Product Description

Eaton Cutler-Hammer Residential Fire Pump Controllers work in conjunction with single phase, electric, residential fire pumps and packages. They are designed to provide fire protection for single and multiple residences. Available as a Simplex or Duplex unit, all controllers are UL listed and meet or exceed NEMA requirements as well as NFPA13D, Sprinkler Systems One and Two Family Dwellings and Manufactured Homes and NFPA 70, National Electrical code.

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

Each FDR residential controller is equipped with upper and lower mounting bars as standard.

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, New York City building code and are built to NFPA 13D standards.
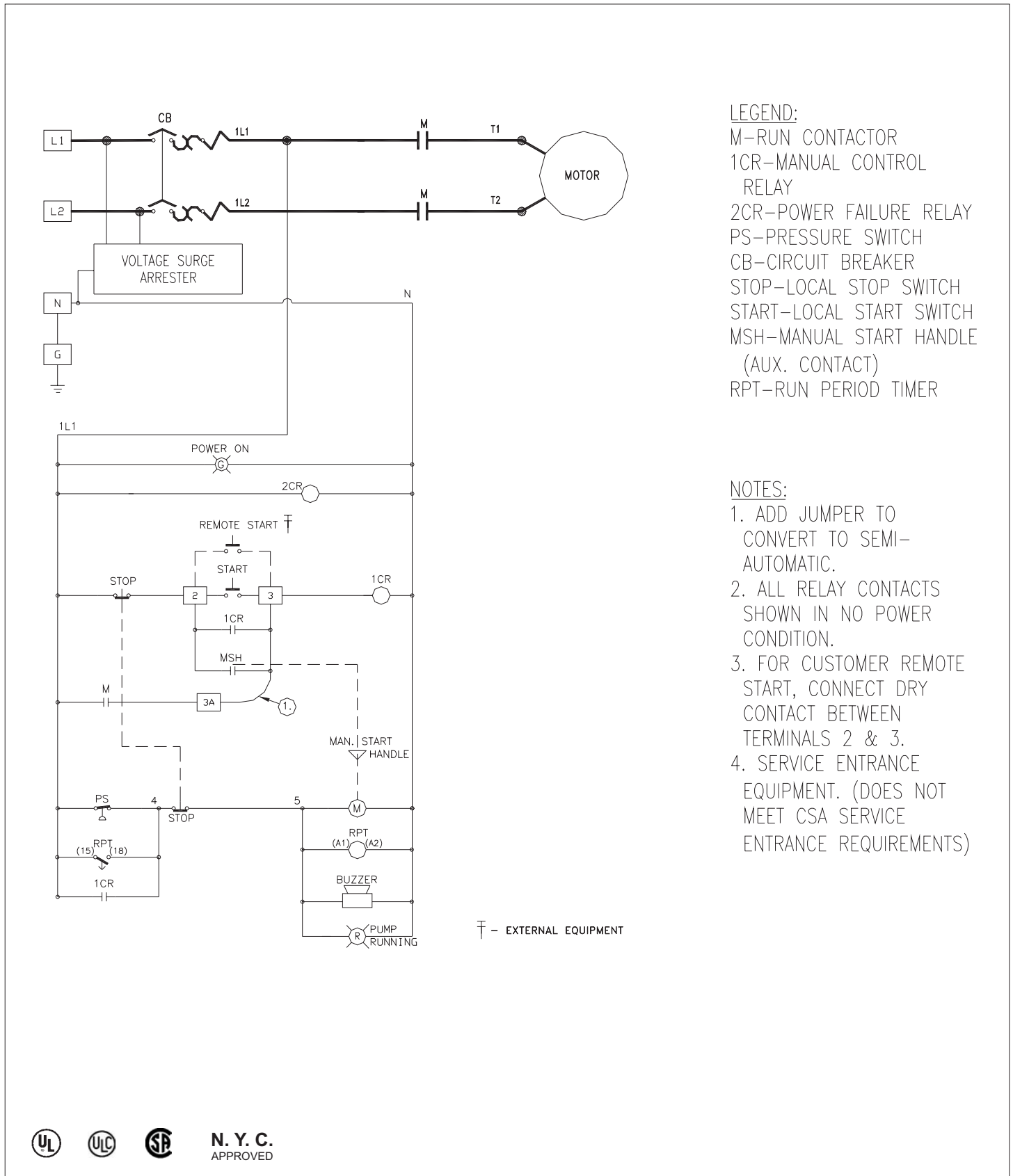
N. Y. C. APPROVED

Dimensions
Standard Enclosure - Simplex - Type NEMA 2

27.01 [686]
11.40 [290]
21.96 [558]
14.50 [368]
Ø0.44 [Ø11]×4 WALL MTG. HOLES

12.93 [328]
17.00 [432]

1.88 [48]
5.25 [133]
2.84 [72]
29.00 [737]

PIPING ENTRANCE 1/4" NPT - FEMALE

6.00 [152]
12.00 [305]

9.00 [229]
FLOOR MOUNTING FEET (F OPTION ONLY)
5.00 [127]

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

PIPING ENTRANCE 1/4" NPT - FEMALE

6.08 [155]
4.30 [109]   7.10 [180]
1.40 [36]
1.35 [34]
12.37 [314]
3.35 [85]

Motor Hp	Line Voltage	Withstand Rating		Approx. Weight Lbs. (Kg)
		Standard	**Intermediate**	
½ - 10	230V - Single Phase	10,000	22,000	60 (27)

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NOTES:
1. All enclosures finished in FirePump red.
2. Cable Entrance either top or bottom.
3. Standard Enclosure type NEMA 2.
4. Add 12" height for optional floor stands.

Electrical Wiring Schematic

FDR Residential - Simplex

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
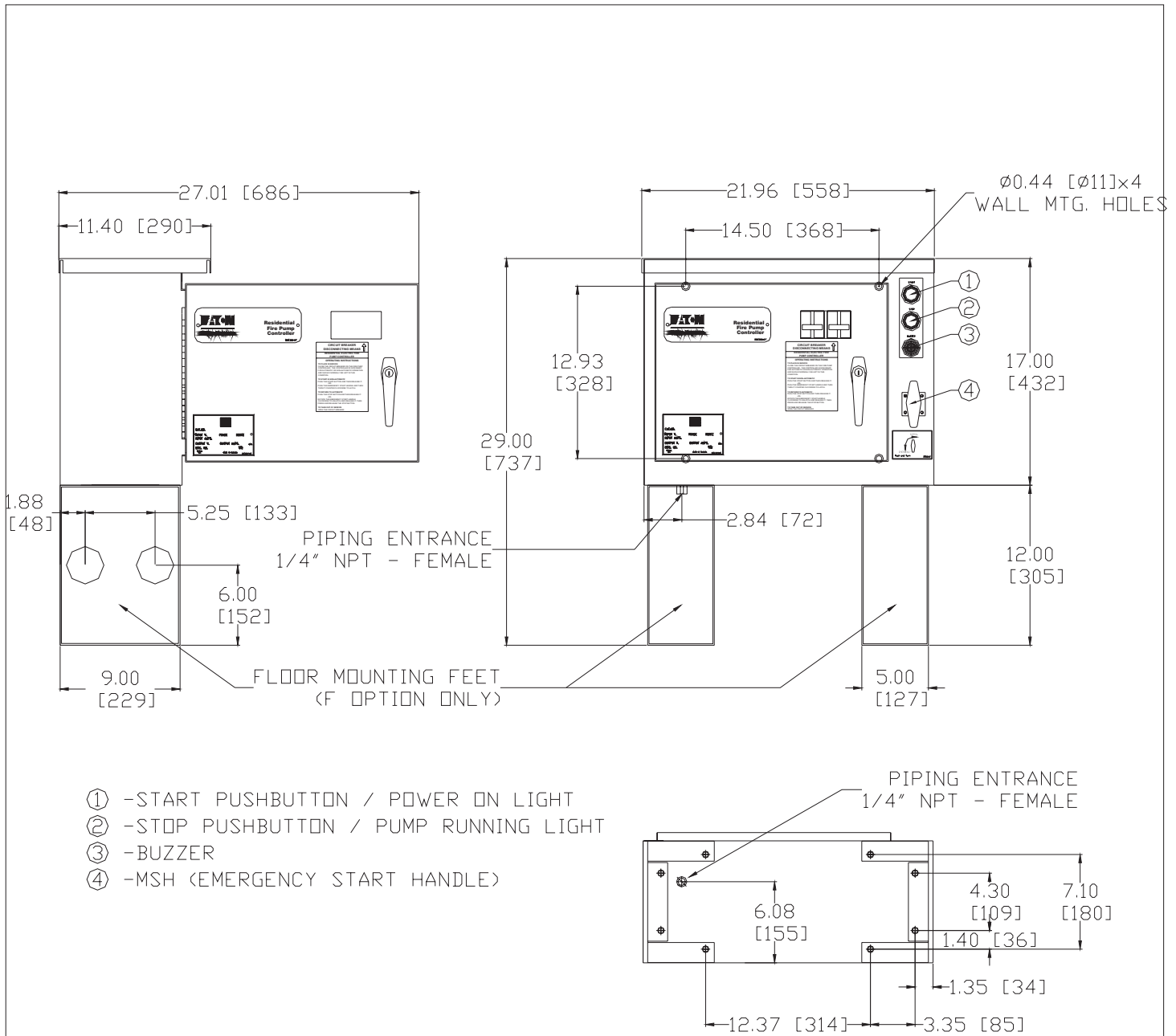 EQUIPMENT. (DOES NOT
 MEET CSA SERVICE
 ENTRANCE REQUIREMENTS)

☦ — EXTERNAL EQUIPMENT

N. Y. C.
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FDR Residential - Simplex, Duplex

Dimensions
Standard Enclosure - Duplex - Type NEMA 2

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

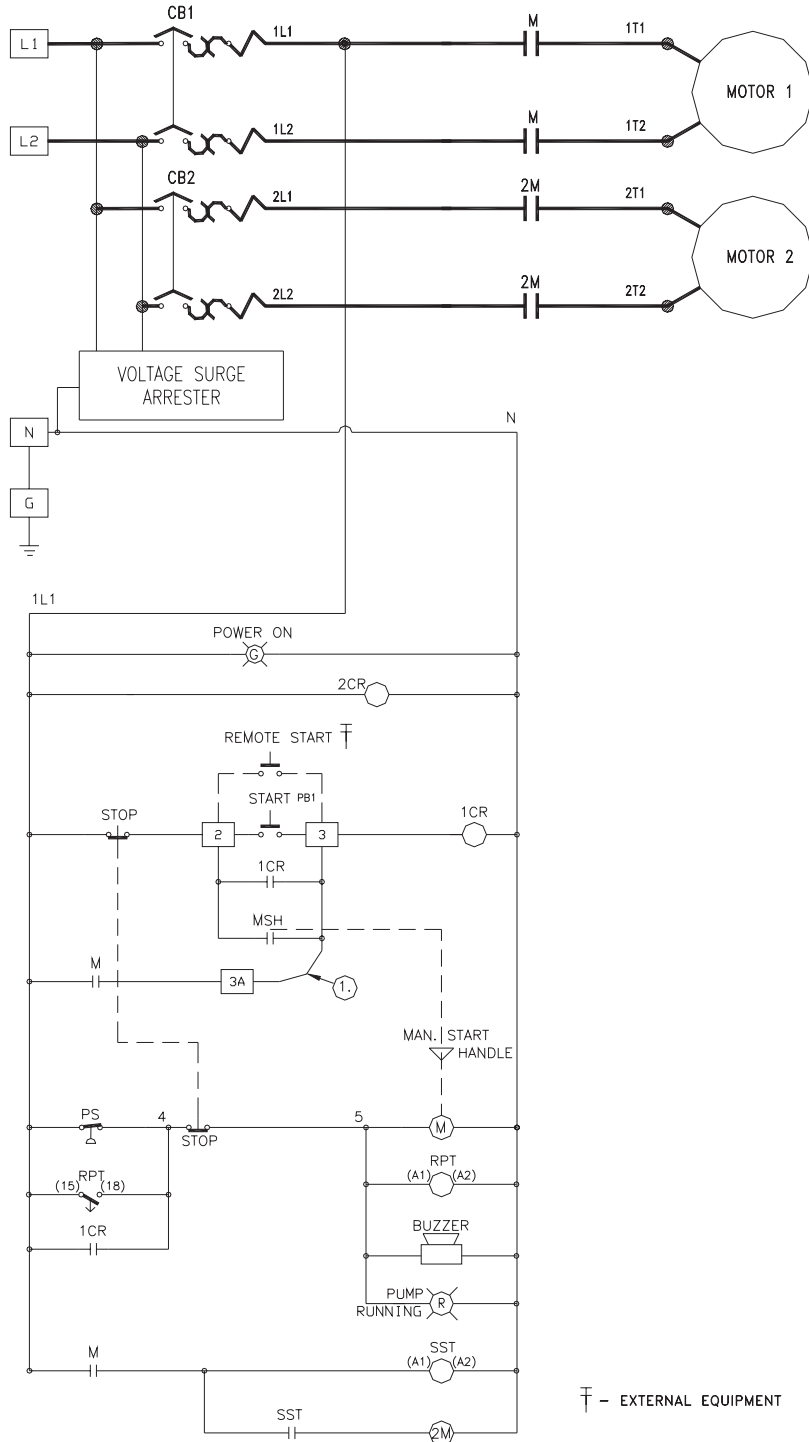| Motor Hp	Line Voltage	Withstand Rating		Approx. Weight Lbs. (Kg)
		Standard	**Intermediate**	
½ - 10	230V - Single Phase	10,000	22,000	60 (27)

N. Y. C. APPROVED

NOTES:
1. All enclosures finished in FirePump red.
2. Cable Entrance either top or bottom.
3. Standard Enclosure type NEMA 2.
4. Add 12" height for optional floor stands.

Electrical Wiring Schematic

FDR Residential - Duplex

LEGEND:
M-PUMP 1 RUN CONTACTOR
2M-PUMP 2 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
SST-SEQUENTIAL START 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)

N. Y. C.
APPROVED