

IntElect[™] Power Control and Conditioning Center (PC³)

The IntElectTM PC^3 integrates the Power and Information features of the advanced hybrid in a single component.



The PC³ performs the following functions:

- Permits >30% reduction in engine power rating through hybrid electrification
- Series or parallel hybrid capability, with power input/output up to 20kW
- Receives / processes all operator command and interlock signals to control all vehicle functions and communicate detailed performance data through vehicle CAN Bus
- Provides bi-directional electrical control for finely-regulated DC output to the vehicle power bus, and variable AC input to the generator for torque addition or engine start
- Manages DC bus voltage for safe and reliable energy storage and maximum life
- Controls all engine functions, including start/stop and speed control
- Manages engine output for optimum fuel economy with minimum emissions
- Permits secure supervisory control to adapt to operator skills

1 IntElect[™] is a technology suite under development by PG Engineered Control Solutions, combining a broad range of Power and Connectivity innovations for off-highway use. **ENGINEERED CONTROL SOLUTIONS**

Features

Full-authority microprocessor control

Control of mechanically-governed engines though a mechanically-actuated fuel control, or EFI engines through a CAN bus input to the ECU

Interface with VePIC for Supervisory control of vehicle authorizations (e.g., acceleration, maximum speed permissions, activation of accessory functions)

CAN Bus with J1939 protocol

Bi-directional conditioning : Active Rectifier for DC output, Inverter for AC input to generator

Optional start capability

Fault monitoring and status indication

Sealed water proof enclosure and connector

Operational from -40° to 65°C ambient operation when installation requirements are followed

24 - 60 volt DC nominal power systems up to 20kW

Over-current, over-voltage, under-voltage, thermal-overload protections

Automatic recovery from transient electrical protection events

RS-232 communication for detailed diagnostics and/or field programming

5 VDC output for sensor power

Software can be updated in application

PG specializes in system engineering of engine electrification tasks. We will customize this controller and its software to fit your application.



Dimensions



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ENGINEERED CONTROL SOLUTIONS

IntElect[™]

Intelligent Electrification

The PC³ is part of PG's IntElectTM technology initiative.

IntElect[™] elements may be applied in whole, as shown in the diagram below, to fully exploit all the advantages of a networked electrified vehicle, or used independently as components in other electrified or conventional system architectures.



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