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PowerWizard 2.0 for Perkins powered models

PowerWizard 2.0 — Control Panel

The PowerWizard 2.0 control panel is a feature packed solution to control, monitor and communicate with your generator set. It includes both manual and automatic start / stop and an engine cool down timer. The 32-bit microprocessor-based system eliminates individual meters, gauges and switches, reduces wiring and results in a highly durable and robust system.

The PowerWizard 2.0 panel combines generator set control and monitoring in one module for easy access to controls, metering, protection device settings and diagnostic information.

The PowerWizard 2.0 panel has an accessory data link allowing the connection of annunciator modules and a Modbus data link allowing remote customer monitoring.

FEATURES

- Fully featured power metering, protective relaying and expanded AC metering

- Real-time clock allows for time stamping of diagnostics & events in the control's logs

- Programmable protective relaying, available as alarm and shutdown, protects against undervoltage, overvoltage, underspeed, overspeed, underfrequency, overfrequency

- Expanded remote customer communications are supported by MODBUS protocol using RS-485, which easily interfaces with existing plant systems and equipment

- Digital, 32-bit microprocessor-based system eliminates the need for multiple switches, meters, transducers, relays, and sending units, which translates to less wiring and fewer opportunities for mechanical failures

- Simultaneous viewing of all AC L-L voltages, all AC L-N voltages, or all AC line currents

- User-friendly, convenient, customer programmability directs the customer to logical parameter groups (Ex. AC metering, protective relaying, engine monitoring) for quick keypad access

- Set points & software are stored in nonvolatile memory, preventing loss during a power outage

- True RMS sensing ensures AC metering accuracy of 1% for AC voltage, current, and power parameters

- Five levels of security allow operators to have different access privileges

- Two display languages, (Customer language and Technician English*) to aid service and commissioning

*See languages available overleaf.

C O N T R O L S

STANDARD/OPTIONAL FEATURES

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Standard	
Panel construction and finish	Components installed in a heavy duty sheet steel enclosure Phosphate chemical pre-coating of steel provides corrosion resistant surface Polyester composite powder topcoat forms high gloss and extremely durable finish Lockable-hinged panel door provides for easy component access
Mounting	Mounted to generating set baseframe on robust steel stand Vibration isolated from generating set
Instrumentation	LCD display with adjustable contrast and backlight with auto power off AC metering: Volts 3-phase (L-L & L-N); Amps (per phase & average); Frequency; kW (total & per phase); kVA (total & per phase); kVAr (total & per phase); Power factor (overall & per phase); kW hours; kVAr hours DC metering: Battery volts; Engine hours run; Engine jacket water temperature (in °C or °F); Lube oil pressure (in psi, kPa or bar); Engine speed (RPM); Crank attempt counter; Start counter
Protection	Fail to start shutdown Low oil pressure shutdown High engine temperature Underspeed / Overspeed Loss of Engine Speed Detection Low / High battery voltage Battery charger failure (if fitted) Under volts / Over volts Under frequency / Over frequency Overcurrent 4 spare fault channels 20 Event fault log (name of each event, time & engine hours at first occurrence of event, time & engine hours at latest occurrence of event, number of occurrences of event)
Controls	2 LED status indicators (1 red shutdown, 1 amber warning) Run key, Auto key and Stop key with LED indicators Lamp test key Alarm acknowledge key Menu navigation keys Engine and AC metering shortcut keys Control module keys have tactile feedback Lock down emergency stop push button
Languages	Arabic, Chinese, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Icelandic, Italian, Japanese, Latvian, Lithuanian, Norwegian, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish and Turkish
Other features	Real time clock Service interval counter CAN 1 data link - J1939 for communicating with electronic engine control modules CAN 2 accessory data link – for additional modules: remote annunciator, digital input/output module Modbus communications on 2 wire half duplex RS485 connection for remote customer monitoring

Optional
Remote annunciator
Battery trickle charge ammeter
Audible alarm
Close remote monitoring and control, Distance remote monitoring and control via telephone line
Battery chargers: 120V AC, 240V AC, 240V AC + Boost
Engine coolant heater controls
Volt free contacts for: (1) Common Alarm, (2) Genset running
Lockdown emergency stop button with security key
Volts adjust potentiometer
Speed adjust potentiometer
Spare shutdown/alarm channel can include: Earth leakage protection, Low fuel level, Low coolant level, High lube oil temperature, Low coolant temperature, High fuel level, Overload via alarm switch, Earth fault protection, Low gas pressure, High gas pressure

Note: All options are not available on all genset models.