



## Available Options for Panels

### Programmable Logic Controller (PLC)

- Programmable Logics Controllers (PLC) are electrical devices designed to control machines and industrial processes automatically. A PLC consists of 4 basic sections:
  1. Internal Power Supply
  2. Input/Output Interface
  3. Logical Processor
  4. Program Memory Storage

### Liquid Level Control

- Probe-type level controls are on/off switch devices with electrical contacts which open or close at predetermined liquid levels. Typical projects include elevated tanks, drainage, wastewater, industrial sumps, irrigation, flood control, process and storage tanks.

### Elapsed Run Time Meters

- Energized with the motor starter to log the motors hours of operation.

### Voltmeter

- Provides voltage indication on each leg of the line voltage via a selectable switch.

### Ammeter

- Provides amperage indication on all three legs of the motor leads via a selector switch.

### Anti-Condensation Heater

- Installed in a control panel or motor in a cold or tropical environment to keep internal components heated and/or to keep condensation from forming inside the enclosure.

### Dead Front

- Provides an inner panel door to mount devices on to protect them from tampering, as a blank door is now facing outward.

### Visual Alarms

- Visible means of indication of an alarm condition by lights, etc.

### Audible Alarms

- Audio signal to indicate and alarm condition by either a horn or a bell.

### Remote Alarm Panel

- Alarm light, alarm horn, silence pushbutton, start/stop and terminal block. Used when it is desirable to have alarm indication or start/stop in a remote location.

### Power Outlet

- Receptacle with weatherproof cover. Provides power for tools, test equipment, etc.

### Control Transformer

- Reduce line voltage to typically lower voltage which is then used in a control circuit to power device as magnetic starter coils, relays, timers, etc. The lower control voltage also reduces the risk of electric shock to persons operating the device. Care should still be taken to prevent electrical shock.

### Selector Switch (Hands Off Auto) (HOA)

- Provides manual operation of the motor starter in the "Hand" position, automatic operation in the "Auto" position and off operation in the "Off" position when properly connected to a control device.

### Pushbutton Switch

- One normally open or one normally closed contact, typically used as either a "Start" or "Stop" pushbutton for a motor controller.

### Pilot Light

- Control voltage, usually 120 V, connects directly to the lamp. Primarily used for status indication, etc. Supplied with a 120 VAC lamp, low voltage, 6 or 24 volt lamp can also be provided.

### Auxiliary Contacts

- Additional contacts for a contactor or starter which are used for status indication or to operate other devices.

### Control Relay

- Either normally open or closed 20 VAC coil (other voltages available). Used as an interface between a remote control device and the contactor or starter coil

### Time Delay Relay

- Either an "on delay" or "off delay" function.
- On delay mode: upon energizing the timer coil, the internal timer will start to time. After a preset amount of time, a contact in the timer will either open or close depending on which contact is used. When properly wired, this contact can be used to energize a contactor coil, relay coil, or similar devices. Typically used to delay the starting of a motor.
- Off delay mode: the timer is energized, the output contacts are in their normal state. When power is removed from the coil, an internal timer will start to time. After a preset amount of time, the contacts will either open or close, depending on which contact is used. This contact is then used to remove power from other devices such as a contactor coil. When power is reapplied to the timer coil, the contacts return to their normal state. Typically used to delay the stopping of a motor.

### Time Clock

- 7 day 24 hour time clock which allows you to omit operation on any day(s) of the week.

### Phase Power Monitor

- Monitors line voltage to detect phase loss, phase reversal, phase unbalance and under voltage, which is wired into the motor starter control circuit to shut down the motor if any of the above conditions occur.

### Lightning Arrestor

- Connects with the incoming line voltage to protect a control panel from over voltages caused by lightning strikes.

### Surge Capacitor

- Connects with the line voltage to protect a control panel from spikes or surges in the line voltage.

### Pressure Switch

- For on/off control, loss of suction and safety alarm.

