INSTALLATION (CONT'D)

ELECTRICAL POWER SUPPLY

It is essential that the power supply and the supply wiring are adequately sized and that the voltage correspond to the unit specifications. Branch circuit protection must be provided at installation a specified in the National Electrical Code.

All wiring should be preformed by a licensed electrian or electrical contractor. Wiring must meet applicable codes for area of installation. The table gives recommended wire sizes based on the 1999 NEC.

WIRE SIZE (AWG) - 75°C COPPER - 30°C AMBIENT

MOTOR HP	3 PHASE				1 PHASE		
	200/208V	230V	460V	575V	115V	208V	230V
1-1/2	14	14	14	14	10	14	14
2	14 (14)	14 (14)	14 (14)	14 (14)	8 (6)	12 (10)	12 (10)
3	14 (10)	14 (12)	14 (14)	14 (14)	8 (4)	10 (8)	10 (8)
5	10 (8)	12 (8)	14 (12)	14 (12)	--	8 (6)	8 (6)
7-1/2	8 (6)	10 (6)	14 (10)	14 (10)	--	6 (3)	6 (4)

Values in ( ) for Duplex Unit w/one incoming power line to both motors.

All models require a properly sized magnetic starter as specified in the National Electric Code (NEC). See Figure 1-1 for simplex wiring diagram and Figure 1-2 for duplex wiring diagram.

If ordered with a factory mounted magnetic starter, compressor is wired at factory. It is necessary only to bring lines from a properly sized disconnect switch to the magnetic starter mounted on the unit.

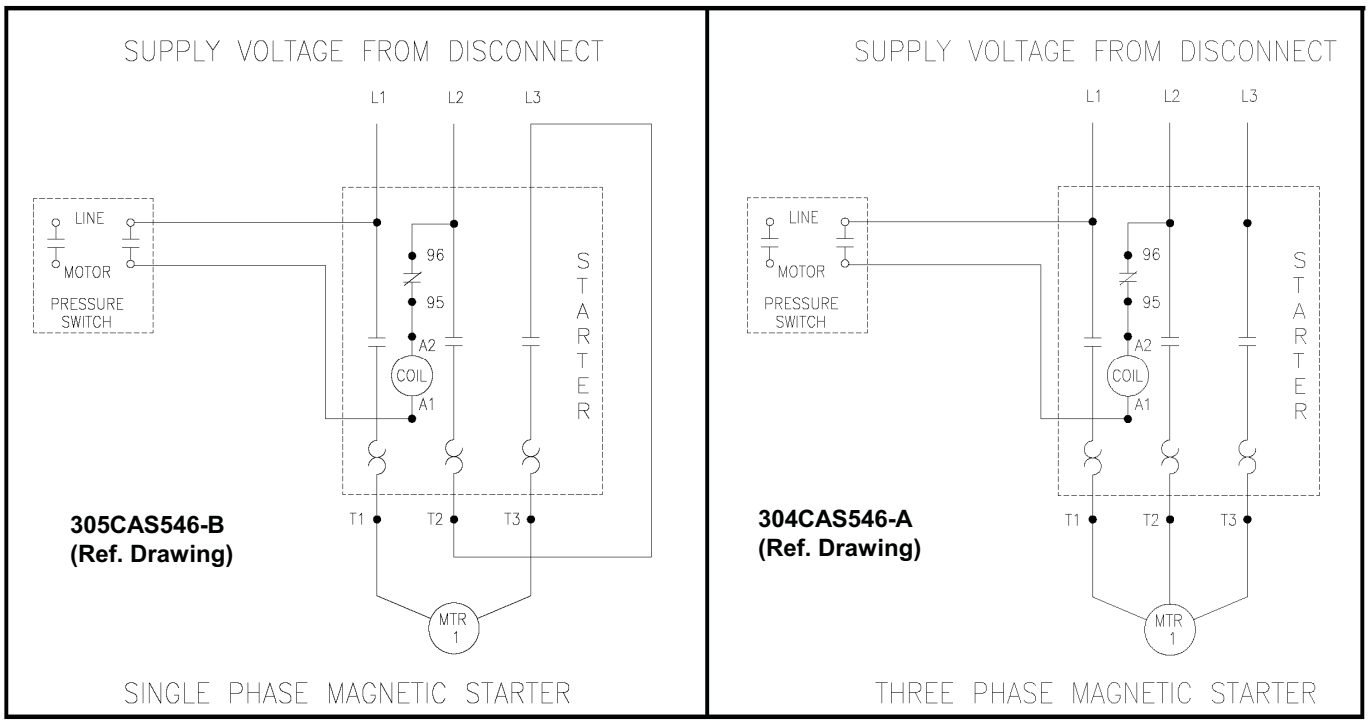
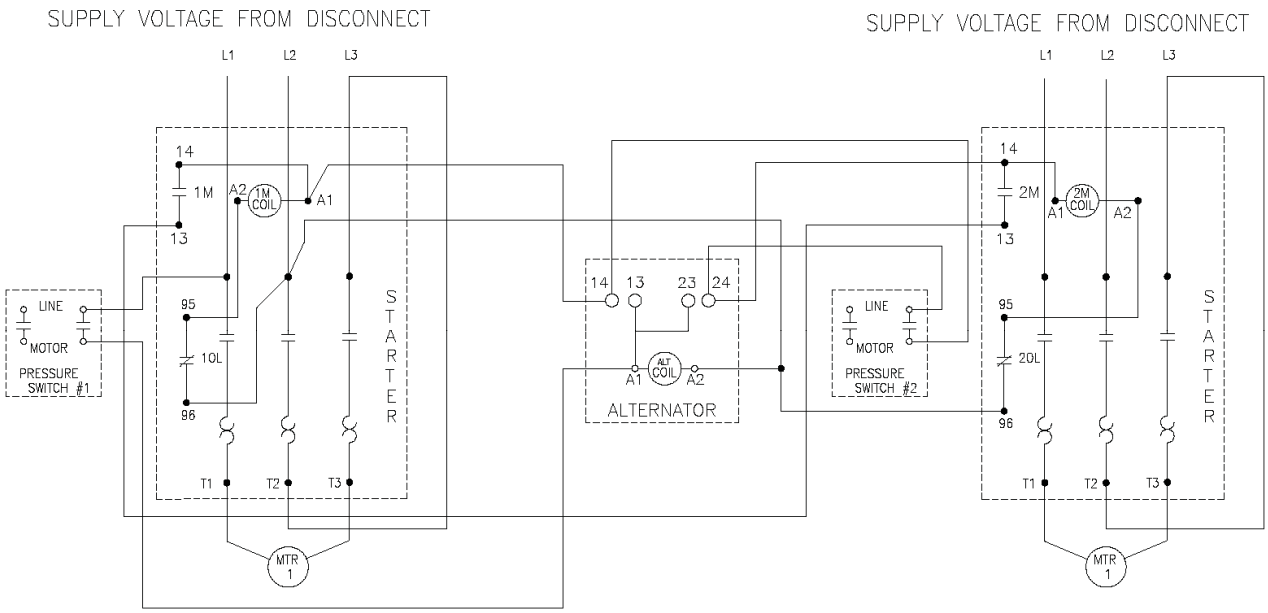
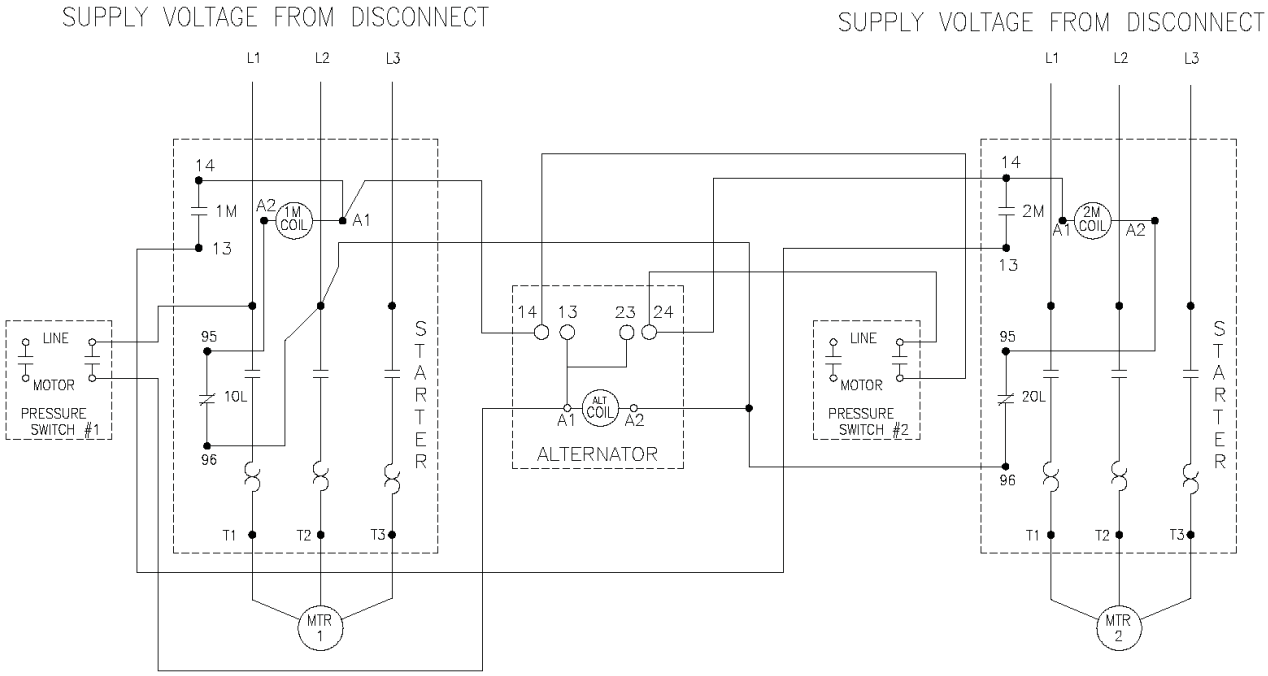


Figure 1 - Simplex Wiring Diagram

INSTALLATION (CONT'D)



SINGLE PHASE – DUPLEX MAGNETIC STARTERS W/ ALTERNATOR **311CAD546-B (Ref. Drawing)**



THREE PHASE – DUPLEX MAGNETIC STARTERS W/ ALTERNATOR **312CAD546-B (Ref. Drawing)**

INSTALLATION (CONT'D)

⚠ CAUTION

Wiring must be such that when viewing compressor from opposite shaft end, rotation of shaft is clockwise as shown by arrow on guard. Wrong direction rotation for any length of time will result in damage to compressor.

GROUNDING INSTRUCTIONS

This product should be connected to a grounded, metallic, permanent wiring system, or an equipment-grounding terminal or lead on the product.

AIR LINE PIPING

Connection to air system should be of the same size, or larger, than discharge pipe out of unit. The table gives recommended minimum pipe sizes. A union connection to the unit and water drop leg is recommended. Install a flexible connector between the discharge of the unit and the plant air piping. Plant air piping should be periodically inspected for leaks using a soap and water solution for detection on all pipe joints. Air leaks waste energy and are expensive.

Minimum Pipe Sizes For Compressor Air Lines
(Based on clean Smooth Schedule 40 Pipe)

MODEL	25'	50'	100'	200'	300'
R10D	3/4"	3/4"	3/4"	3/4"	3/4"
R15B	3/4" (1")	3/4" (1")	3/4" (1")	1" (1-1/4")	1" (1-1/4")

Values in ( ) are for duplex unit.

⚠ WARNING

Never use plastic pipe or improperly rated metal pipe. Improper piping material can burst and cause injury or property damage.

OPERATION

This compressor has been inspected, thoroughly tested and approved at the factory. For this unit to give long satisfactory service it must be installed and operated properly. This compressor has been designed for a 80%/ON – 20%/OFF duty cycle.

Simplex units have a pressure switch that senses changes in receiver pressure and automatically starts and stops the compressor at preset pressure limits. If the receiver pressure falls below the cut-in pressure setting of the pressure switch the compressor will run until the cut-out pressure setting of the pressure switch has been reached.

Duplex units have lead and lag pressure switches and an automatic alternating system to evenly distribute the load between the two compressors. The pressure switches sense changes in receiver pressure and automatically start and stop the compressor at preset pressure levels. If the receiver pressure falls below the cut-in pressure setting of the lead pressure switch but remains above the cut-in pressure setting of the lag pressure switch, only one compressor will run until receiver pressure reaches the cut-out pressure of the lead pressure switch. The next time the pressure in the receiver drops, the system automatically starts the compressor that was idle. If the receiver pressure falls below the cut-in pressure setting of the lag pressure switch, both compressors run until receiver pressure reaches the cut-out pressure setting of the lead pressure switch.