

**GENERAL NOTE** - ALL NOTES BELOW HAVE BEEN PRE-NUMBERED. ONLY NOTES INDICATED ON THE ELECTRICAL OR INTERCONNECTION DIAGRAMS APPLY

ANY ADDITION OR DELETION TO THIS ENGINEERED CONTROL SYSTEM WITHOUT WRITTEN AGREEMENT BY MILLER, IS THE RESPONSIBILITY OF THE INSTALLING PERSONNEL.

- C] MOUNTED ON CABINET. P] MOUNTED ON CONTROL PANEL.
- D] MOUNTED ON DOOR. J] JUMPER ON TERMINAL STRIP

1] **WARNING** - THIS EQUIPMENT MAY BE AT LINE VOLTAGE EVEN WHEN NOT IN OPERATION. TO AVOID ELECTRIC SHOCK, DISCONNECT.

2] **WARNING** - NEVER REMOVE OR INSERT ANY MODULE OR CARD WHILE THE POWER IS ON.

3] CONNECT A-C INPUT TO L1, L2 AND L3 AS SHOWN. IF THE PHASE SEQUENCE INDICATOR DOES NOT LIGHT, INTERCHANGE L1 AND L3 CONNECTIONS.

4] REMOVE JUMPER IF ADDITIONAL INTERLOCK IS ADDED.

5] SEPARATELY MOUNTED - NOT SUPPLIED BY MILLER.

6] SEPARATELY MOUNTED - SUPPLIED BY MILLER.

7] SEPARATELY MOUNTED.

8] USE TWISTED TWO - CONDUCTOR CABLE. THIS CABLE MUST BE IN A SEPARATE SIGNAL CONDUIT. IT CANNOT BE RUN WITH OTHER CONDUCTORS OR CABLES. REFER TO TABLE 1 BELOW FOR WIRE SPECIFICATION DATA

9] SIGNAL WIRE CABLES WITH THIS NOTE NUMBER CAN BE IN THE SAME SEPARATE SIGNAL CONDUIT. THEY CANNOT BE RUN WITH NON-SIGNAL WIRES. FOR TWISTED TWO CONDUCTOR CABLES, USE BELDEN PART NUMBER 9497 OR EQUIVALENT FOR TWISTED THREE CONDUCTOR CABLES. REFER TO TABLE 1 BELOW FOR WIRE SPECIFICATION DATA.

10] REFER TO NOTE 9. THE NUMBER FOLLOWING THE NOTE 9 IDENTIFIES THE CABLES THAT MAY BE GROUPED TOGETHER IN THE SAME SIGNAL CONDUIT. FOR EXAMPLE, CABLES REFERENCED WITH NOTE 10 CANNOT BE RUN IN THE SAME SIGNAL CONDUIT WITH NOTE 9-2 CABLES.

**TABLE 1**

BELDEN PART NO. (SPEC. NO.)	NUMBER OF CONDUCTORS	TWISTS PER FOOT (LAY)	NOMINAL O.D.	COLOR
9497	TWO TWISTED	24 (1/2")	0.2"	BLK & DRG ORANGE
9498	THREE TWISTED	8 (1 1/2")	0.3"	BLK, DRG, & DRG WITH BLK TRACER

BOTH HAVE THE FOLLOWING CHARACTERISTICS:  
 VOLTAGE RATING - 600 VOLTS AWG SIZE - 16  
 STRANDING - 19 X 29 INSULATION - PVC  
 TEMPERATURE - (-)40°C TO (+)105°C

11] **WARNING** - DO NOT OPEN DISCONNECT SWITCH WHILE THE MOTOR IS ENERGIZED.

12] REFER TO TRANSFORMER NAMEPLATE FOR CONNECTIONS OF PRIMARY LEADS.

13] **WARNING** - TRANSFORMER IS CONNECTED TO LINE VOLTAGE EVEN WHEN THE A-C DISCONNECT IS OPEN.

14] MOUNTED ON CONTROL PANEL.

15] MOUNTED ON REMOTE CONTROL STATIONS

16] MOUNTED ON OPERATOR CONSOLE

G] GROUND DEVICE TO PANEL GROUND STUD/BUS BAR

**SIGNAL CONDUIT**

1. USE EITHER:  
 A. RIGID STEEL, OR  
 B. FLEXIBLE ARMORED STEEL CABLE
2. WILL CROSS NON-SIGNAL CONDUIT AT AN ANGLE OF BETWEEN 45 DEGREES AND 90 DEGREES.
3. WILL NOT BE ROUTED THROUGH JUNCTION OR TERMINAL BOXES THAT CONTAIN NON-SIGNAL WIRING.
4. REFER TO THE ELECTRICAL DIAGRAM WHEN SELECTING CONDUIT. DO NOT ASSUME ALL SIGNAL WIRE WILL BE IN THE SAME CONDUIT.

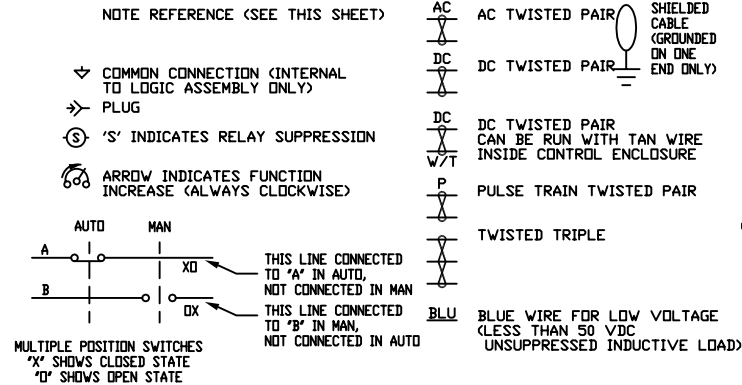
**SIGNAL WIRE** (PREFERRED)

1. WILL BE NON-SHIELDED TWISTED CONDUCTOR.
2. WILL NOT BE RUN WITH NON-SIGNAL WIRE.
3. WILL ALWAYS BE RUN IN STEEL CONDUIT.
4. WILL BE TWISTED TWO - OR THREE - CONDUCTOR CABLE. SPECIFIC INSTRUCTIONS FOR EACH SIGNAL CABLE ARE FOUND ON THE ELECTRICAL DIAGRAMS.

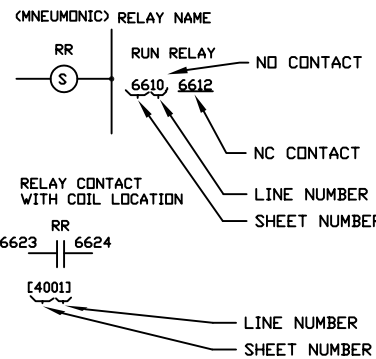
IF SHIELDED WIRE IS USED FOR SIGNAL WIRE, THE GROUND/SHIELD IS TO BE GROUNDED ON ONE END ONLY TO AVOID SIGNAL GROUND LOOPS AND ERRATIC OPERATION.

**DRAWING STANDARDS:**

**SYMBOLS:**



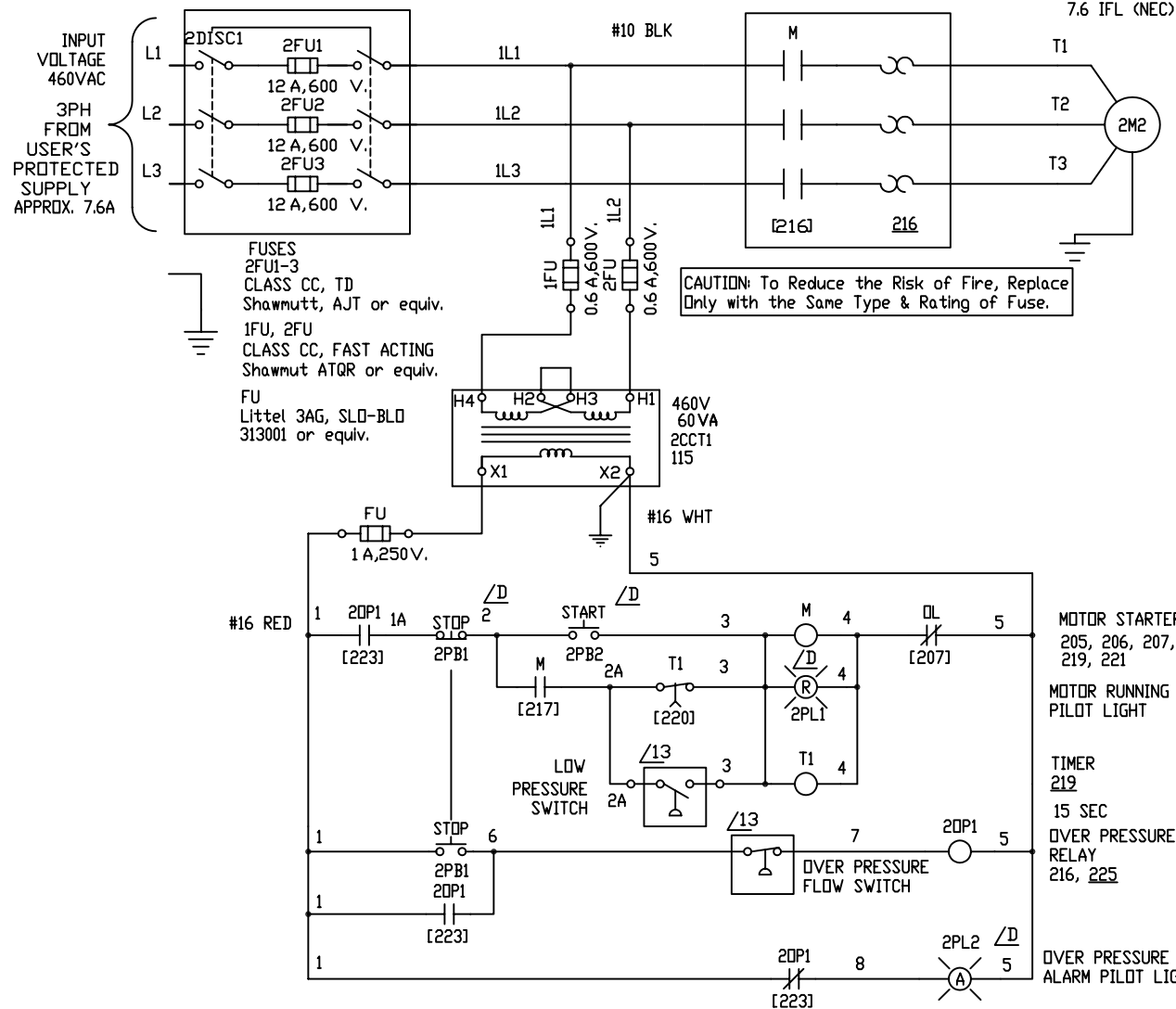
**RELAY NAMING CONVENTION WITH CONTACT LOCATIONS**



USE COPPER WIRE (60 deg min) ONLY  
 TIGHTENING TORQUE: 12 IN-LBS

USE COPPER WIRE (60 deg min) ONLY  
 TIGHTENING TORQUE: 12 IN-LBS

5 HP MOTOR  
 460/60/3  
 7.6 IFL (NEC)



		<b>G2 FILTRATION</b>		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & TOLERANCES ARE:	
		4020 SIMON ROAD YOUNGSTOWN, OHIO 44512		FRACTIONAL DIMENSIONS ±1/16 DECIMAL DIMENSIONS ±.001 ANGLE DIMENSIONS ±1°	
		MACHINE: STANDARD ELECTRICAL PANEL			
		OPTION:			
		DRAWN: CRB		DRAWING NUMBER: 2	
		SCALE: NONE		44103	
		DATE: 04/08/05		5	
REV	DATE	DESCRIPTION			