# **FDR** Residential Fire Pump Controllers Features

FDR Residential - Simplex, Duplex

March 2010



# **Product Description**

Eaton Cutler-Hammer Residential Fire Pump Controllers work in conjunction with single phase, electric, residential fire pumps and packages. Available as a Simplex or Duplex unit, all controllers are UL listed and meet or exceed NEMA requirements.

## **Product Features**

### **Sequential Start Timer**

A sequential start timer may be installed which is used to program a start delay after the pressure switch initiates an automatic start. In duplex controllers, a SST is standard and is wired to delay starting the second (lag) pump. The timer does not operate if starting is initiated via the start pushbutton or emergency start handle.



#### **Run Period Timer**

The run period timer turns on whenever the controller starts due to a drop in pressure. This ensures that the pump motor is not subjected to frequent starts if the pressure switch contact repeatedly closes and opens at short time intervals because of pressure fluctuations.

#### **NEMA 2 Enclosures**

All FDR controllers are supplied with NEMA 2 enclosures.

Contact factory for availability of other styles.

#### Alarm & Status Indication

Both Simplex and Duplex controllers are equipped with illuminated pushbuttons which have dual use.

The green "POWER ON" pushbutton functions as the "Start" pushbutton and indicates when the circuit breaker is closed.

The red "PUMP RUNNING" pushbutton functions as the "Stop" pushbutton and indicates when the pump is running.



When the controller starts the fire pump, the red Pump Running light turns on as well as the buzzer mounted on the front panel.

#### **Mounting Bars**

FDR residential controllers can be supplied with optional upper and lower mounting bars.



#### **Optional Floor Mount Legs**

Optional 12 inch high floor mounting legs are available upon request.

## **Dual Setting Pressure Switch**

A dual setting 15-290 PSI pressure switch is used to sense a drop in pressure which actuates the residential controller. The setting adjustment screws are used for setting the pressure range and differential. There is one set of form-C output contacts rated at 10 amps.



## **NEMA Rated Contactors**

Cutler-Hammer NEMA rated Freedom Contactors are used in all FDR Residential fire pump controllers. A wide variety of coil voltages are available for domestic and international use.

## **Emergency Start Operator**

A mechanically operated emergency start handle activates the motor contactor independent of any electrical control circuits or pressure switch input.



### Standards & Certification

The FDR Residential Fire Pump Controllers meet or exceed the requirements of Underwriters Laboratories, Underwriters Laboratories Canada, the Canadian Standards Association, and the New York City building code.



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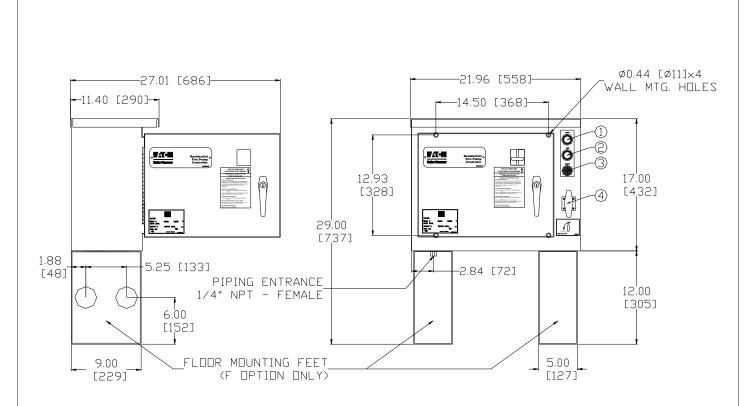


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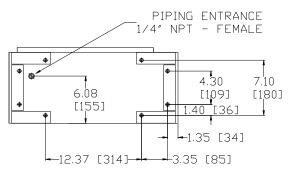
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## **Dimensions**

# Standard Enclosure - Simplex - Type NEMA 2



- 1 -START PUSHBUTTON / POWER ON LIGHT
- 2 -STOP PUSHBUTTON / PUMP RUNNING LIGHT
- 3 -BUZZER
- 4 -MSH (EMERGENCY START HANDLE)



Motor Hp	Line Voltage	Withstand Rating		Approx. Weight
		Standard	Intermediate	Lbs. (Kg)
1/2 - 10	230V - Single Phase	10,000	22,000	60
				(27)







## NOTES:

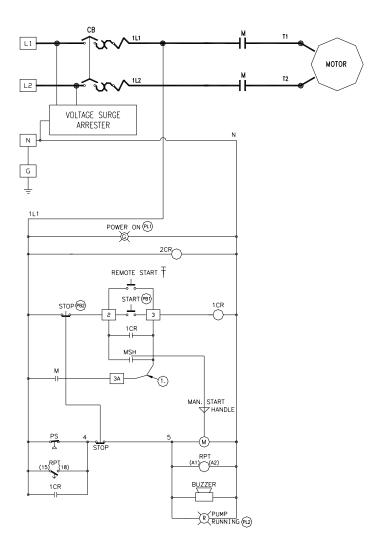
- All enclosures finished in FirePump red.
   Cable Entrance either top or bottom.

- 3. Standard Enclosure type NEMA 2.
  4. Add 12 inches height for optional floor stands.

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# **Electrical Wiring Schematic**



LEGEND:
M-RUN CONTACTOR

1CR-MANUAL CONTROL
RELAY

2CR-POWER FAILURE RELAY
PS-PRESSURE SWITCH
CB-CIRCUIT BREAKER
STOP-LOCAL STOP SWITCH
START-LOCAL START SWITCH
MSH-MANUAL START HANDLE
(AUX. CONTACT)
RPT-RUN PERIOD TIMER

## NOTES:

- 1. ADD JUMPER TO CONVERT TO SEMI-AUTOMATIC.
- 2. ALL RELAY CONTACTS SHOWN IN NO POWER CONDITION.
- 3. FOR CUSTOMER REMOTE START, CONNECT DRY CONTACT BETWEEN TERMINALS 2 & 3.
- 4. SERVICE ENTRANCE
  EQUIPMENT. (DOES NOT
  MEET CSA SERVICE
  ENTRANCE REQUIREMENTS)

T - EXTERNAL EQUIPMENT

