MANUAL
ELECTRIC JOCKEY PUMP CONTROLLER
SERIES M-15

This Manual provides General Information, Installation, Initial Start-up, and Sequence of Operation Information for Series M-15 Electric Jockey Pump Controllers.

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METRON, INC.
1505 West Third Avenue
Denver, Colorado 80223

Telephone: (303) 592-1903 Fax: (303) 534-1947

PART I: GENERAL DESCRIPTION

Jockey (or make-up), Pump Controllers are installed in the same system as the Main Fire Pump Controllers. Their primary function is to maintain normal water pressure which may fluctuate slightly due to small leaks in the system. The use of this small pump will eliminate frequent starting of the Main Pump. The Jockey Pump Controller automatically starts the Jockey Pump Motor when the water pressure drops below a set level for Models M15A, M15B, and M15C only.

Model M15A includes a Line Voltage to the primary side of a 115 Volt Control Transformer, a Pressure Switch and a Minimum Run Timer. The M15B Model operates off of Line Voltage and includes a Pressure Switch. Model M15C also operates off of the Line Voltage and includes both a Pressure Switch and a Minimum Run Timer. The M15D model operates off of the Line Voltage but does not have a Pressure Switch or Minimum Run Timer.

PART II: MODEL DESIGNATION

The Jockey Pump Controllers are designated as follows:

M15A - 7.5 - 460
I II III

A. Designates Options

1. With Transformer, Pressure Switch, and Minimum Run Timer.
2. With Pressure Switch.
3. With Pressure Switch and Minimum Run Timer.
4. Does not contain any of the following:
   - Transformer
   - Pressure Switch
   - Minimum Run Timer

B. Designates Horsepower

0.33 - 1/3 HP	2 - 2 HP	15 - 15.0 HP
.50 - 1/2 HP	3 - 3 HP	20 - 20.0 HP
.75 - 3/4 HP	5 - 5 HP	25 - 25.0 HP
1 - 1 HP	7.5 - 7.5 HP	30 - 30.0 HP
1.5 - 1.5 HP	10 - 10.0 HP	50 - 50.0 HP

C. Designates Voltage Rating

	240 - 240 V	575 - 575 V
208 - 208 V	380 - 380 V	600 - 600 V
220 - 220 V	415 - 415 V	
230 - 230 V	460 - 460 V	

PART III: INSTALLATION

The Jockey Pump Controller has been assembled and wired at the factory with the highest workmanship standards. All wiring and functions have been thoroughly tested to ensure correct operation when properly installed. Before operating the Controller, perform the ***INITIAL INSTALLATION START-UP PROCEDURE , PART IV.***

The Enclosure should be well grounded according to Local Standards. The connection from the Contactor to the Motor may be done after the Test Procedure is completed.

PART IV: INITIAL INSTALLATION START-UP PROCEDURE

A. **General**: All but the Final Functional Test can be made with the Motor disconnected. This will eliminate the need for starting and stopping the Motor several times during the Test Procedure. If the Output Connections from the Contactor to the Motor have been made on initial installation, disconnect the wires for the first part of the ***INITIAL INSTALLATION START-UP PROCEDURE***.

The Controls and their functions are as follows:

1. **Motor Disconnect Switch:** The Motor Disconnect Switch is located ahead of the Motor Contactor and is provided with fuses according to the ***Motor Full Load Current***. Its function is to provide Short Circuit Protection and a Disconnect Means. (A Circuit Breaker may be used in lieu of the Motor Disconnect Switch and fuses.)

2. **Hand - Off - Auto (HOA) Selector** ***(Models M15A, M15B, and M15C only)***. This Switch is used to select between ***Automatic*** and ***Manual*** Operation. When switched to ***"Hand"***, the Motor starts. When switched to ***"Off"*** the Motor Stops. When switched to ***"Auto"***, the Contactor **closes** and starts the Pump Motor when the pressure drops below a pre-set level.

3. **On - Off Selector** *(Model M15D only).* This Switch is used to select between the On and Off operation. When switched to ***"On"*** the Motor **starts**. When switched to ***"Off"*** the Motor **stops.**

B. **Initial Start Up**

1. Close the Disconnect Switch and measure the Voltage on the Line Side of the Motor Contactor. The Voltage should be the same as the Incoming Line Voltage.

2. ***Models M15A, M15B, and M15C only.***

   Switch the HOA Selector to ***"Hand"*** and the Motor Contactor should **close**. Measure the voltage on the Load Side of the Motor Contactor. The voltage should be the same as the Incoming Line Voltage.

3. Switch the HOA Selector or the On - Off Selector Switch depending on the Controller to ***"Off"***. The Motor Contactor should **open**.

4. ***Models M15A, M15B, and M15C only.***

   MODEL M15B

   Position the HOA Selector in ***"Auto"*** and drop the Water Pressure at the Water Inlet to the Controller so that the Pressure Switch will **close**. The Motor Contactor should **close**. Allow the Water Pressure to return to Normal. The Motor Contactor will **open** as soon as the Water Pressure returns to Normal.

   MODEL M15A AND M15C

   Position the HOA Selector in ***"Auto"*** and drop the Water Pressure at the Water Inlet to the Controller so that the Pressure Switch will **close**. The Motor Contactor should **close**. Allow water pressure to return to normal. Set the Minimum Run Timer to the desired setting, typically 30 seconds. The Motor Contactor should **open** after this time period has elapsed.

5. Turn Selector Switch to ***"OFF"***

6. Open the Disconnect Switch.

7. Connect the Output from the Motor Contactor to the Pump Motor.

8. Close the Disconnect Switch.

9. Depending on the Controller, switch the HOA Selector to ***"Hand"*** or the On - Off Selector to ***"On"***, and the Motor should **start**.

10. Switch the Selector to ***"Off"*** and the Motor should **stop**.

PART V: OPERATION OF CONTROLLER

After the Installation and Test Procedures are completed, the Controller will be ready for normal operation. The Disconnect Switch should be **closed**. If this is a Controller with a Minimum Run Timer, set it to the desired setting, typically 30 seconds.

PART VI: SEQUENCE OF OPERATION

A. Introduction: The explanation of the Sequence of Operation will start with the assumption that the Controller has been properly installed, all external connections have been made and the Disconnect Switch is **closed**.

B. Manual Operation: To manually start the Jockey Pump Motor, the HOA Selector is in the ***"Hand"*** or the On - Off Selector is in ***"On"*** depending on the Controller. This will energize the Motor Contactor Coil (MC) and will cause the Motor Contactor Contacts to **close**, thus starting the Motor.

To manually stop the Motor the Selector Switch is switched to ***"Off"***, thus allowing MC to de-energize and open the Motor Contactor contacts.

C. Automatic Operation *(Models M15A, M15B, and M15C only.):* For Automatic Operation, the HOA Selector is switched to ***"Auto"***. This places the Pressure Switch in series with the MC. Under normal pressure, the Pressure Switch contacts are **open**. When the water line pressure drops below a certain pre-set level the Pressure Switch Contacts close and energize the coil of MC, thus closing the Contractor Contacts and starting the Pump Motor. The contacts of the MC **close** and through the normally closed contacts of the Minimum Run Timer (1TR), MC is held energized even after the water pressure has returned to normal. The MC will remain energized until 1TR times out and its contacts **open**. If this is a Controller without 1TR, the Motor will **stop** as soon as the water pressure returns to normal.