POWER ZONE® CONTROL PLATFORM

Features

The Generac POWER ZONE® Digital Control Platform is a fully integrated and multipurpose family of controllers for Generac's single and Modular Power Systems (MPS).

Standard Single Unit Control Features (-GS* and -DS*)

- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- 7" Color Touch Screen
- Multi-Lingual
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication Via Modbus® RTU, Modbus TCP/IP, Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog And Digital Inputs and Outputs
- Wireless Software Update Via Remote Computer
- Wi-Fi, Blue-tooth, BMS and Remote Telemetry

Additional Standard Parallel Control Features (-GSP** and -DSP**)

- Paralleling Control (Synchronizing)
- Reverse Power
- Loss Of Synchronization Between Gensets
- Load and VAR Sharing

Standard System Control Features

- Built-In PLC Logic Eliminates the Need for External Controllers Under Most Conditions
- Ethernet Based Communications Between Gensets
- Programmable I/O Channel Properties
- Built-In Diagnostics

"* -GS is Gaseous Standby, -DS is Diesel Standby
"** -GSP is Gaseous Standby Parallel, -DSP is Diesel Standby Parallel

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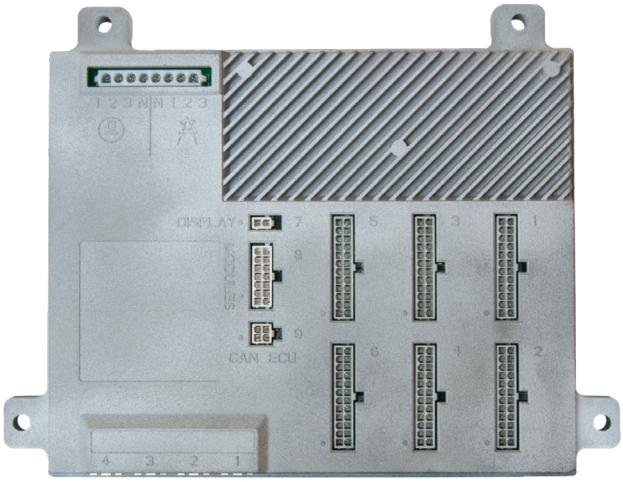

Voltage Regulation (Single or Three Phase Module Options)

- Digital Control
- Three-Phase Sensing†
- Variable V/F Slope Settings and Adjustable Gains
- Negative Power Limit
- Soft Start Ramping
- Loss Of Sensing Protection
- Components Encapsulated for Total Protection
- Paralleling Function for Power Zone® -DSP and Power Zone™-GSP ‡
- Fault Protection (I^2T Function)‡
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- ±0.5% Voltage Regulation
- ±0.1% Stability

PLC (Built-In Programmable Logic Controller)

- Boolean Logic Programming (Ladder)
- 16 Timers
- 16 Counters
- Counter Reset
- Configurable Through Software Tool

Governor Module

- Soft Start Ramping (Multiple Steps)
- Synchronizing Function for Power Zone® -DSP and Power Zone™-GSP Only ‡
- Fully Adjustable Gain (PID)

Display (Touch Screen)

- Resistive Color Touch Screen
- Hi-Brite (1400 NITS)
- Easy Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
  - Three Phase Voltage, Amperage, kW, kVa, and kVar
  - Selectable Line to Line or Line to Neutral Measurements
  - Frequency
  - RPM
  - Engine Coolant Temperature
  - Engine Oil Pressure
  - Engine Oil Temperature
  - Battery Voltage
  - Warning and Alarm Indication
  - Diagnostics
  - Maintenance Events/Information
  - Hourmeter

Customer Ports

- 1 - RS485 - Modbus RTU (Main Controller)
- 1 - RJ45 - RAP/RRP (Main Controller)
- 1 - CANBus - Power Zone Accessories (Main Controller)
- 1 - RJ45 - Modbus TCP/IP or Ethernet 10/100 (Display)

† With select voltage regulators
‡ Configurable option

POWER ZONE® CONTROL PLATFORM

Connections§

- 27 - Digital Outputs (Open Drain, 35Vdc. 1.7A)
  - 6 Fast PWM Capable
  - 1 High Current
- 20 - Digital Inputs Maximum
  - 6 Fast PWM Capable
- 12 - General Purpose Analog Inputs
- 4 - Fast Analog Inputs
- 4 - Analog Outputs (0-5Vdc)
- 1 - E-Stop Relay Output
- 7 - Current Sense Inputs
- 2 - High Voltage Sense Inputs (3 Phase + Neutral)
- 2 - Magnetic Pickup Inputs
- 1 - Coolant Sensor Input
- 4 - Ethernet Ports
- 3 - CANBus Channels
- 1 - RS-485 Ports
- 2 - Switchable +12V Power Outputs

Qualification Testing

- Life Test in Environmental Chamber
- Temperature Rating -40° C to +70° C
- Humidity 2% to 95% (Non Condensing)
- Vibration Tested And Protected
- Accelerated Testing MTBF >50,000 Hr.

Codes And Standards

- UL 6200
- C-ETL-US
- CE
- FCC
- NFPA 110 (Software Programmable For Level 1 or 2)§§

Protections

- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- Sender Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- Battery Voltage
- Battery Charger Current
- Phase To Phase And Phase To Neutral Short Circuits (I^2T Algorithm)

Control Panel And Touch Screen

- Auto/Off/Manual
  - Operation Through Key Switch
  - Indication Through Touchscreen
- Alarm Acknowledge Button
- Audible Alarm and Silence
- Emergency Stop
- Not in Auto Indication

Key

	Fuel Type	Generator Type	Number
-GS	Gas	Standby	
-GSP	Gas	Standby	Parallel
-DS	Diesel	Standby	
-DSP	Diesel	Standby	Parallel
-BS	Bi-Fuel	Standby	
-BSP	Bi-Fuel	Standby	Parallel

§ Actual I/O may vary due to configuration
§§ With Additional Optional Remote Annunciator

