

February 2009

Simplex, Duplex, Triplex Booster, Sewage, Submersible ....



## Product Description

Eaton's Cutler-Hammer custom Pump Controllers are designed for use in a variety of Industrial, Commercial and Municipal pumping applications from simplex and duplex sequencing operations, to waste water and sewage treatment installations.

Various styles are available from relay based Simplex controllers to PLC based Quadraplex controllers with pressure transducer input.

As well, a Variable Frequency Drive Booster Controller, model BPV is available.



## Approvals



N. Y. C.  
APPROVED



## Product Features

### Eaton Cutler-Hammer Components

All Pump Controllers are manufactured using Eaton Cutler-Hammer components such as NEMA rated starters, oil and dust tight 10250T Series NEMA pushbuttons and Cutler-Hammer breakers.

### Enclosures

Eaton Cutler-Hammer manufactures a wide variety of enclosures. As well as many standard designs, custom enclosures can be produced to your specifications. Ratings include NEMA 1, 2, 3R, 4, 4X and 12.

### Control Transformer

The control power is supplied by a control power transformer (TR) which is protected by two fuses on the primary lines. Secondary power is 120vac - 50/60Hz.

### Power ON / Pump Run Lights

A 120V Power ON and Pump Run light is supplied standard on Duplex, Triplex and Quadraplex controllers and can be added as an option to all simplex controllers. The Power ON light indicates when power is supplied to the internal components and indicating devices. The Pump Run light is operated from an auxiliary contact from the pump motor starter. The two lights are provided standard in PLC controlled units.

### Auxiliary Indication Light

Auxiliary indication lights can be provided for indication of various conditions. Quantity and nameplate information must be specified at time of order.

### Common Alarm Indication

A common alarm indicating light can be provided which will activate when any alarm condition exists.

### Manual Alternation Selector Switch

An optional selector switch can be installed which allows the user to manually select lead and lag pumps.

### Auxiliary / Remote Contacts

An auxiliary set of contacts can be installed to provide a signal for indication of Pump Run and / or AC Power Failure.

Extra remote contacts ( 1 set - Form-C ) are also available. The quantity required must be specified at time of order.

### Space Heaters

Several space heater options are available. A 120V / 220V, 300W heater can be provided by itself, with Thermostat for controlling temperature or with a Humidistat for control of internal moisture.

As well, a low room temperature switch and high temperature cutout input (PLC models) are available as options.

### Strobe Light

A compact, rotating warning light can be provided in place of an alarm bell for alarm indication purposes. It features a parabolic reflector which rotates around an incandescent lamp, providing 60 flashes per minute in all directions.

### Timers

Timer options include SST - Sequential Start Timer, RPT - Run Period Timer and ETM - Elapsed Time Meter.

In the PLC based controller, timer values can be field modified. Descriptions of each timer function can be found in the Pump Controller Instruction Manual - IM05805007K.

### Weekly Test

The weekly clock function can be provided by either a separate component or as part of the PLC program / function. This allows the user to set automatic time intervals for performing system tests.



### Elapsed Time Meter

A six digit LCD, solid state, non-resettable elapsed time meter can be installed which will record the amount of time the pump motor has been running. It receives the elapsed time signal from the auxiliary contact of the motor starter. This ensures that elapsed time is recorded in both the HAND and AUTO position of the H.O.A. Control selector switch.

In a PLC operated controller, the elapsed time meter is integral to the PLC.

### Pressure Input Devices

Various pressure switches are available for functions such as low suction pressure, low suction shutdown and low system (tank) pressure. Options include a Standard diaphragm pressure switch, a Mercoild 10-300 or 25-600psi seawater rated stainless steel Mercoild switch.

On PLC based controller units, a pressure transducer input can be substituted in place of a standard pressure switch. The transducer provides a 0.5 - 5.5V input to the PLC.

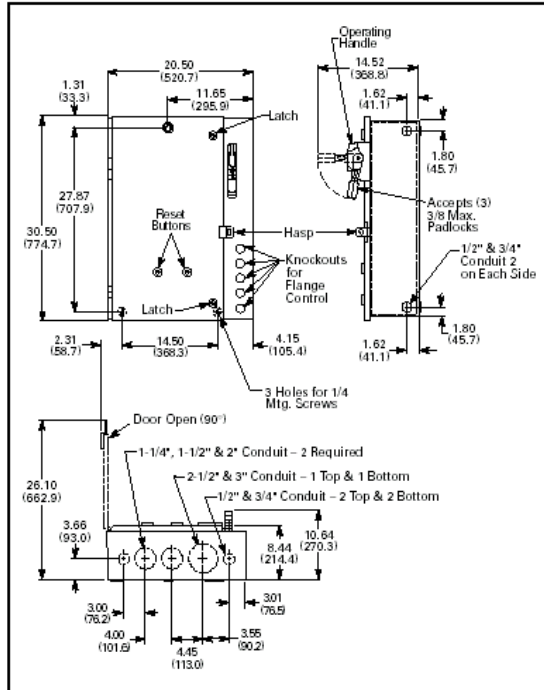
Simplex, Duplex, Triplex Booster, Sewage, Submersible ....

**Dimensions**

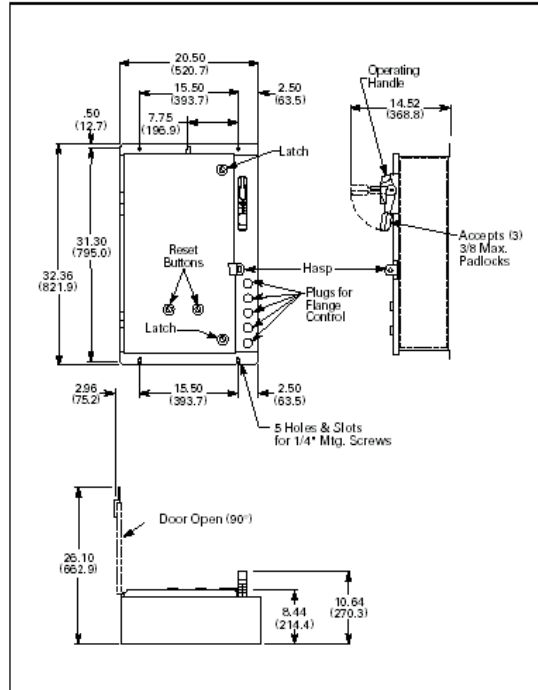
**Standard Enclosure - Type NEMA 2, 3R, 4, 4X, 12**

Approximate Dimensions in Inches (mm)

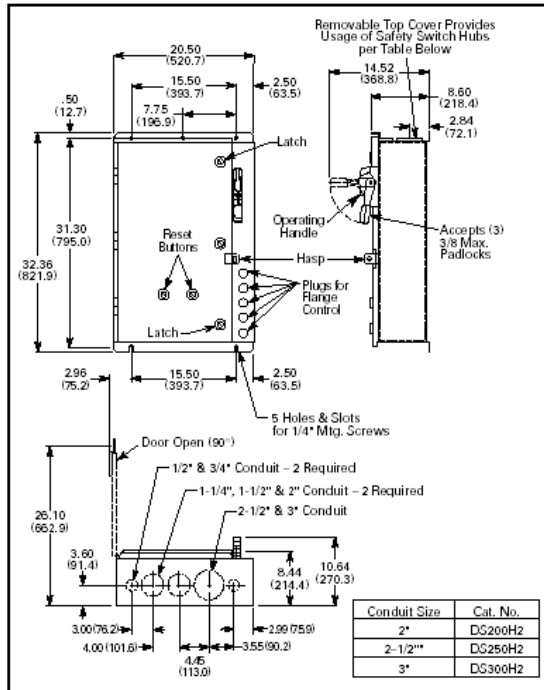
**Box C, NEMA 1**



**Box C, NEMA 12**

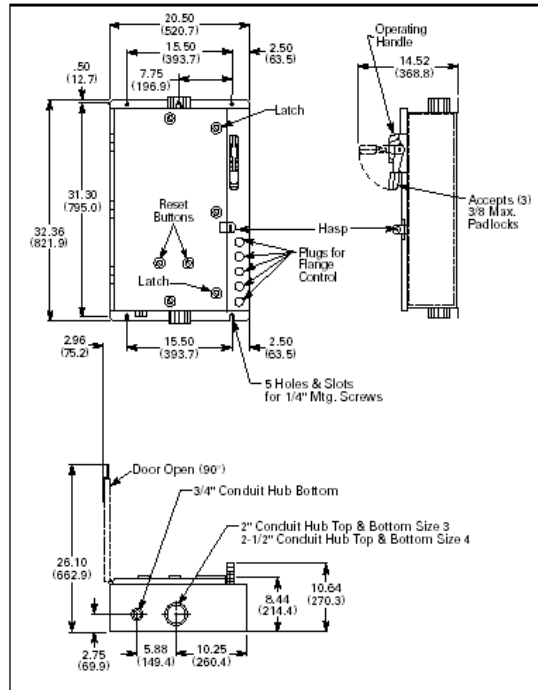


**Box C, NEMA 3R**



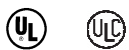
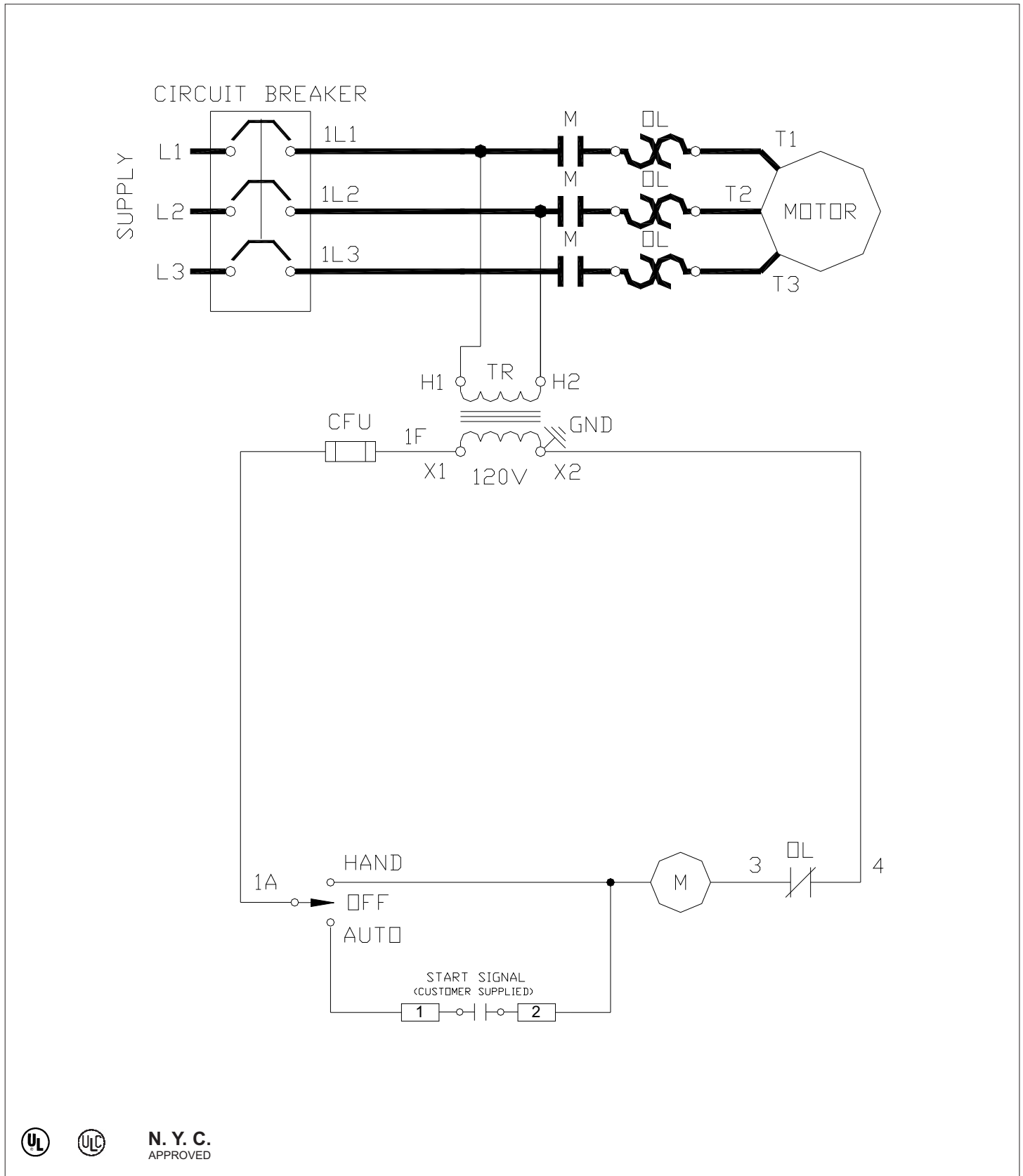
Conduit Size	Cat. No.
2"	DS200H2
2-1/2"	DS250H2
3"	DS300H2

**Box C, NEMA 4X**



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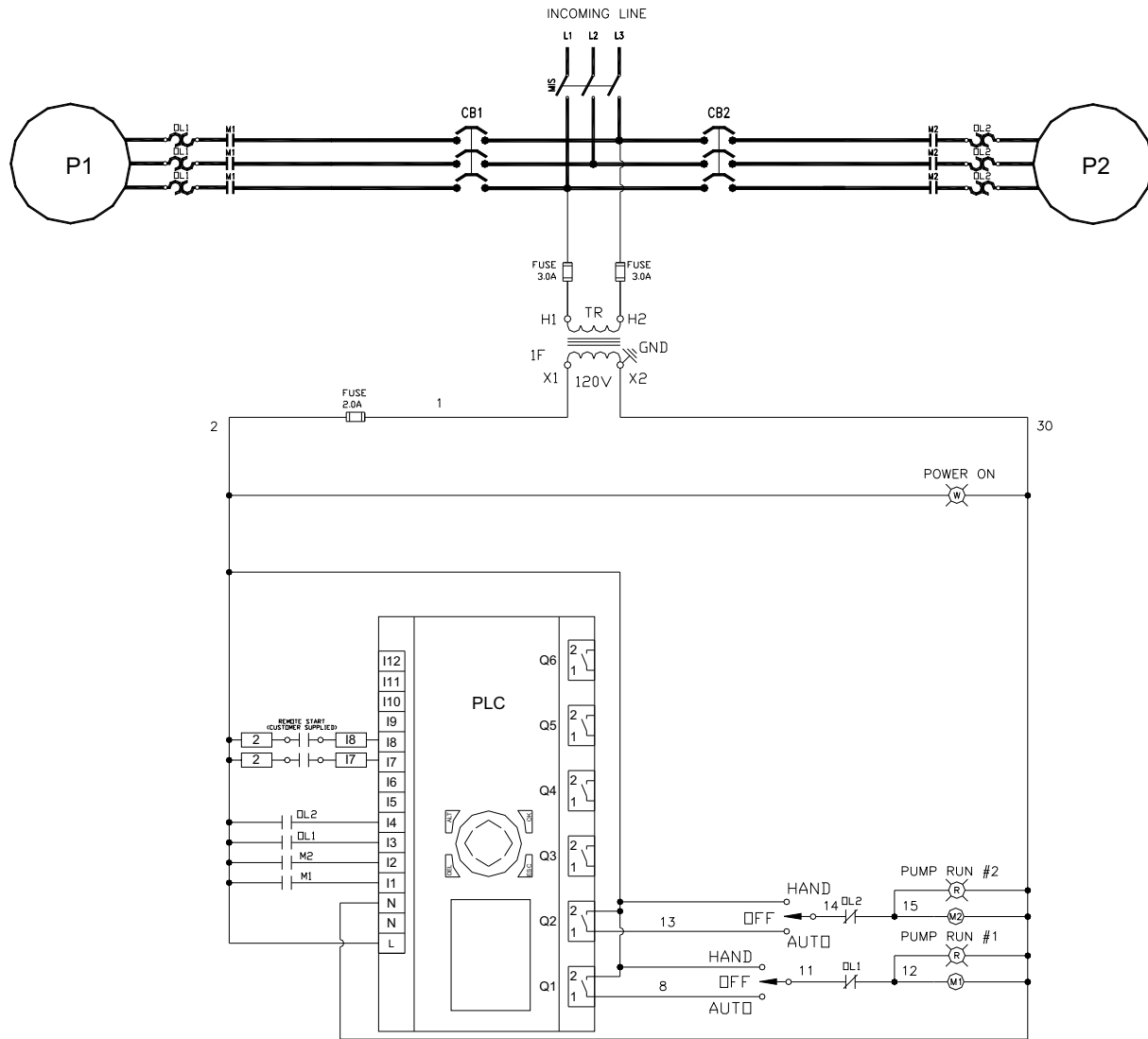
Electrical Wiring Schematic  
Booster Pump Controller - Simplex



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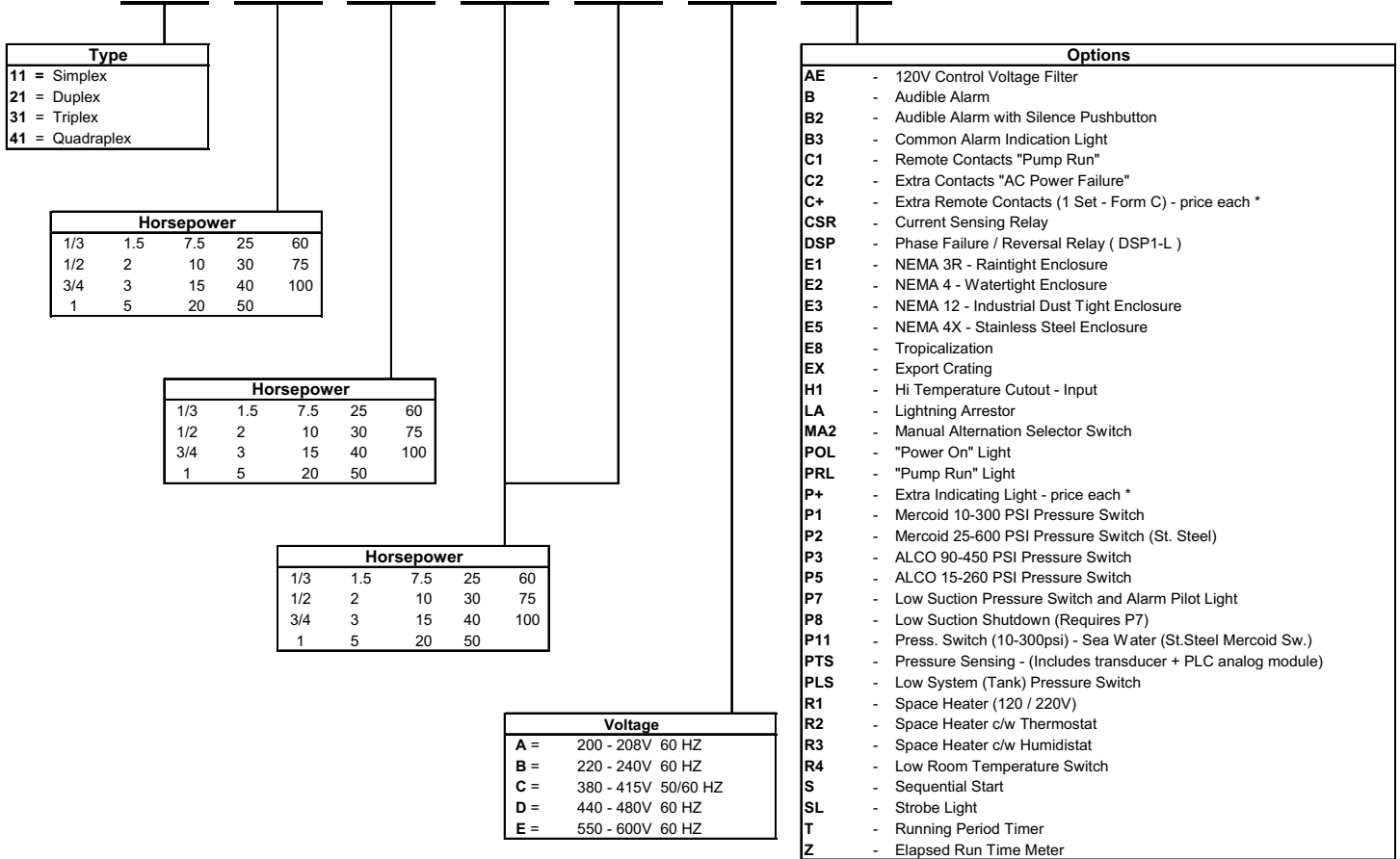
### Typical Electrical Wiring Schematic Booster Pump Controller - PLC Based



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**Catalog Number Selection  
Booster Pump Controller Catalog Numbering System**

**BPC**



## Manufacturing

### Flexible Production Capabilities

Our independent demand production area allows us to provide single, custom controllers, while our lean manufacturing assembly lines give us the capability to process large volume requests.

### Testing

All custom Pump Controllers are tested in-house by one of our certified test technicians before being packed and shipped.

### Design

Standard controller models and operating programs have been designed and developed in-house by our technical support specialists.

Controllers with extra or non-standard features can be designed from your existing specifications. As well, custom engineered solutions can be produced for your application.

## Field Coverage and Support

### Local Representation

In the United States, Eaton Cutler-Hammer provides local support through our network of Pump Controller factory trained agents.

### Start Up

Each agent is available for local sales and technical support including on-site start up assistance.

### Spare Parts

All Eaton Cutler-Hammer authorized agents have quick access to spare parts for emergency situations.

### Note:

For support in territories where there are no Eaton Cutler-Hammer authorized sales agents, please contact the factory direct.

## Application Support

### Factory Location

The Eaton Cutler-Hammer support team is located in our Pump Controller manufacturing facility, which allows for improved communication and a reduction in errors and delays.

### Territory Assigned

Each technical support Product Specialist is assigned to a specific territory to ensure continuity of efforts.

### Quotations

All requests for quotes are reviewed and processed within 48 hours of receipt.

### Email

Email responses are returned within 24 hours of receipt.

## Delivery

### Standard Delivery

Standard delivery on all styles of Pump Controllers is 2-3 weeks.

### Flexible

Rush or improved delivery times can be accommodated by contacting Cutler-Hammer.