

POWER ZONE® CONTROL PLATFORM

Power Zone® Pro Sync Controller



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*

- 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, SNMP
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Wireless Software Update via Remote Computer
- Wi-Fi, Bluetooth, BMS and Remote Telemetry
- USB Port for Easy Log Data Downloads and Firmware Updates
- Analog Input Bias for Speed and Voltage[‡]
- E-mail Notifications for Alarm Conditions and Log Data[†]

Additional Standard Parallel Control Features**

- 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

Customer Ports

- 1 - RS485 - Modbus RTU (Main Controller)
- 1 - RJ45 - Remote Annunciator Panel/Remote Relay Panel (Main Controller)
- 1 - CANBus - Power Zone® Accessories (Main Controller)
- 1 - RJ45 - Modbus TCP/IP or Ethernet 10/100 (Display)
- 2 - Type A USB (Display)

PLC (Built-In Programmable Logic Controller)

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

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 (I²T Algorithm)

* For SG and SD Models

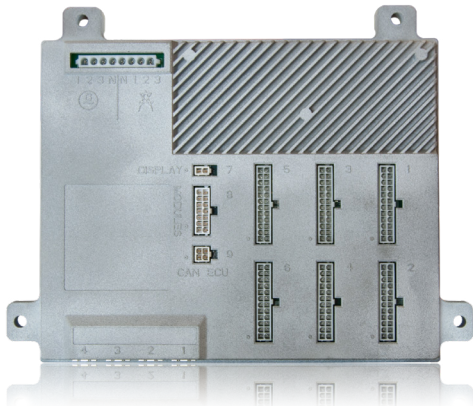
** For MG and MD Models

[‡] Not Available in Parallel Controller

[†] Requires Use of a Network Accessible Authenticated or Open SMTP Server

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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 (I²T Function)[‡]
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- ±0.5% Voltage Regulation
- ±0.1% Stability

Display (Touch Screen)

- Resistive Color Touch Screen
- Hi-Brite (1400 NITS)
- Easy Identifiable Icons
- Multi-Lingual
- IP65 Rated
- 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

Governor Module

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

Qualification Testing

- Life Test in Environmental Chamber
- Temperature Rating -40° C to +60° C
- Humidity 2% to 95% (Non Condensing)
- Vibration Tested and Protected

Connections[§]

- 27 - Digital Outputs (Open Drain, 35 VDC, 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 (0-10 VDC)
- 1 - E-Stop Relay Output
- 7 - Current Sense Inputs
- 2 - High Voltage Sense Inputs (Three 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

Codes And Standards

- UL 6200
- C-ETL-US
- CE
- FCC
- NFPA 110 (Software Programmable for Level 1 or 2)^{§§}

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

^{††} With Select Voltage Regulators

[‡] Configurable Option

[§] Actual I/O May Vary Due to Configuration

^{§§} With Additional Optional Remote Annunciator