

PR-204 PressuRITE 3-Function Digital Pressure Controller With NEMA1 Enclosure

The PR-204 3-Function Digital Pressure Controller provides unlimited compressor pressure functions...Hi-Pressure, Lo-Pressure & Oil Pressure. Infinitely adjustable pressure set-points along with programmable anti-short cycle delay, full-range differential between ON & OFF set-points are programmable via a hand-held programmer... an "SUT" (Set-Up-Tool). It is Network capable and communicates via Bacnet compliant protocol.

PR-204 contains 1 hi-current Form C Relay which controls the compressor under Lo Pressure operation and Hi and Oil Pressure trips. Manual Over-Ride, Hi & Oil Pressure manual re-set buttons are on-board. Light-Emitting Diodes (LEDs) indicate the controller status and operation. Operates at 120/240VAC and uses 3 Pressure sensors/transducers... 2 Lo Pressure and 1 Hi Pressure... supplied with the PR-204 which are channel specific for their respective Lo, Hi & Oil functions. Controller retrofits easily into the exact location (using the same mounting screws) as the mechanical device it replaces.

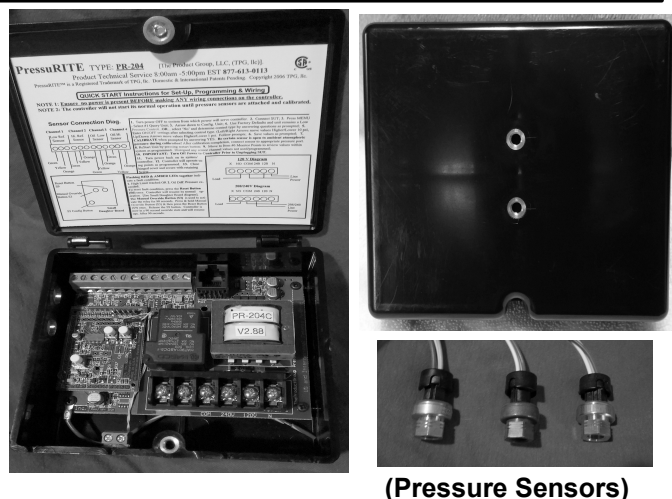


Figure 1: PR-204 Pressure Controller Shown in NEMA 4/1 Enclosure – Front & Back
 (Pressure Sensors Shown are for Lo, Hi & Oil Press.)

Features and Benefits

Easy-to-Use Set-Up-Tool (SUT) for viewing status & setting values

Set-points (Lo, Hi & Oil) are user programmable in less than 2 minutes. SUT does NOT use batteries... plug-in cable supplied with controller

Infinitely Variable Set-Points & Differential

Allows the user to set a precise (to 1 PSI) pressure differential across the entire operating range

Adjustable Anti-Short Cycle Delay (0 to 20 Minutes in 1-Minute Increments)

Ensures that the system remains off for a user-set time delay, which helps avoid hard starts, nuisance overload outages, and unnecessary equipment wear

Wide ranging applications for all commercial/industrial refrigeration and A/C equipment

Allows the user to control any refrigerant-based equipment regardless of refrigerant type (except ammonia) or pressure range

Enclosure is UL rated high-impact, UV resistant plastic; NEMA1 rated

Provides for surface mount indoor or weather protected outdoor applications

Universal Hi-Voltage & Current Design

Is 110-130/208-240 Volt capable and provides Hi Current (25A) relay direct-connection control for all commonly used HVAC/R compressors

Application

IMPORTANT: The **PR204 Controller** is intended to be used to both control equipment under normal operating conditions and to act as a limit or safety control as well, though it may be applied in either or both as needed.

The PR204 Digital Pressure Controller can be used on any freezer, cooler or A/C equipment that requires pressure control operation. Typical applications would include but not be limited to:

- Ⓟ Walk-In freezers and walk-in coolers
- Ⓟ Reach-In freezers and coolers
- Ⓟ Display-type freezers and coolers
- Ⓟ Process freezers and/or coolers of any type
- Ⓟ Any/All freezers and/or coolers requiring defrost
- Ⓟ Any A/C with semi-hermetic compressors

FCC Compliance

This device complies with Part 15 of the FCC Rules and operation is subject to the following conditions:

1. This device may not cause harmful interference;
2. This device must accept any interference that may cause undesired operation,

This device has been both laboratory and field tested and has been found to comply with the limits outlined for a Class A digital device pursuant to Part 15 of the FCC Rules. The designated limits as such designed to provide reasonable protection against harmful interference when and while this device is operated in a commercial/industrial environment. This device generates, uses and can/does generate radio frequency energy that if not installed and used in accordance with the instructions supplied, may cause harmful interference to radio communications. Residential application of this device may or may not cause or be likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense and effort.

Canadian Compliance

This digital device does not exceed the Class A Limits for radio noise emissions from digital apparatus as set forth in the Radio Interference Regulations of the Canadian Department of Communications.

Additional Compliance

No other agency compliance terms are met or intended to be met by this device at this time.

Functional Description

The PressuRITE PR-204 primarily functions as a “compressor refrigerant pressure” controller (Lo, Hi, Oil). It will also function as a condenser fan system pressure/operating controller depending on the physical logistics of the installation application.

The controller contains 1 Form C 25A relay that is connected load equipment...: compressor or fan. It will operate:

- A. 1 Compressor;
- B. 1 Condenser Fan;
- C. With an added 'RelayRITE – 2 Condenser Fans.

The 3 pressure sensors inputs are channel specific for Lo, Hi & Oil Pressure Operation.

Relays: Relay has an LED to indicate operation [ON/OFF].

Terminals: Wiring connections are labeled for relay and power connections as are the sensors.

IMPORTANT: All wiring must conform to local, national, and regional regulations. Use copper conductors only for all wire connections. Do not exceed the electrical ratings for the for the equipment it is wired to.

Use wire no larger than 12 AWG when connecting to the high power terminal blocks

Temperature sensor signals may be affected by electrical interference. When extending sensor cable beyond 50 ft (15.2 m) use a twisted-pair, shielded cable to reduce electrical interference.

WARNING: Risk of Electrical Shock. To avoid the risk of electrical shock, disconnect all power sources to the control before wiring any connections. More than one disconnect may be required to completely de-energize the control and equipment.

Controller Specifications

The PressuRITE™ Controller is designed to operate in most applications where the controlled equipment is installed and will comply with the environmental conditions as outlined.

Use the PressuRITE™ Controller wherever a low, high or oil differential pressure controller will normally be used.

PressuRITE PR-204 Specifications

Controller Power Requirement:	110V, 240V AC	Single Phase AC 50-60 Hz,
Power Consumption	3 Watts	
Operating Conditions:	Temperature: 32 to 145 deg F (0 to 62 deg C)	Humidity: 0 to 100% Non-Condensing
Relay Contact Rating:	@110VAC [or 1 line of 240VAC] N.O.- 25A; N.C.- 25A	
Motor or Resistive Control	Any Single Phase AC power Switching [1 line] or less	Three phase power switching is not supported by this Controller
Refrigerant Pressure Transducer	Range 0 psi to 667 psi	Power 5Vdc; output: 0.46V at 0 psi; 3.24V at 667 psi
Compressor Oil Pressure Transducer	Range 0 psi to 150 psi	Power 5Vdc; output: 0.71V at 0 psi; 3.24V at 150 psi
Reading and Set point Accuracy	+/- 1 psi	For all channels
FCC Compliance:	FCC Part 15, Class A	
Agency Approvals:	CSA – C/US	
Patents	USA/Int'l Patents Pending	

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