Phase Two-Leg Zero-Fired SCR Power Control Panel

#### Panel Configuration

- **Real Time Process Indicators:**
  - Heater Current
  - Line Voltage
  - Load Power Measurement (Kw/Kw/Hr)
  - Duty Cycle (0 - 100%)
  - Ground Fault Leakage Trending
  - Life Factor Measurement
  - Resistance Monitoring
  - Inlet / Outlet / Shell Temperatures
  - Historical Hi / Low Temperature Indication & Record

- **Operational Features:**
  - Global Alarm Display, Alarm Setup, Mapping & Configuration
  - Interlock Status Display, Interlock Setup & Configuration
  - Real Time Trending (Six Pens), Heater Graphics
  - RS-485 MODBUS® Communications

- **Selectable Control Setups:**
  - Single Loop
  - Differential

- **Cascade:**
  - Outlet and Sheath Process and Sheath
  - Remote 4-20mA Command Signal

### Technical Notes:

1. Enclosure for codes 12, 14, 15, 16, and 17 are Floor-Mount Designs
2. Consult factory for 575 Vac Applications and Pricing
3. Select Load Circuit Protection Option to be 125% Minimum of Actual Load Current
4. Ventilated NEMA 12 Enclosure Derates Enclosure to NEMA 1
5. Specify quantity of circuits

---

### Code Current @ 40°C (104°F) Ambient

<table>
<thead>
<tr>
<th>Code</th>
<th>SCR Component</th>
<th>Max. # Circuits</th>
<th>Type 12 Enclosure Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>MXPCII-3-02-1-1-LF03-0</td>
<td>4</td>
<td>72”H x 36”W x 12”D</td>
</tr>
<tr>
<td>03</td>
<td>MXPCII-3-03-1-1-LF03-0</td>
<td>4</td>
<td>72”H x 36”W x 12”D</td>
</tr>
<tr>
<td>06</td>
<td>MXPCII-3-06-1-1-LF03-0</td>
<td>4</td>
<td>72”H x 36”W x 12”D</td>
</tr>
<tr>
<td>08</td>
<td>MXPCII-3-08-1-1-LF03-0</td>
<td>4</td>
<td>72”H x 36”W x 12”D</td>
</tr>
<tr>
<td>12</td>
<td>MXPCII-3-12-1-1-LF03-0</td>
<td>8</td>
<td>60.06”H x 60.06”W x 12.06”D</td>
</tr>
<tr>
<td>14</td>
<td>MXPCII-3-14-1-1-LF06-0</td>
<td>8</td>
<td>60.06”H x 60.06”W x 12.06”D</td>
</tr>
<tr>
<td>15</td>
<td>MXPCII-3-15-1-1-LF06-0</td>
<td>12</td>
<td>72.06”H x 72.06”W x 12.06”D</td>
</tr>
<tr>
<td>16</td>
<td>MXPCII-3-16-1-1-LF06-0</td>
<td>12</td>
<td>72.06”H x 72.06”W x 12.06”D</td>
</tr>
</tbody>
</table>

### Code Voltage

<table>
<thead>
<tr>
<th>Code</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>208 Vac</td>
</tr>
<tr>
<td>2</td>
<td>240 Vac</td>
</tr>
<tr>
<td>3</td>
<td>380 Vac</td>
</tr>
<tr>
<td>4</td>
<td>400 Vac</td>
</tr>
<tr>
<td>5</td>
<td>415 Vac</td>
</tr>
<tr>
<td>6</td>
<td>480 Vac</td>
</tr>
</tbody>
</table>

### Code Sensor Options

- **J**: J Thermocouple Sensor Inputs (1-8)
- **K**: K Thermocouple Sensor Inputs (1-8)
- **JK**: J Thermocouple Sensor Inputs (1-4) and (4) K Thermocouple Sensor Inputs (5-8)
- **R**: RTD Sensor Inputs (1-8)
- **RJ**: RTD Sensor Inputs (1-4) and (4) J Thermocouple Sensor Inputs (5-8)
- **RK**: RTD Sensor Inputs (1-4) and (4) K Thermocouple Sensor Inputs (5-8)
- **JR**: J Thermocouple Sensor Inputs (1-4) and (4) RTD Sensor Inputs (5-8)
- **KR**: K Thermocouple Sensor Inputs (1-4) and (4) RTD Sensor Inputs (5-8)

### Code Overtemperature Controller Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Overtemperature Controller Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>One Chromalox Model 1600-11130 1/16 DIN High Limit Controller (Sheath)</td>
</tr>
<tr>
<td>2</td>
<td>Two Chromalox Model 1600-11130 1/16 DIN High Limit Controllers (One Sheath, One Shell)</td>
</tr>
<tr>
<td>3</td>
<td>Three Chromalox Model 1600-11130 1/16 DIN High Limit Controllers (Two Sheath)</td>
</tr>
<tr>
<td>4</td>
<td>Three Chromalox Model 1600-11130 1/16 DIN High Limit Controllers (Two Sheath, One Shell)</td>
</tr>
<tr>
<td>5</td>
<td>Three Chromalox Model 1600-11130 1/16 DIN High Limit Controllers (Three Sheath)</td>
</tr>
</tbody>
</table>

### Code Communications Option

<table>
<thead>
<tr>
<th>Code</th>
<th>Communications Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>RS485 / 422 MODBUS™</td>
</tr>
</tbody>
</table>

### Code Load Fusing Option (Thermal Magnetic Circuit Breakers)

<table>
<thead>
<tr>
<th>Code</th>
<th>Load Fusing Option (Thermal Magnetic Circuit Breakers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000</td>
<td>None</td>
</tr>
<tr>
<td>9025</td>
<td>25 Amps/per Circuit</td>
</tr>
<tr>
<td>9030</td>
<td>30 Amps/per Circuit</td>
</tr>
<tr>
<td>9035</td>
<td>35 Amps/per Circuit</td>
</tr>
<tr>
<td>9040</td>
<td>40 Amps/per Circuit</td>
</tr>
<tr>
<td>9045</td>
<td>45 Amps/per Circuit</td>
</tr>
<tr>
<td>9050</td>
<td>50 Amps/per Circuit</td>
</tr>
</tbody>
</table>

### Technical Notes:

1. Enclosure for codes 12, 14, 15, 16, and 17 are Floor-Mount Designs
2. Consult factory for 575 Vac Applications and Pricing
3. Select Load Circuit Protection Option to be 125% Minimum of Actual Load Current
4. Ventilated NEMA 12 Enclosure Derates Enclosure to NEMA 1
5. Specify quantity of circuits
# 3-Phase SCR Power Control Panel

## Ordering Information

**Model**  | **IntelliPANEL Series 1**
---|---
**IPZ3** | Three Phase Three-Leg Zero-Fired SCR Power Control Panel

### Panel Configuration

- **Real Time Process Indicators:**
  - Heater Current
  - Line Voltage
  - Load Power Measurement (Kw/Kv/Hr)
  - Duty Cycle
  - Ground Fault Leakage Trending
  - Life Factor Measurement
  - Resistance Monitoring
  - Inlet / Outlet / Shell Temperatures
  - Historical Hi / Low Temperature
  - Indication & Record

### Operational Features

- **Global Alarm Display, Alarm Setup, Mapping & Configuration**
- **Interlock Status Display, Interlock Setup & Configuration**
- **Real Time Trending (Six Pens), Heater Graphics**
- **Eight Sensor Inputs Selectable in Groups of Four J, K, E Thermocouples or RTD's, Loop ID / Tagging, Hand / Off / Auto Selection, Language Selection Option, Security Code Protection, Ramp-to-Setpoint, Built-In Help and Troubleshooting Pages**

### Selectable Control Setups:

- **Single Loop**
- **Differential**
- **Cascade:**
  - Outlet and Sheath
  - Process and Sheath
  - Remote 4-20mA Command Signal

### Technical Notes:

1. Enclosures are Floor Mount Designs
2. Consult factory for 575 Vac Applications and Pricing
3. Select Load Circuit Protection to be 125% Minimum of Actual Load Current
4. Ventilated NEMA 12 Enclosure Derates Enclosure to NEMA 1.
5. Specify quantity of circuits

### Code Current @ 40°C (104°F) Ambient

<table>
<thead>
<tr>
<th>Code</th>
<th>Current @ 40°C (104°F) Ambient</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>100 Amp MXPCIII-3-02-3-1-1-2-1-1-0-F01-0</td>
</tr>
<tr>
<td>03</td>
<td>150 Amp MXPCIII-3-04-3-1-1-2-1-1-0-F01-0</td>
</tr>
<tr>
<td>06</td>
<td>200 Amp MXPCIII-3-06-3-1-1-2-1-1-0-F02-0</td>
</tr>
<tr>
<td>08</td>
<td>300 Amp MXPCIII-3-06-3-1-1-2-1-1-0-F03-0</td>
</tr>
<tr>
<td>10</td>
<td>400 Amp MXPCIII-3-10-3-1-1-2-1-1-0-F04-0</td>
</tr>
<tr>
<td>12</td>
<td>550 Amp MXPCIII-3-12-3-1-1-2-1-1-0-F05-0</td>
</tr>
<tr>
<td>14</td>
<td>650 Amp MXPCIII-3-14-3-1-1-2-1-1-0-F06-0</td>
</tr>
<tr>
<td>16</td>
<td>800 Amp MXPCIII-3-16-3-1-1-2-1-1-0-F06-0</td>
</tr>
<tr>
<td>17</td>
<td>1000 Amp MXPCIII-3-16-3-1-1-2-1-1-0-F06-0</td>
</tr>
</tbody>
</table>

### Code Voltage

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>1</td>
<td>208 Vac</td>
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<td>6</td>
<td>480 Vac</td>
</tr>
</tbody>
</table>

### Code Sensor Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Sensor Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>(8) J Thermocouple Sensor Inputs (1-8)</td>
</tr>
<tr>
<td>K</td>
<td>(8) K Thermocouple Sensor Inputs (1-8)</td>
</tr>
<tr>
<td>JK</td>
<td>(4) J Thermocouple Sensor Inputs (1-4) and (4) K Thermocouple Sensor Inputs (5-8)</td>
</tr>
<tr>
<td>KJ</td>
<td>(4) K Thermocouple Sensor Inputs (1-4) and (4) J Thermocouple Sensor Inputs (5-8)</td>
</tr>
<tr>
<td>R</td>
<td>(8) RTD Sensor Inputs (1-8)</td>
</tr>
<tr>
<td>RJ</td>
<td>(4) RTD Sensor Inputs (1-4) and (4) J Thermocouple Sensor Inputs (5-8)</td>
</tr>
<tr>
<td>RK</td>
<td>(4) RTD Sensor Inputs (1-4) and (4) K Thermocouple Sensor Inputs (5-8)</td>
</tr>
<tr>
<td>JR</td>
<td>(4) J Thermocouple Sensor Inputs (1-4) and (4) RTD Sensor Inputs (5-8)</td>
</tr>
<tr>
<td>KR</td>
<td>(4) K Thermocouple Sensor Inputs (1-4) and (4) RTD Sensor Inputs (5-8)</td>
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### Code Overtemperature Controller Options

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<tr>
<th>Code</th>
<th>Overtemperature Controller Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>One Chromalox Model 1600-11130 1/16 DIN High Limit Controller (Sheath)</td>
</tr>
<tr>
<td>2</td>
<td>Two Chromalox Model 1600-11130 1/16 DIN High Limit Controllers (One Sheath, One Shell)</td>
</tr>
<tr>
<td>3</td>
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<td>5</td>
<td>Three Chromalox Model 1600-11130 1/16 DIN High Limit Controllers (Three Sheath)</td>
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</table>

### Code Communications Option

<table>
<thead>
<tr>
<th>Code</th>
<th>Communications Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>RS485 / 422 MODBUS</td>
</tr>
</tbody>
</table>

### Code Remote On / Off Shutdown Contactor Option (Per Sub-Circuit)

<table>
<thead>
<tr>
<th>Code</th>
<th>Remote On / Off Shutdown Contactor Option (Per Sub-Circuit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>1</td>
<td>Industrial 3-Pole Contactor 25 Amp Rating</td>
</tr>
<tr>
<td>2</td>
<td>Industrial 3-Pole Contactor 35 Amp Rating</td>
</tr>
<tr>
<td>3</td>
<td>Industrial 3-Pole Contactor 40 Amp Rating</td>
</tr>
<tr>
<td>4</td>
<td>Industrial 3-Pole Contactor 50 Amp Rating</td>
</tr>
</tbody>
</table>

### Code Load Fusing Option (Thermal Magnetic Circuit Breakers)

<table>
<thead>
<tr>
<th>Code</th>
<th>Load Fusing Option (Thermal Magnetic Circuit Breakers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9000</td>
<td>None</td>
</tr>
<tr>
<td>9025*</td>
<td>25 Amps/per Circuit</td>
</tr>
<tr>
<td>9030*</td>
<td>30 Amps/per Circuit</td>
</tr>
<tr>
<td>9035*</td>
<td>35 Amps/per Circuit</td>
</tr>
<tr>
<td>9040*</td>
<td>40 Amps/per Circuit</td>
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<td>9045*</td>
<td>45 Amps/per Circuit</td>
</tr>
<tr>
<td>9050*</td>
<td>50 Amps/per Circuit</td>
</tr>
</tbody>
</table>

### Typical Model Number

- **IPZ3 03 6 J 2 1 4(3) 9070(3)"**