



The Frick® Quantum™ LX Control Panel is the most technologically advanced screw compressor control center in the world today.

Powered by a high-speed PC-based processor, it is a quantum leap over competitive microprocessor control panels. Examine the features and you'll agree that the Quantum™ LX is unequalled in its ability to let you "Take Control" of your entire refrigeration system.

## Hardware - The Heart of the Panel

The Quantum™ LX Control Panel incorporates hardware features & technology proven in millions of applications.

- **PC-Based Industrial Controller.** High-speed processor provides speed and processing capability far surpassing competitive microprocessor offerings.
- **10.4" Active Color VGA Graphics Display.** High contrast, crisp, clear display of compressor information and status with a superior viewing angle. Also available in a special outdoor option, viewable in direct sunlight.
- **Input/Output Upgrade Capability.** Additional I/O can be easily installed in the field. This feature provides flexibility for future engine room upgrades and changes.
- **Three Serial Communication Ports.** These field-selectable ports allow you to choose from a combination of RS-422, RS-485, or RS-232 port configurations for both interpanel and external communications.
- **Ethernet communications port.** Connection to this port is accomplished via industry standard RJ-45 connection, allowing Internet viewing, E-mail alarm notification, and compressor sequencing (all Quantum™ LX panels required) without the need for additional software for the Quantum™ LX panel.
- **Circuit Breaker Protection for Main Power.** Forget about ever having to change blown fuses due to power spikes and other line voltage disturbances. If a disturbance occurs, you will be back on line with the flip of a switch.
- **UL, cUL, CE, and ISO 9001 Certifications**
- **Flexible Analog Inputs.** Setup is easily changed in the field to accept 0-5 volt, 1-5 volt, 4-20 mA, ICTD, RTD, Current Transformer, and Potentiometer inputs.
- **Long Life Lithium Coin Cell Battery.** Used to back up time/date clock only.
- **Communication Activity and Diagnostic Lamps.** Numerous LED lamps simplify troubleshooting and provide visual indication of proper component operation.
- **NEMA 4 Enclosure.**



Input/Output Upgrade Capability



Circuit Breaker Protection for Main Power



Long Life Lithium Coin Cell Battery

**Frick®**

BY JOHNSON CONTROLS

- Flash Setpoint Memory.** All setpoints are stored on an Internal Flash card, which requires no battery backup, and can be downloaded to an External Flash Storage device (USB Drive). You will never again lose a setpoint or have to reenter setpoints due to power loss. Setpoints can be field programmed within Frick defined limits. A notice is displayed if setpoints are entered outside of defined ranges.
- Replaceable Input and Output Modules** with individual replaceable fuses, on-board tester, and spare fuse.



- Software Diagnostics.** Numerous diagnostic features have been incorporated to assist in troubleshooting. They include: sensor short/open, setpoint input out of sensing range, and memory error sensing.

## Software - Bringing It All Together

All of the impressive hardware features would be wasted if we did not bring them together with a superior, user-friendly software package. Extensive discussions with contractors and end users have allowed us to develop a software package that is nothing short of spectacular.

- Intuitive Operator Interface.** All of the Quantum™ LX screens are menu driven and easy to use and understand. Help screens and prompts are available to assist in setup or monitoring of system information. The software is user-level driven; each level is designed for different operator ability. Basic level is more graphical with limited information, while the service level has fewer graphics and more information.
- Multiple Capacity Controllers.** Four capacity/regulation controllers are available with the ability to select any defined analog point for control. This feature provides application flexibility for auto setback control and control reset for changes in modes of operation.
- Override Controls.** All safety and controller functions can be programmed to unload the compressor when maximum safety and control parameters are exceeded.
- On-screen Calibrations.** Sensors, motor current, slide valve and slide stop are calibrated on screen with easy to understand graphics. Potentiometer "tuning" has been eliminated. Slide valve and slide stop can be auto calibrated with just a push of a button.

- Shutdown Notification.** Display backlight flashes on shutdown to attract attention in noisy engine rooms.
- Ability to add flexible digital and analog inputs.** They can be used for monitoring and setting alarms.
- Real-Time and Historical trending.** Selected data and time periods can be viewed in either an X-Y trending chart or a tabular chart and easily downloaded in .CSV format via USB Flash drive or through the browser.
- Foreign Language Displays.** Language displays included as standard are: English, French, Portuguese, Spanish, Polish, Traditional and Simplified Chinese.



Replaceable Input and Output Modules

- Selectable Pressure and Temperature Units.**
- Programmed compressor sequencing.**
- Programmed condenser control** is available as an option.
- Industry standard communication protocols.** Modbus TCP/IP, Modbus ASCII, Modbus RTU, Allen-Bradley DF1 Serial, and Ethernet IP.



Screen Shots of the Quantum™ LX

The Quantum™ LX control panel provides nearly limitless expansion capabilities for growth to keep pace with control technology.

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