AC Remote Control Panels

Overview

This document highlights common AC General Power Control Panels, interconnect diagrams, wiring and specifications.

These panels are designed to work with any of our PDUs operating at 60Hz or 400Hz. All panels operate at low voltage and possess rugged industrial control switches.

Interconnecting to the PDU(s) is easy and secure with circular plastic control connectors.

Standard remote control cable length is 8 feet and is provided with any PDU with Remote Control option.

If you don't see a control panel that works for your application, contact us…
AC General has a large set of control panel designs to leverage a solution for your unique needs.

Part Number List

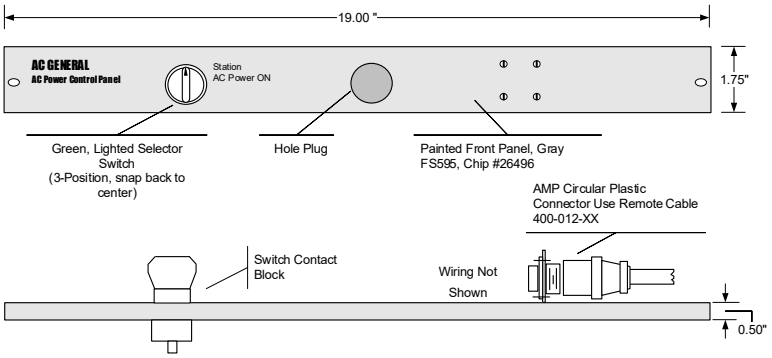
Other Sections

PN 020-011

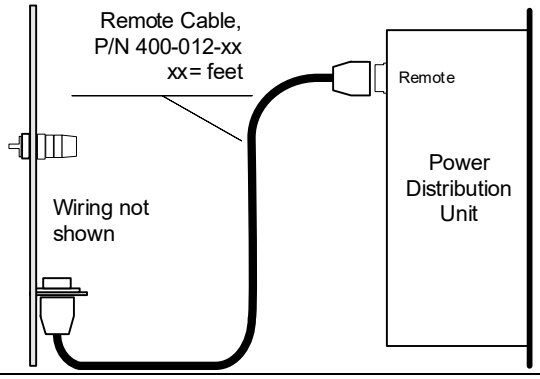
PN 020-207

PN 020-240

Part Number 020-011

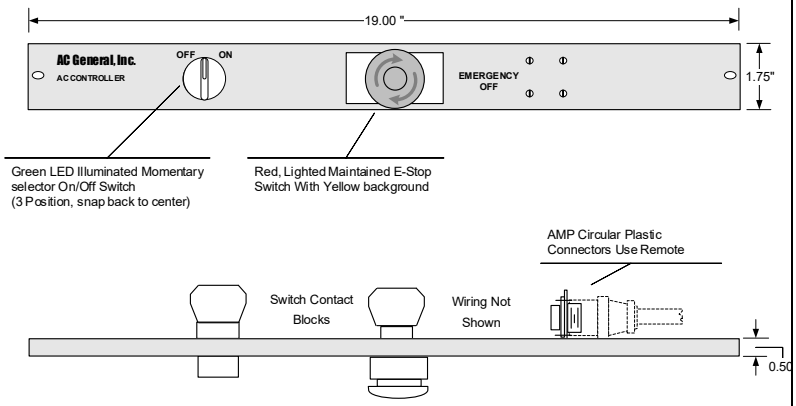


Notional Interconnect

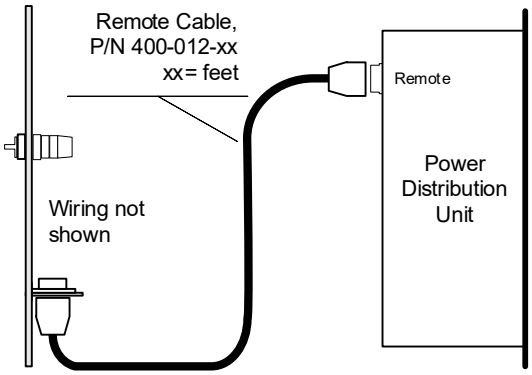


- Use this simple to use compact control panel for any PDU equipped with an AC General “R” style remote control
- A single selector switch provides ON/OFF control for a single PDU
- Switch contains green LED indicator to show ON status
- Front panel is a formed panel, 0.5” thick

Part Number 020-244

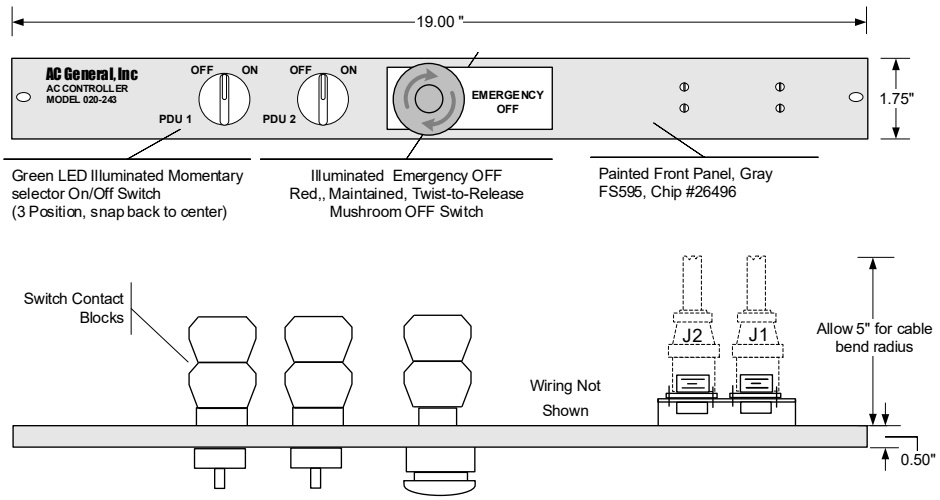


Notional Interconnect



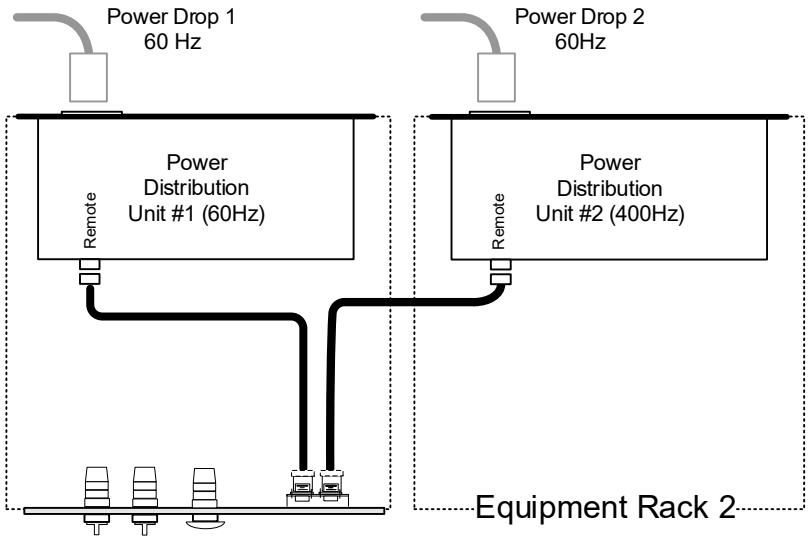
- Use this compact control panel for any PDU equipped with an AC General “R1” style remote control
- Employs one Momentary / Lighted ON/OFF switch and one Maintained Emergency Power OFF (EPO), Twist-to-Release E-Stop switch
- The E-Stop switch has a highlighted painted yellow background and illuminates when pressed
- Controls a single PDU
- Formed panel, non-enclosed

Part Number 020-243

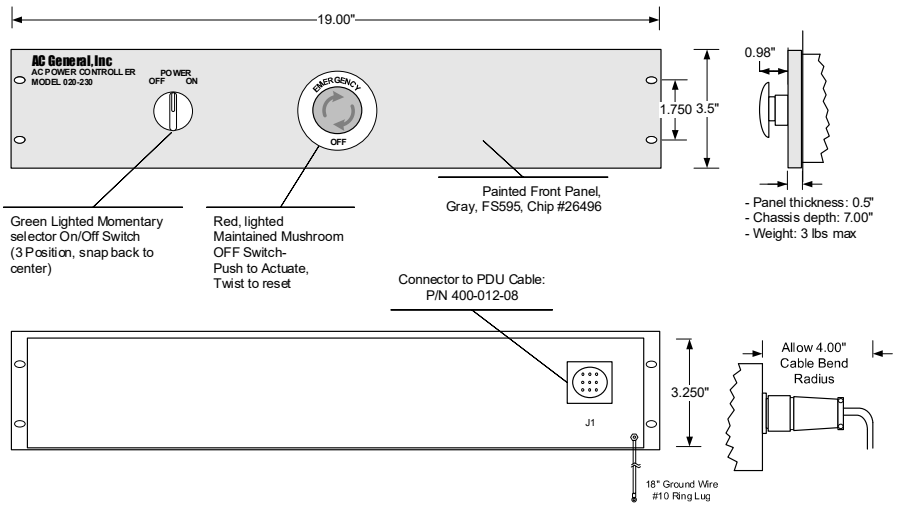


- Use this compact control panel for any PDU equipped with an AC General "R1" style remote control
- Employs two Momentary / Lighted ON/OFF switches and one Maintained Emergency Power OFF (EPO), Twist-to-Release E-Stop switch
- The E-Stop switch has a highlighted painted yellow background and illuminates when pressed
- Controls up to two PDUs independently and share a common E-Stop
- Will operate with either 60Hz or 400Hz PDUs
- Formed panel, non-enclosed

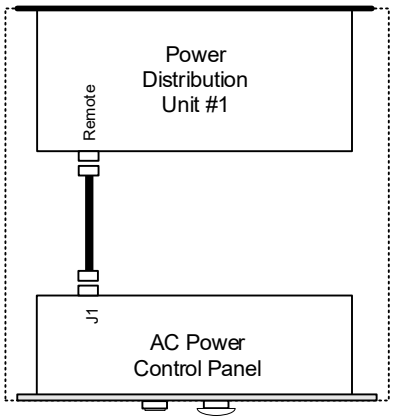
Notional Interconnect



Part Number 020-230



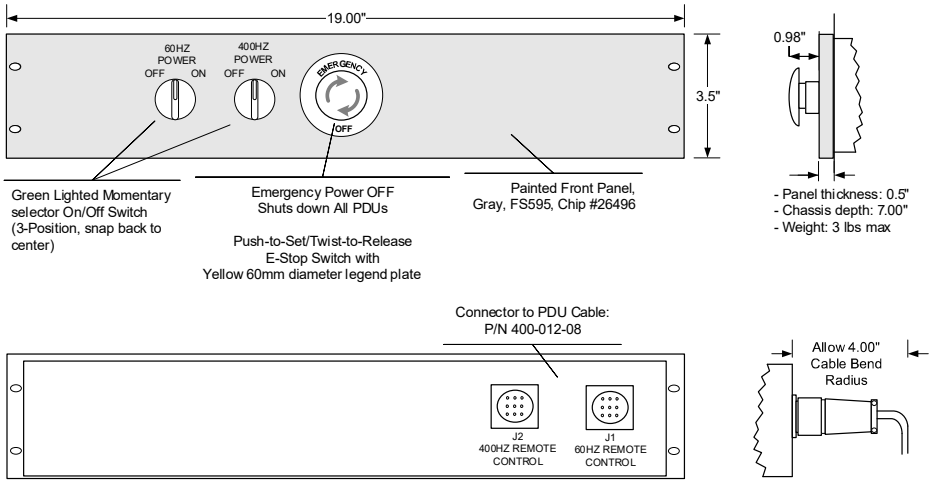
Notional Interconnect



- Employs one Momentary / Lighted ON switch and one Maintained Emergency Power OFF switch, Twist-to-Release E-Stop switch
- The E-Stop switch has an oversize 60mm yellow circular legend plate and illuminates when pressed
- Controls a single PDU
- Enclosed panel

- ***PN 020-230 replaces PN 020-019 and PN 020-019-01 Controllers***

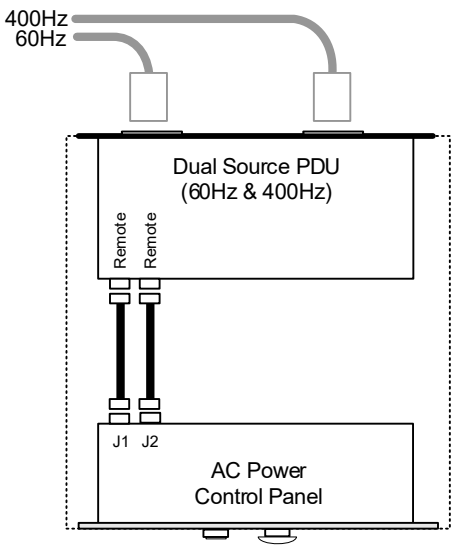
Part Number 020-207

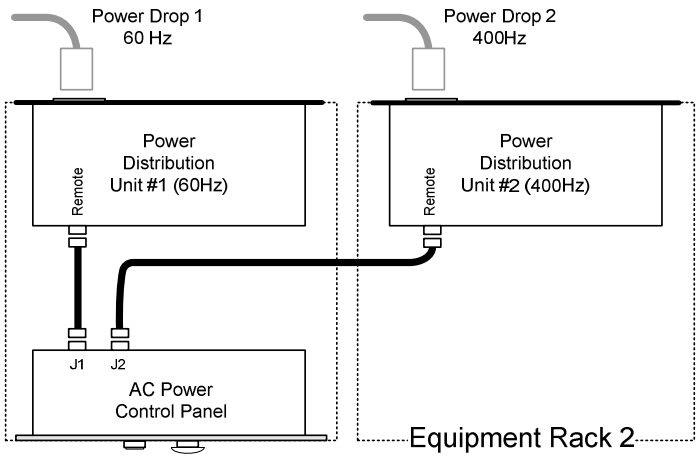


- Dual PDU Control (60 Hz & 400 Hz)
- Separate ON/OFF selector switches mounted in an enclosed panel provide individual control for each PDU
- The E-Stop switch has an oversize 60mm yellow circular legend plate and illuminates when pressed

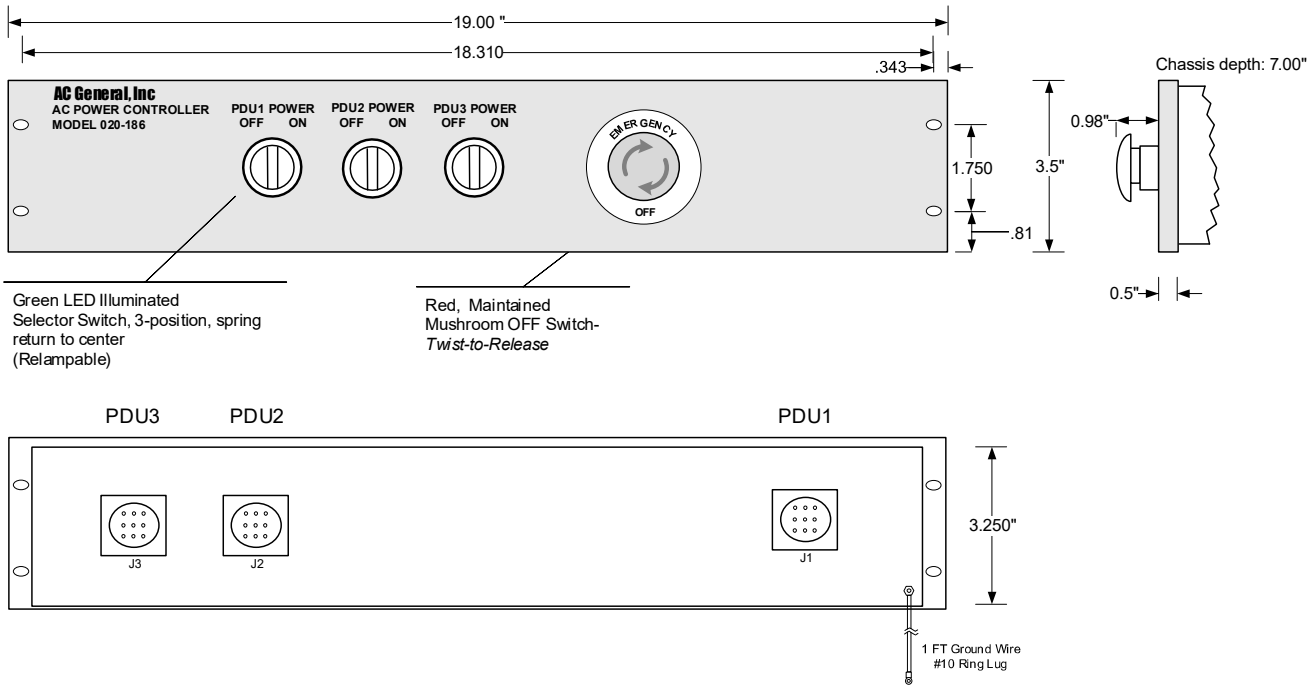
Notional Interconnect PN 020-207

- This panel can be used in two possible connection schemes
  - Single PDU with combined 60 & 400Hz power sources
  - Separate 60 & 400 Hz PDUs



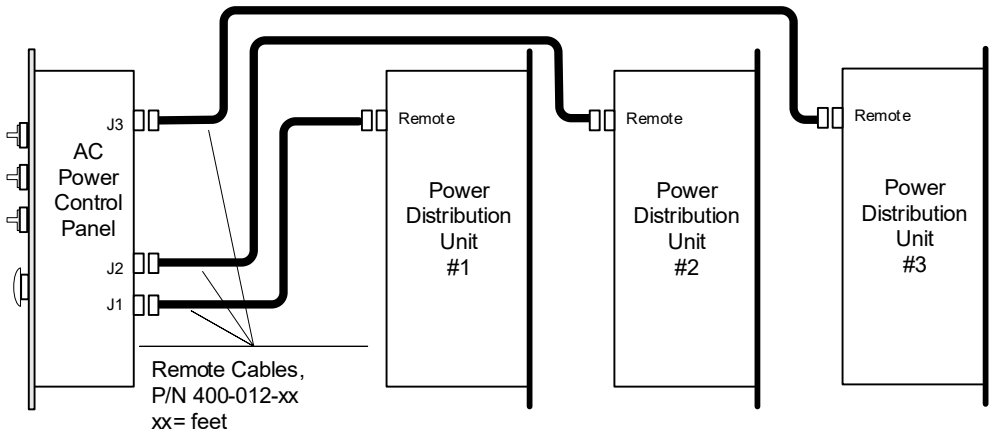


Part Number 020-186

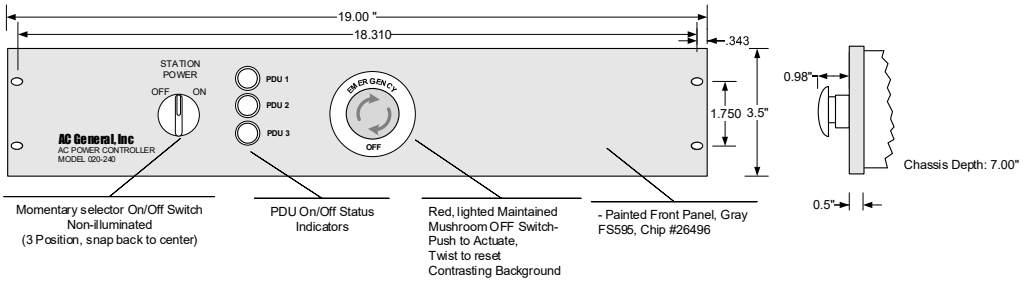


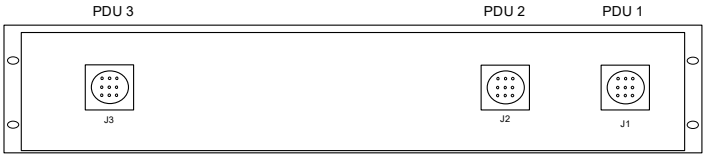
- Employs three Momentary / Lighted ON switches and one Maintained Emergency Power OFF switch, Twist-to-Release E-Stop switch
- OFF Switch has Oversize 60mm yellow circular legend plate
- One switch per PDU provides individual PDU ON/OFF control for up to three PDUs
- Enclosed panel

Notional Interconnect



Part Number 020-240

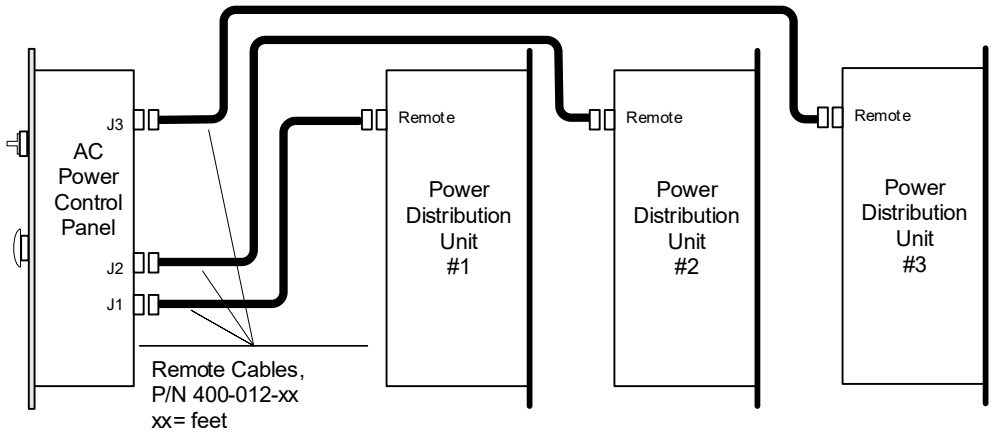




- Employs one Momentary / Lighted ON switch and one Maintained Emergency Power OFF switch, Twist-to-Release E-Stop switch
- OFF Switch has Oversize 60mm yellow circular legend plate
- One switch controls up to three PDUs simultaneously
- LED indicators show power-on status of each PDU
- Enclosed panel

- ***PN 020-240 replaces PN 020-020 and PN 020-020-01 Controllers***

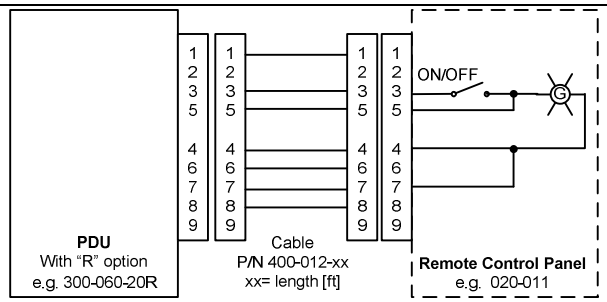
Notional Interconnect



Basic Control Circuits

AC General control panel designs fall into one or two general design schemes: type “R” or type “R1” (schematically shown below).

Remote Control Type -R

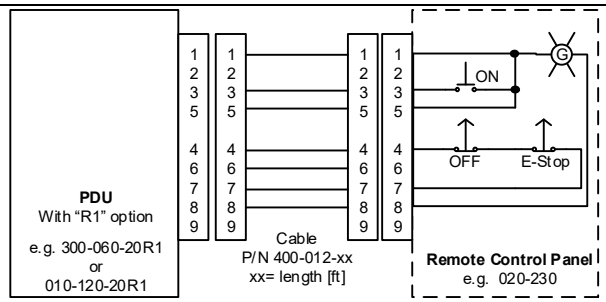


A "R" configured AC Control Panel contains (1) maintained style selector switch.

Turning the ON/OFF switch will cause the switched outputs in a PDU to supply output power and illuminate the Control Panel ON/OFF switch lamp.

Turning the OFF switch will disengage the switched outputs in each PDU and shut off power indicator lamp.

Remote Control Type -R1



A "R1" AC Control Panel contains (2) momentary style switches.

In newer designs, the ON & OFF contacts (shown above) are combined into one ON/OFF momentary selector switch.

Engaging the ON switch will cause the switched outputs in a PDU to supply output power and illuminate the Control Panel ON switch lamp.

Switching to OFF will disengage the switched outputs in each PDU extinguish the ON indicator light

Pressing the E-Stop will disengage the switched outputs in each PDU illuminate the E-Stop indicator light

Additional Control Options

Your design may be more complex and require additional control capability. AC General can work with you to accommodate:

- Multiple E-stops
- Sequenced outputs
- System inter-locks (doors, fans, external control switches, etc)
- Remote enabling or control of specific PDU outputs
- Digital control of outputs from a control computer, PC, VXI card, etc.
- Smart relay or PLC control

Please contact us to discuss your unique requirements: support@acgen.com

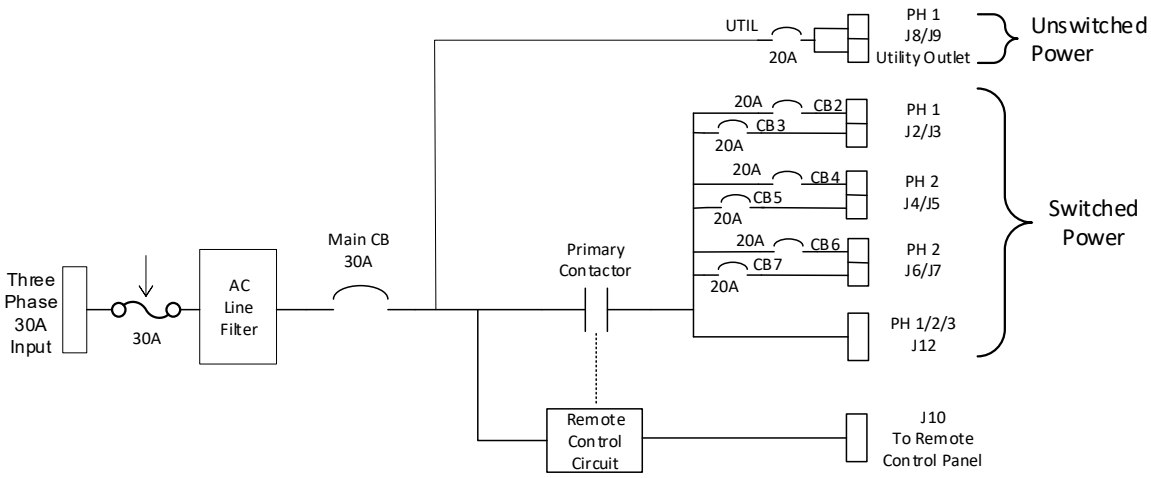
Important E-Stop Usage information

In general, all AC General control panels which contain E-Stop or red Mushroom-style switch(s) will *not* trip the PDU circuit breaker when pressed. Instead, the primary contactor in the PDU is opened which removes all “switched” power.

A simplified notional schematic for a typical three phase 30A PDU is shown below to highlight “switched vs unswitched” power concept.

If the PDU is wired with Utility (ie "convenience") Outlets, those outlets will remain live even after the E-Stop switch is pressed. Typically, only important keep-alive equipment is plugged into the Utility outlet.

Control power is supplied by the PDU.



Specifications

- Control Power (supplied by the PDU):
  - 24VAC (60Hz PDUs)
  - 24VDC (400Hz PDUs)
- Non-enclosed control panels feature touch-safe low voltage terminal connections
- Operating Temperature: 0ºC to +50ºC
- Non-operating Temperature: -40ºC to +70ºC
- Relative Humidity (non-condensing): 5 to 95% +/- 5%
- Operating & Non-operating Altitude: 15,000 Ft
- Operating Vibration: 5 to 55 Hz, 0.33 mm peak-to-peak displacement
- Functional Shock 15g, half-sine shock pulse, 11 mSec, 3 axes
- Remote Connector Types:
  - 9-pin AMP Circular Plastic Connectors
    - AMP 206705-1
    - Mating Conn: AMP 206708-1
- Avg. Bulb Life: 100K Hrs. (LED)
- Bulb replacement: T 3 ¼ Mini-bayonet
- All components and wiring are UL listed/recognized components
- Unless specified, all front panels are painted Gray, FS595, Chip #26496
- Any PDU with either R or R1 remote control includes the remote control cable