

POWER ZONE® CONTROL PLATFORM

Power Zone® 410 Controller



Features

The Generac Power Zone® Digital Control Platform is a fully integrated and multipurpose family of controllers for Generac's generator systems.

Standard Features

- 128 x 64 Graphical Display with Heater
- Multi-Lingual
- Full System Status
- Three Phase Sensing Digital Voltage Regulator
- Full Range Standby Operation
- Full System Status
 - Three Phase AC Volts
 - Three Phase Amps
 - kW
 - Power Factor
 - Oil Pressure
 - Water Temperature
 - Oil Temperature*
 - Oil Level*
 - Fuel Pressure and Level
 - Engine Speed
 - Battery Voltage
 - Alternator Frequency
 - Time
 - Date
 - Line Power and Gen Power
 - Run Hours
 - Service Reminders
 - Fault History (Alarm Log)
- Remote Communications
- Programmable Auto Crank
- Emergency Stop
- On/Off Manual Switch
- Not in Auto Flashing Light
- Selectable Low Speed Exercise
- NFPA 110 Capable**
- 5A Integrated Battery Charger ◊

Standard Protections

- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- 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)
- Ground Fault

Display

- Easy Menu Structure
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
 - Three Phase Voltage, Amperage, kW, kVa, and kVAR
 - Selectable Average or Line to Neutral Voltage Measurements
 - Frequency
 - RPM
 - Engine Coolant Temperature
 - Engine Oil Pressure
 - Engine Oil Temperature
 - Battery Voltage
 - Warning and Alarm Indication
 - Diagnostics
 - Maintenance Events/Information
 - Hourmeter

* Optional; When Available

** See Modular NFPA 110 Components Section

◊ Operation Disabled when Optional 10A Battery Charger is Installed

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Control Panel

- Auto/Off/Manual
 - Operation Through Onboard Buttons or Optional Key Switch
 - Indication Through Display Screen and LEDs
- Audible Alarm and Silence†
- Auxiliary Shutdown Rocker Switch
- Not in Auto Indication

Voltage Regulation (Single or Three Phase Module Options)

- Digital Control
- Three Phase Sensing
- Variable V/F Slope Settings
- Negative Power Limit
- Loss of Sensing Protection
- Fault Protection (I²T Function)
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- ±0.5% Voltage Regulation
- ±0.5% Stability

Governor Functionality

- Speed Control through ECM Integration
- Soft Start Ramping (Multiple Steps)

Customer Ports

- 2 RS-232
- 2 RS-485
- 1 CANBus

Qualification Testing

- Life Test in Environmental Chamber
- Temperature Rating -40° C to +70° C
- Vibration Tested and Protected

Connections‡

- 7 Analog Inputs
- 1 Analog Output (0-10 VDC)
- 6 AC Voltage Sensing Inputs
- 3 CT Inputs
- 16 Digital Inputs
- 13 Digital Outputs
- Comms Ports
 - 1 CANbus Port
 - 1 USB Port (for Configuration Transfer and Firmware Upgrades)
 - 1 RS-485 Modbus Master Port (for External RAP/RRP/HTS/External I/O Modules)
 - 1 RS-485 Modbus Slave Port (for other uses, e.g. Building Management)
 - 2 RS-232 Communication Ports (for Tether or other uses)

Codes And Standards

- UL 6200
- C-ETL-US
- CE
- NFPA 110 Capable

Modular NFPA 110 Components§

- Remote Annunciator
- NFPA Accessory Module
 - Key Switch
 - Alarm Horn
 - Emergency Stop
- 10A External Battery Charger§§



Controller with Optional NFPA Accessory Module

† When Selected; See Modular NFPA 110 Components Section
‡ Actual I/O May Vary Due to Configuration

§ When Selected; Not Standard on All Models
§§ Charger size dependent on battery size. See specific unit spec sheet.