



CLASS 8198 ISO-FLEX MEDIUM VOLTAGE CONTROLLER — MODEL 3, SERIES B

OPERATING INSTRUCTIONS FULL VOLTAGE NON-REVERSING CONTROLLERS AND FEEDER DISCONNECT CONTROLLERS

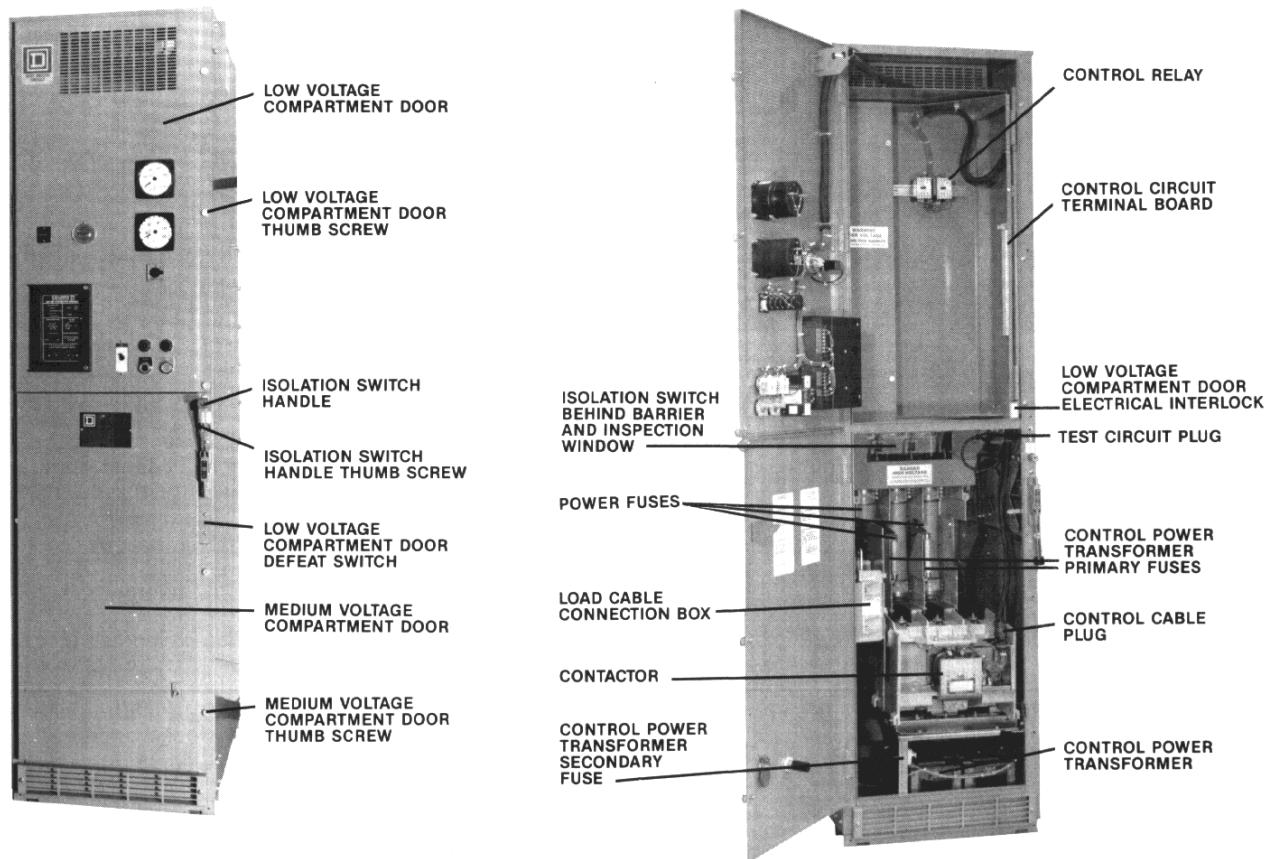


FIGURE 1

This service bulletin covers operating instructions for a full voltage non-reversing controller and a feeder disconnect controller. Operating instructions for other type controllers are covered in the following:

1. Service Bulletin 8198-8 for reduced voltage autotransformer and primary reactor controllers.
2. Service Bulletin 8198-9 for full voltage non-reversing synchronous and brushless synchronous controllers.

Service Bulletin 8198-6 covers the installation and

maintenance of Square D Class 8198 Model 3 Series B Medium Voltage Controllers and should be read in its entirety prior to installing or operating the equipment. The Class 8110 contactors are covered in detail in Service Bulletin 8110-10 (vacuum) and Service Bulletin 8110-11 (air break).

This service bulletin will familiarize the user with the location and identification of standard controller parts (Figure 1), and explain the basic control circuit sequence of a full voltage non-reversing controller (Figure 2) and a feeder disconnect controller (Figure 3).

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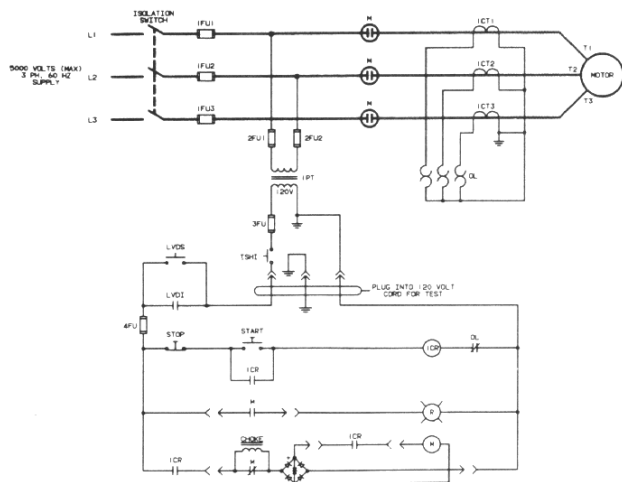


FIGURE 2

A. The basic full voltage non-reversing controller (See Figure 2) includes:

- Three pole non load break isolation switch
- Three current limiting power fuses (1FU1, 1FU2, 1FU3)
- 750VA control transformer (1PT) with primary fuses (2FU1, 2FU2)
- 360 ampere, 3 pole electrically held vacuum contactor (M)
- Three current transformers (1CT1, 1CT2, 1CT3)
- Low voltage controls with:
 - Control circuit fuses (3FU, 4FU)
 - Isolation switch handle electrical interlock (ISHI)
 - 120 volt test circuit plug
 - Low voltage compartment door electrical interlock (LVDI)
 - Low voltage compartment door electrical interlock defeat switch (LVDS)
 - Start and stop push buttons
 - Control relay (ICR)
 - Red indicating light (R)
 - Ambient compensated, thermal overload relay (OL) with external reset

The control circuit sequence is as follows:

1. To start, depress "START" push button.
2. Relay "ICR" energizes and seals in.
3. "ICR" contacts close and contactor coil "M" energizes.
4. Electrical interlock "M" closes and indicating light "R" energizes, indicating that the contactor has closed.
5. Control interlock "M" opens, inserting "CHOKE" in series with contactor coil.
6. To stop, depress "STOP" push button.

NOTE: If the contactor fails to operate on the test circuit, refer to TROUBLESHOOTING section in Service Bulletin 8198-6.

B. The basic feeder disconnect controller (See Figure 3) includes:

- Three pole non load break isolation switch
- Three current limiting power fuses (1FU1, 1FU2, 1FU3)
- 750 VA control transformer (1PT) with primary fuses (2FU1, 2FU2)
- 360 ampere, 3 pole mechanically held vacuum contactor (M)

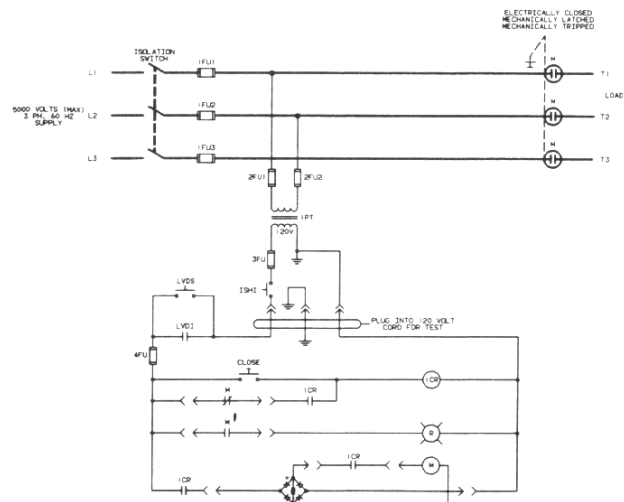


FIGURE 3

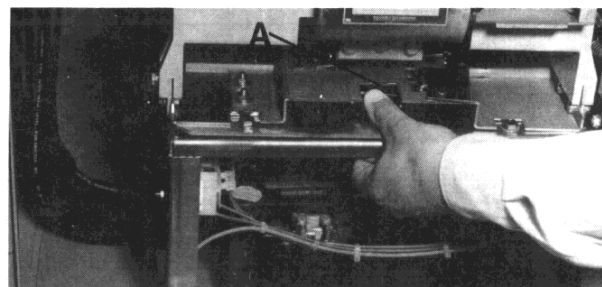
Low voltage controls with:

- Control circuit fuses (3FU, 4FU)
- Isolation switch handle electrical interlock (ISHI)
- 120 volt test circuit plug
- Low voltage compartment door electrical interlock (LVDI)
- Low voltage compartment door electrical interlock defeat switch (LVDS)
- Close push button
- Control relay (ICR)
- Red indicating light (R)
- Manual trip (unlatch) push button (located on front of medium voltage compartment door)

The control circuit sequence is as follows:

1. To close, depress "CLOSE" push button.
2. Relay "ICR" energizes.
3. "ICR" contacts close and contactor coil "M" energizes.
4. Electrical interlock "M" closes and indicating light "R" energizes, indicating that the contactor has closed.
5. Latch mechanism locks armature and mechanically holds contactor in the closed position.
6. Normally closed electrical interlock "M" opens; de-energizing relay "ICR".
7. To unlatch armature and open contactor, push in the manual unlatch push button. (The manual unlatch push button is located on the front of the medium voltage compartment door.)

NOTE: An electric release mechanism can be added to the latch mechanism and an electrical release circuit is available as an option.



Mechanically held vacuum contactor can be opened by pushing in release actuator (A).