

Quantum Series

Type QMC1

Compressor Controller

The QMC1 is a stand-alone microprocessor based controller for a **Single Compressor with Motor Drive**. It is designed primarily for Compressed Natural Gas (CNG) applications. Based on Discharge (control) pressure the controller will perform automatic start/stop sequences including pre-lube, compressor load/unload and fault monitoring using digital and analog inputs. Provision for multiple controller lead/lag sequencing is also provided.

All set points for pressures, temperatures, gas leak levels, control sequences etc. are user programmable using the built-in keypad and LCD display. Live operation of all monitoring and control functions of the controller can viewed locally or remotely using a standard PC or laptop. The phone modem option gives users full remote access to the controller including notification of system faults and ESD's.

Additionally, the CellCon System can be added to allow users to view controller status and other information directly on a secure web site. Daily status reports and alarm notifications can be sent to user created lists for e-mails, faxes, alphanumeric pagers and voice mail.

The controller is shipped with standard software developed for the QMC1. However, the unit is also available with user programmable software such as Basic, "C" and all IEC1131 programming languages. IEC 1131 programming tools include Sequential Function Chart, Ladder Logic, Structured Text, Function Block Diagram or Instruction List, and Flow Chart. Programs can be developed on a standard PC, compiled and downloaded into the controller for operation.



Standard Features

- Meets or exceeds NFPA 52 requirements
- Factory Mutual and CSA approved
- Designed for C1D2, groups C & D hazardous locations
- Automatic or manual compressor start/stop operation
- Automatic compressor load/unload feature
- All set points/parameters stored in non-volatile memory
- On screen help for compressor start/stop sequences
- Password protection in program
- Large, multiple screen, 20 character X 2 line, back lit LCD display
- 16 button, tactile, membrane keypad
- 12 analog input channels
- 8 dry contact inputs for compressor/engine
- 7 control outputs for compressor/motor
- RS232 serial port for direct PC connection
- Temp controlled on/off output for skid fan
- Solid-state 120 VAC, 3 amp, fused control outputs
- Built-in 120 VAC relays for ESD circuitry
- First Fault out LCD Display with time and date stamp plus output to local alarm or light
- Built-in 120 VAC relay compressor fault indication
- Front panel LED's for compressor fault and ESD
- Front panel compressor on/off switch and reset push button
- Built-in controller enclosure cooling fan
- Built-in 120 VAC surge and lightning protection
- Built-in menu driven PC interface software

QMC1

12 Analog Inputs

Ambient Temperature
Skid Temperature
Gas Leak Level
1st Interstage Temperature
2nd Interstage Temperature
3rd Interstage Temperature
Discharge Gas Temperature
Suction Pressure
1st Interstage pressure
2nd Interstage pressure
3rd Interstage pressure
Discharge/Control Pressure

9 Digital Dry Contact Input

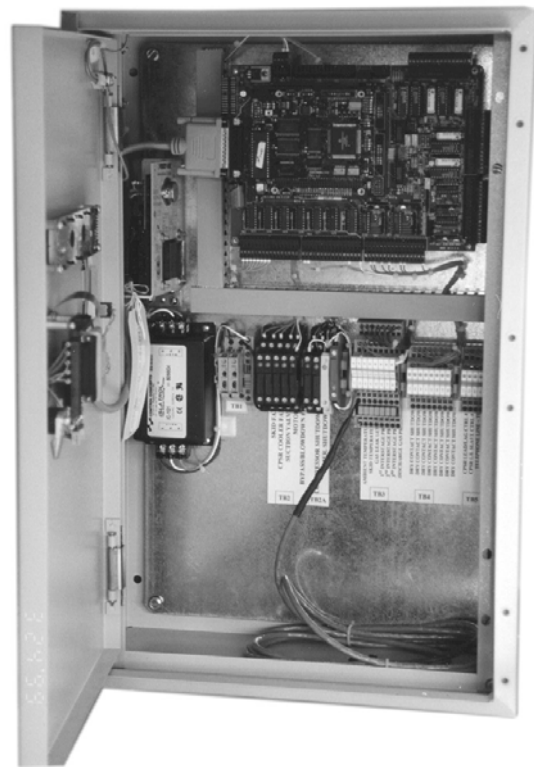
1 – 8 User definable dry contact inputs
Emergency Shutdown

Control Outputs

Skid Fan
Compressor Cooler Fan
Suction Valve
Motor Starter
Bypass/Blowdown #1
Compressor Fault Shutdown
Emergency Shutdown

Specifications

Power supply – 120 VAC standard, 0.5 Amps
Pressure Transducer – Signal 0.1 to 5 VDC
Thermocouple – Signal 0 to 5 VDC
Digital shutdown inputs optically isolated - NO or NC
Solid State Relay Output – 120 VAC, 3 AMP, fused.
Operating Temperature – 0 to 55 °C
Enclosure – Steel NEMA 4, 24” H x 16” W x 8” D



Optional Features

GE Cellcon Communication System
Phone Modem - four-line auto-dialer
MOD-BUS RTU Protocol
Temperature compensated discharge set-point
Lead/Lag control of duplex compressors
Lubricator no flow
Controller integral heater
Air Purge for Class 1 Div. 1



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