InteliGen[®] GPU Ground Power Unit

Comprehensive controller for land aircraft gen-sets





General Features

- Engine control and protection
- Display indication of all measured and calculated values
- Push buttons for manual control
- Three circuit breakers control
- Warm-up and cooling functions
- Load bank TEST mode
- Binary inputs 9, expandable by IG-PCM (+4) and IGS-PTM (+8) module
- Binary outputs 9, expandable by IG-PCM (+4) and IGS-PTM (+8) module

- Analog inputs 3, expandable by IGS-PTM (+4) module, configurable characteristics
- RS232 interface with ModBus protocol support; Analog/GSM/ISDN modem communication support; SMS sending on gen-set failure
- Event based history file (~ 120 records), RTC, statistics
- Dimensions 180x120 mm (front panel)
- Sealed to IP65 (front panel)

Description

InteliGen® GPU - Ground Power Unit is comprehensive controller designed for land aircraft gen-sets operating at 400 Hz frequency. No additional external buttons, measure devices and indication lamps are needed for switchboard design.

InteliGen® GPU enables independent control of three circuit breakers. The first circuit breaker is supposed to supply external AC/DC converter for aircraft 28 VDC supply. The second and third circuit breaker is supposed to supply two AC feeders to aircraft.

Gen-set can be operated manually from controller front panel or remotely from external buttons or via modem or GSM modem.

Power cable connection to the aircraft is protected by plug feedback information with two different methods of plug feedback detection:

- plug feedback is required before GCB is closed,
- plug feedback is closed after voltage validation from aircraft.

Load bank TEST mode enables gen-set power test without connection to aircraft. InteliGen® GPU supports DC line droop compensation, when DC line is used. Separate CT for DC line overcurrent can protect DC line overload.

InteliGen® GPU inputs/outputs configurability enables large customizing to different types of land aircraft applications.

InteliGen® GPU controller is equipped with powerful graphic display. Icons, symbols and bar graphs for intuitive operation.

Benefits

- Less wiring and external components
- Economic switchboard design
- Integrated solution upgradeable
- Less engineering
- Full communication easy service
- Perfect price/performance ratio
- Free SCADA WinEdit software

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Integrated protections

- 3 phase integrated generator protections (U+f)
- IDMT overcurrent + Shortcurrent protection
- Current and voltage unbalance

Extension features

- **IG-IOM** (4 analogue inputs, range 0-2400 Ω; 8 binary inputs; 8 binary outputs; 1 analogue output)
- Overload protection
- All binary/analogue inputs free configurable for various protection types: Warning / Slow stop / Unload / Shutdown
- IGS-PTM (4 analogue inputs, ranges 0-250 Ω / 0-20 mA / 0-100 mV; 8 binary inputs; 8 binary outputs; 1 analogue output)

Communication extension features

- IG-COM CAN interface to link more controllers and/or to supervising system
- IG-MU (direct or modem control of multiple gen-sets; RS422 / RS485 / ModBus support for direct connection; Analog / GSM / ISDN modem support; modem callback function)
- IG-IB (Ethernet/Internet communication support; multiple gen-set control via Internet; active e-mails on gen-set failure; Internet dial-up / callback function)

- Phase sequence supervision
- IG-PCM (4 configurable binary inputs; 4 configurable binary outputs)
- WinEdit free PC software for configuration and supervision of one IG/IS controller (gen-set); direct / modem / Internet connection
- MultiEdit free PC SCADA software for supervision of a group of IG/IS controllers (gen-sets); easy site overview, including MCB state and load consumption





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