

How to Install a Pressure Switch on an Air Compressor

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Most air compressors are controlled by a pressure switch. The switch turns the power on and off to the compressor motor. In most cases the switch will control the power wires to the air compressor. Air compressors are typically powered by 120 VAC and 240 VAC single-phase electrical power. 120 VAC power uses one power wire and a neutral wire to conduct the electricity, while 240 VAC will use two power wires. Both power sources use a bare copper wire or a green insulated wire as part of the earth-grounding safety circuit. Installing a switch isn't all that complicated

Things You'll Need:

- Rated air compressor switch
- Teflon tape
- ¼ inch pipe nipple (optional)
- Crescent wrench
- Wire strippers
- Screwdriver

1. Step 1

Remove all electrical power from the circuit feeding the air compressor. Locate the correctly rated pressure switch on the air compressor's storage tank. No valve must be installed between the switch and the air storage tank. A short pipe nipple is used to conduct the air from the tank into the pressure switch. Typically a ¼-inch diameter pipe is pre-installed on the storage tank for the pressure switch.

2. Step 2

Use the Teflon tape and install two or three rounds of the sealant tape over the male pipe threads. Screw the female fitting of the pressure switch onto the pipe nipple. Tighten with the crescent wrench. Remove the top cover of the pressure switch.

3. Step 3

Observe the set of four contacts, small copper discs, on the interior of the pressure switch. The contacts are electrically connected together on the topside of the copper discs. Each set of discs has a corresponding screw connector. Think of each set of contacts like a light switch. One set of contacts will be used for each wire to be switched. Strip back the four wires, two wires coming from the power

source and two wires going to the compressor motor, with the wire strippers. Remove 1 inch of the plastic insulation to reveal the bare copper wire underneath.

4. Step 4

Failure to perform this step properly will ruin your new pressure switch. No returns on incorrectly wired pressure switches will be given. If in doubt, ask. Use the screwdriver to connect the two wires coming from the power source (power cord or wires coming from the AC source) to the two outermost screws of the contacts. (in most cases) These screw terminals may also be marked as "**line**." Connect the other two wires, going to the compressor motor, to the two inside screw terminals (in most cases) on the pressure switch. These terminals may be identified as "**load**". In a 240 VAC feeder circuit the wires do not have to be mated to the switch. In a 120 VAC circuit the white neutral wires must be connected to the same set of contact screw terminals. Connect the bare copper wire or green insulated wire to the green screw on the metal frame of the pressure switch. Your new pressure switch may be configured differently than your old one as the manufacturer changes their product from time to time. If you wire it wrong, you will weld the contacts together on your new switch.

5. Step 5

Replace the cover over the pressure switch. Apply power to the air compressor circuit. Switch the pressure switch to the on position.

Tips & Warnings

- Use only pressure switches rated for your air system and the electric motor. Follow all local electrical codes when performing any electrical wiring.
- Do not adjust the factory settings on the pressure switch. Tampering with the factory presets could cause damage to the air compressor by overpressurization.