

Reciprocating Compressor Controls

RECIPROCATING COMPRESSOR CONTROLLER

M&M Refrigeration's Reciprocating Compressor Controller is designed to meet the needs and budgets of any customer.

The reciprocating controller uses an advanced microcontroller that has been specifically developed to provide the industry's most extensive control flexibility, safety, security and energy efficiency. All information is clearly presented on the compressors large display and through an easy to use menu structure.

The controller is composed of a microprocessor board, input/output board, keypad, and a liquid crystal display (LCD). The NEMA 4 designed control cabinet consists of a door mounted keypad and display, a high efficiency universal power supply with a pre-numbered field wiring terminal strip.

Customizable, ten (10) user, multi-level password security system with extensive alarm reporting and data logging protects system information while battery backed up memory and non-volatile storage safeguards operational setpoints.

RETROFITS

Retrofit older refrigeration compressor controls to increase energy efficiency, reliability, maintainability and functionality.

Retrofit control panels are available for all compressor manufacturers. Each retrofit kit consists of a microprocessor control panel with a keypad, backlit LCD display and a set of three (3) pressure sensors (SP, DP, OP), two (2) temperature sensors (DT, OT) and a motor current sensor (CT).



- Microprocessor Based System
- Support for all Compressor Manufacturers
- Full Featured and User Configurable
- Extensive Set of Energy Management Features
- Support for Multiple Loaders or Unloaders
- Multiple Modes of Operation
- Ramp Start for Slow Loading Control
- Built-in Sequencer
- Comprehensive Logging and Diagnostics
- Multi Level Security System with User Tracking

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Reciprocating Compressor Controller

CONTROLLER FEATURES

Support for all Reciprocating Compressor Manufactures
 Configurable Staging Control Supports Loaders or Unloaders
 Status & Diagnostic Screens on Compressor's Conditions
 Comprehensive Alarm Reporting and Data Logging Function
 Customizable, Ten (10) User, Multi-Level Password Security
 Extensive Set of Energy Management Features
 Setpoint Scheduling for Peak Demand Curtailment
 Four Setpoint Groups for Control, Deadband & Alarm Levels
 Power Failure Recovery & Automatic Compressor Re-Start
 VFD Motor Control (requires analog output board)
 Capacity Control Based on Suction Pressure or Process Temp
 Support for Two Stage Compressors
 Built-In Open Communications Protocols

CONSTRUCTION

Enclosure: 20" H x 20" W x 6" D NEMA 4, UL Type 1
 Keypad: Full Numerical with Dedicated Special Function Keys
 Display: Backlit LCD, 5.2" Diagonal Size
 Operating Temperature: -4°: +158°F
 Storage Temperature: -40°: +176°C
 UL File Listing: NITW.E136526
 cUL File Listing: NITW7.E136526

SENSORS

Temperature (2)	32°F : 392°F	(DT, OT)
Pressure (2)	0 : 200 PSIA	(SP, OP)
Pressure (1)	0 : 500 PSIG	(DP)
Motor Current (1)	0 : 800 Amps	(CT)
Temperature (1)	-58°F : 122°F	(PT) optional
Optional Sensor (1)	various	(ST, IP, DP2)

CONTROLLER DISPLAY - COMPRESSOR STATUS SCREEN

HARDWARE SPECIFICATIONS

Microprocessor Board

Non-Volatile EPROM for Software Configuration
 Com Ports: Two RS-422/RS-485 and One RS-232
 Protocols: PC Interface, Modbus/RTU
 Watchdog Timer and Self Test Functions
 Battery Backed Memory and Power Monitoring Circuits

Display Adapter Board

Supports Multiple Font Sizes Including Reverse Video
 Keypad Support and Digital Contrast Control

Power Supply

120/240 VAC, 50/60 Hz, Single Phase Power Supply
 Maximum FLA: 30 Amps, Internal Fuse: 15 Amps

Communication Boards

Options: 56K Modem Board or Ethernet Board
 Protocols: Modbus/TCP Ethernet (optional)

I/O Board

Analog Inputs
 Eight (8) Channels (12-Bit, 4/20 mA)
 Mechanical Relay I/O
 Eight (8) SPDT Mechanical Relays
 Max Load: 4A 140VAC (fused)
 Solid State I/O
 Four (4) AC Output Modules
 Four (4) AC Input Modules
 Max Load: 1.5A 120VAC (running), 30A 120VAC (inrush)

PC INTERFACE WINDOW (OPTIONAL) - COMPRESSOR STATUS SCREEN

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTIFICATION



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