



COMPRESSOR
CONTROLS
CORPORATION

VANTAGE® GDX

Efficient and Cost-Effective Governor for Single Automatic Extraction Steam Turbines Driving Synchronous Generators

Compressor Controls Corporation is pleased to announce a new addition to the VANTAGE® product line: the VANTAGE GDX governor. Its extensive benefits, capabilities, and features combine to create a compelling argument for the use of the VANTAGE GDX governor on virtually any single-automatic extraction, generator-drive steam turbine.

Major Benefits of the Vantage GDX Governor

- ***Outstanding speed control*** with integrated manual-control capability, protective override for overspeed and critical speed, and fully automated start-up and shutdown sequencing.
- ***Stable and precise load control*** for synchronous electrical generators. Permits operation in power droop, characterized valve droop, and isochronous modes. Discrete inputs are provided for manual synchronization or interfacing with external auto-synchronization units.
- Advanced algorithms with a sophisticated loop-decoupling scheme provide ***precise extraction control*** in a cost effective solution.
- A built-in ***cascade control loop*** that allows you to regulate other process variables, such as turbine inlet or exhaust pressure, without the added expense of a separate controller.
- Because a separate computer or operator panel is not required, your ***installed cost is minimized***.
- ***Extensive self-diagnostics*** and field I/O diagnostics simplify troubleshooting.



Operator Interface

All configuration, operation, and maintenance activities for the VANTAGE GDX governor can be performed using the local operator interface:

- Two separate keypad areas are provided on the front panel. One is exclusively for configuration and maintenance, while the other is for machine operation. This provides the simplest and most intuitive interface possible for your plant personnel.
- An alphanumeric, vacuum-florescent display provides complete access to operating and configuration parameters for use by plant operators and control engineers.
- Front-panel LEDs indicate control mode, controller integrity, and process status, providing a quick, convenient reference for monitoring the state of the process and the control system.

Because a separate computer or operator panel is not required, your installed cost is minimized. If you prefer your plant personnel to have a consistent operator interface, all operation activities can be performed from your plant DCS using the industry standard Modbus RTU interface. Whether the operator interface is through the front panel or Modbus, multilevel password protection is provided on configuration and test parameters for secure operation.

Inputs and Outputs

The VANTAGE GDX governor features a comprehensive I/O complement:

- 2 Magnetic Pickup Inputs o 16 Discrete Inputs
- 8 Analog Inputs o 6 Discrete Outputs
- 3 Analog Outputs

Test and Maintenance

The VANTAGE GDX governor provides several unique features to simplify test and maintenance procedures. These features help lower your system life-cycle costs:

- Extensive self-diagnostics and field I/O diagnostics simplify troubleshooting.
- A history log aids in the analysis of recent shutdowns.
- Manual operation allows direct valve positioning for test and maintenance of final control elements.
- The overspeed test feature (password protected) facilitates testing of the primary overspeed device by allowing an increase of the turbine speed set point up to the configured maximum control speed.

Specifications

- Input Power: 85 to 265 VAC (optional 18-32 VDC)
- Enclosure Rating: IP-54
- Operating Temperature Range: -40 to +65 °C
- Humidity Range: 5 to 95% (Non-condensing)
- EMC Compliance: CE Certified
- Hazardous Area Certification
- U.S. Class 1, Div. 2, Gas Groups A, B, C, D, Temperature T3
- Canadian Class 1, Zone 2, Gas Group IIC, Temperature T3
- European ATEX Group II, Category 3, Gas Group IIC, Temperature T3



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