

VANTAGE® GD

***Specifically Designed For Condensing
and Back-Pressure Steam Turbines
Driving Synchronous Generators***



Compressor Controls Corporation's new Vantage® GD

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

CONTROL ALGORITHMS

The **VANTAGE GD** governor provides a comprehensive collection of turbine and generator control algorithms.

Speed Control

VANTAGE GD provides outstanding speed control with integrated manual-control capability, protective override for overspeed and critical speeds, and fully automated start-up and shutdown sequencing.

Generator Load Control

The **VANTAGE GD** provides stable and precise load control for synchronous electrical generators, and permits operation in power droop, characterized valve droop,

and isochronous modes. Selection of the load control mode is accomplished through a set of discrete inputs that monitor the status of the utility breaker, generator breaker, and an external droop/isochronous switch. Raise and Lower inputs are provided for manual synchronization or interfacing with external auto-synchronization units.

Cascade Control

VANTAGE GD features 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.



Operator Interface

All configuration, operation, and maintenance activities for the **VANTAGE GD** 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 GD** governor features a comprehensive I/O complement:

- 2 Magnetic Pickup Inputs
- 5 Analog Inputs
- 3 Analog Outputs
- 15 Discrete Inputs
- 6 Discrete Outputs

Test and Maintenance

The **VANTAGE GD** 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
- IP-54 type enclosure
- Hazardous Area Certification:
 - USA: Class 1, Division 2, Groups A-D, T3
 - Canadian: Class 1, Zone 2, Group IIC, T3
 - European (ATEX): Group II, Cat. 3, G, EEx, nACL, IIC, and T3



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