

Screw Compressor Controls

SCREW COMPRESSOR CONTROLLER

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

The screw 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) level password security system with extensive alarm reporting and data logging protects system information while battery backed up of memory 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, circuit breakers; and a set of four (4) pressure sensors (SP, DP, OPBF, OPAF), four (4) temperature sensors (ST, DT, OT, OST) 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
 - Real-Time Animated Graphics
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- Multiple Modes of Operation
 - Ramp Start Feature for Slow Loading Control
 - Comprehensive Logging and Diagnostics
 - Multi Level Security System with User Tracking
 - Designed to Support Future Expansion

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Screw Compressor Controller

CONTROLLER FEATURES

- Support for all Screw Compressor Manufacturers
- Real-Time, Easy-To-Read Animated Graphics Display
- Status & Diagnostic Screens on Compressor's Conditions
- Customizable Ten (10) Level Password Security System
- Extensive Set of Energy Management Features
- Comprehensive Alarm Reporting and Data Logging Function
- Setpoint Scheduling for Peak Demand Curtailment
- Power Failure Recovery & Automatic Compressor Re-Start
- Built-In Open Communications Protocols
- Common Scalable Hardware and Software Platform
- VFD Motor Control (requires analog output board) - optional
- Capacity Control Based on Process Temperature - optional
- Compressor Sequencer: up to Eight (8) Compressors - optional

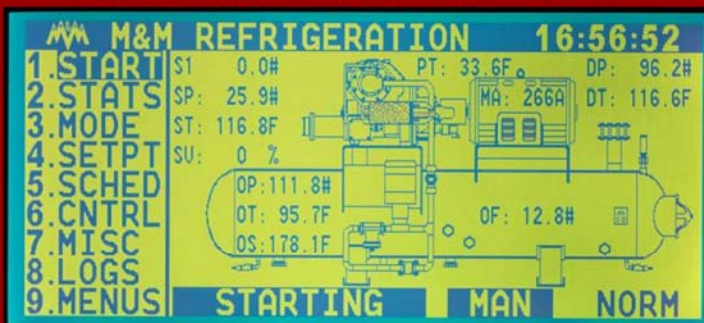
CONSTRUCTION

- Enclosure: 30" H x 24" W x 8" D, NEMA 4 , UL Type 1
- Keypad: Full Numerical with Dedicated Special Function Keys
- Display: Graphical Backlit LCD, 10" Diagonal Size
- Operating Temperature: 32°: +122°F
- Storage Temperature: -4°: +140°F*
- UL File Listing: NITW.E136526
- cUL File Listing: NITW7.E136526

SENSORS

Temperature (1)	-58°F : +122°F	(ST)
Temperature (3)	-32°F : +302°F	(DT, OT, OST)
Pressure (1)	0 : 200 PSIA	(SP)
Pressure (3)	0 : 500 PSIG	(DP, OPBF, OPAF)
Motor Current	0 : 1000 Amps	(CT)
Slide Valve	0 : 100 PCT	(SV)
Temperature (1)	-58°F : +122°F	(PT) optional

CONTROLLER DISPLAY - COMPRESSOR STATUS SCREEN



HARDWARE SPECIFICATIONS

Microprocessor Board

- 16 Channels of Analog Input (12-Bit, 4/20 mA, 0-5V)
- 32 Channels of Discrete I/O
- Two RS-422/RS-485 Communications Ports
- 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

Electrical

- 120/240 VAC, 50/60 Hz, Single Phase Power Supply
- Maximum FLA: 30 Amps
- Internal Breakers: 1, 5 and 15 Amps

Modem/Communications Board

- COM 2: RS-232/Modem
- COM 3: RS-232/RS-422/RS-485
- Protocols: PC Interface, Modbus RTU, Allen Bradley DF1
- Options: 56K Modem / Ethernet Board

I/O Board

- 32 Channel Design with Optically Isolated Modules
- Standard Layout: 10 Outputs and 3 Inputs
- Nominal Voltage: 120/240 VAC
- Max: 140/280 VAC/VDC
- Min Voltage: 90/180 VAC/VDC
- 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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