D-R DI-TRONICS

Control Systems

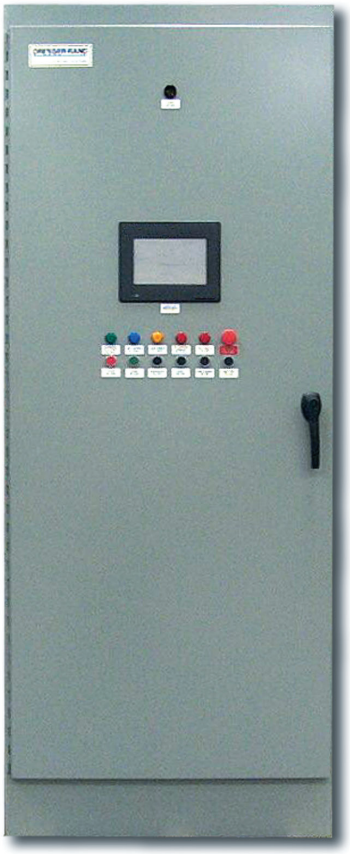
Motor Gear Compressor DI-TRONICS® Model # MGC100-000

To efficiently operate a motor/gear driven centrifugal compressor train, the control system must be technologically advanced and capable of meeting the operational challenges found in today's demanding industrial environments.

The DI-TRONICS motor gear compressor control system is an integrated solution designed to monitor vibration, temperature, surge control and other process variables to efficiently operate an advanced motor/gear-driven centrifugal compressor train.

At the heart of the system is a programmable logic controller (PLC). Today's PLCs are technically advanced, flexible in configuration and can be programmed in many common program languages including ladder logic. The DI-TRONICS process control programs are ready-to-use with comprehensive documentation. Surge control and other high-level programs are developed in segregated "C" blocks to ensure the highest levels of system reliability and security.

The DI-TRONICS PLC-based controllers interface with the instrumentation of the motor gear compressor through an input-output (I/O) system and communicate both internally and externally in a variety of standard industry protocols.



For the user, these features translate into lower life cycle costs associated with spare parts, operation, maintenance and training. In addition, the use of DIN rail I/O mounting and advanced packaging techniques provide easy access to panel internal components and the smaller panels offer a distinct advantage in areas with limited space.

Standard Configuration and System Features

The standard DI-TRONICS motor gear compressor control system, contained in a free-standing enclosure, is based on a GE Fanuc 90-30 PLC controller, programmed with the following standard functions:

- Capacity/performance control system
- Thrust bearing axial position and temperature monitoring
- Bearing vibration and temperature monitoring
- Anti-surge control
- Pressure monitoring
- Process and auxiliaries temperature monitoring
- Oil system monitoring
- Start, stop, alarm and shutdown sequencing

DRESSER-RAND

System Communication

Standard communication to external system devices is provided through an RS-232/485 serial communication link using MODBUS RTU protocol.

Hard-Wired Relay Back-up Shutdown System

A hard-wired relay back-up system is used to shut down the DI-TRONCIS control system in critical situations including PLC failure, vibrations exceeding designated limits and other critical system input.

System Options and Enhancements

The following options are available and will be quoted upon request:

- LCD display
- Operator pushbuttons and pilot lights
- Ethernet communication
- Hazardous area panel
- Laptop computer (programming and maintenance device)
- Local operator panel NEMA 4X
- DI-TRONICS HMI (panel-mounted or desktop)
- System software
- Monitoring for Voith variable speed transmission driver
- Monitoring for VFD motor driver
- Intrinsically safe barriers
- Additional anti-surge loop
- Additional compressor case
- 90-30 PLC upgrade to redundant configuration
- Allen Bradley ControlLogix simplex PLC
- Allen Bradley ControlLogix upgrade to redundant configuration
- Client-witnessed test

For more information on the **DI-TRONICS Control System,** contact:

Dresser-Rand Control Systems
1202 West Sam Houston Pkwy. N.
Houston, TX 77043
Tel: (Int'l +1) 713-365-2630
Fax: (Int'l +1) 713-365-2660

For a complete list of D-R products and services, visit us at www.dresser-rand.com or contact one of the following locations:

Dresser-Rand
Corporate Headquarters

West8 Tower Suite 1000
10205 Westheimer Road
Houston, TX 77042 USA
Tel: (Int'l +1) 713-354-6100
Fax: (Int'l +1) 713-354-6110
email: info@dresser-rand.com

112, Avenue Kleber
75784 – Paris Cedex 16
Tel: (Int'l +33) 156 26 71 71
Fax: (Int'l +33) 156 26 71 72
email: info@dresser-rand.com

Regional Headquarters

The Americas
Dresser-Rand
West8 Tower Suite 1000
10205 Westheimer Road
Houston, TX 77042 USA
Tel: (Int'l +1) 713-354-6100
Fax: (Int'l +1) 713-354-6110

EMEA
(Europe, Middle East, Africa)
Dresser-Rand S.A.
31 Boulevard Winston Churchill
Cedex 7013
Le Havre 76080 France
Tel: (Int'l +33) 2-35-25-5225
Fax: (Int'l +33) 2-35-25-5366 / 5367

Asia-Pacific
Dresser-Rand Asia Pacific Sdn Bhd
Unit 9-4, 9th Floor
Bangunan Malaysian Re
17 Lorong Dungun, Damansara Heights
50490 Kuala Lumpur, Malaysia
Tel: (Int'l +60) 3-2093-6633
Fax: (Int'l +60) 3-2093-2622

Form 2088

DRESSER-RAND