Control Panels
RANGE BROCHURE

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Contents

Putting You In Control

Whatever your power requirements, FG Wilson can provide a control system to suit your needs. Our generator set experts design and validate FG Wilson control systems to optimise your generator set performance and put you in control.

All FG Wilson control panels are compact, versatile and easy to use. Enhanced by common designs across the range enabling simple panel upfitting. Our comprehensive range of digital control panels include remote/auto start panels for straightforward functionality and reliability; control panels suitable for use in automatic mains failure applications, providing advanced metering, protection and diagnostics; and the next generation of advanced synchronising panels with integrated load management capability, suitable for synchronising up to 32 generator sets.

Our range of load transfer panels are designed to enhance the operation of your standby generator set in conjunction with our electronic control panels, to provide automatic control of your standby generator set in the event of a power outage, 24 hours a day, 365 days a year.

For more challenging power requirements, our Power Solutions Team is dedicated to the design and production of bespoke control systems to meet your individual needs, regardless of complexity.

FG100

The FG100 digital control panel is our standard/default controller across our product range. The FG100 offers simple, intuitive menu navigation and control of your generator set operations, key features such as remote monitoring allow you to control your generator set with ease. Key information is displayed via the LCD display using universally recognised symbols, eliminating the need for complex instructions or language settings. Rainbow SCADA PC software allows for remote control of your generator set.

Features

- 128x64 graphical LCD display
- Field upgradable plug-in communication modules
- 400 event logs, full snapshot
- Most parameters editable via front panel
- 3 level configuration password
- 6 configurable digital inputs
- 5 configurable digital outputs
- 3 configurable analog inputs
- CANBUS-J1939 (for electronic engines)
- 3 configurable service alarms
- Power protection
- Overload IDMT protection
- Current & voltage unbalance protection
- Idle speed control
- Battery charge run enabled
- 4 quadrant generator set power counters
- Configurable from USB
- Simple firmware upgrades via USB port

PowerWizard

The FG Wilson PowerWizard range of digital control panels, combine straightforward menu navigation with advanced metering and protection technology. They are used in automatic mains failure applications in conjunction with transfer panels.

Our PowerWizard range allows you to monitor and control your generator set with ease, whilst ensuring your unit operates within safe parameters and provides important diagnostic information when needed.

Key Features

- Robust electronics package for industry leading reliability
- Single menu layout for ease of navigation and monitoring
- Two display languages (Customer & Technician Language)
- Shortcut keys for instant access to engine or AC metering
- Run/Auto/Stop keys with LED indicators
- Dedicated fault reset key & main menu key
- Serviced using standard EST
- 40 unique events log configuration
- 10.5-32V DC providing a single module to cover the whole FG Wilson generator set range
- Comprehensive range of standard features and options to ensure the most appropriate configuration for your needs
- 5 spare fault channels
- Configurable sender input
- True RMS Voltage Sensing
- Engine and AC Monitoring
- CAN 1 Data Link for communication to electronic engines, CAN 2 Accessory Data Link for additional modules (PW2.1)
- Integrated metering and controls aiding reliability and ease of service (PW2.1)
- Generator set voltage and over/under frequency protection (PW1.1+)
- MODBUS connection to building management system via RS485 (PW2.1)
- Power metering

DeepSea 4520

The DSE4520 is a compact remote start or auto mains failure control module that has been developed to provide an outstanding range of features within a compact enclosure. Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current and power, the modules will give comprehensive engine and alternator protection. This will be indicated on a large back-lit LCD icon display via an array of warning, electrical trip and shutdown alarms.

Benefits

- Displays information to the operator in a clear and concise format
- Ensures the display continues to operate in extreme cold weather conditions
- Provides true generator sensing
- Provides true generator and mains (utility) sensing
- Provides global flexibility
- Provides clear accurate power measurement information
- Provides engine overload protection
- Provides multiple installation options
- Provides full monitoring flexibility
- Ensures the engine is fully monitored for improved operating performance
- Ensures the battery maintains enough power at all times
- Provides access to historical alarms and operational status
- Provides complete user-friendly configuration and easy-to-use high-level system control & monitoring

Features

- Large back-lit icon LCD display
- 3-phase generator sensing
- 3-phase generator and mains (utility) sensing
- 600 V ph-ph nominal system compatibility
- Generator & load power monitoring (kW, kVA, kVAr, pf)
- Generator overload protection (kW)
- Configurable inputs & outputs
- Configurable DC, volt-free and staged loading outputs
- CAN & alternator speed sensing
- Engine speed protection, engine hours counter, engine pre-heat, engine run-time scheduler, engine idle control for start/stop
- Battery voltage monitoring
- Configurable event log (50)
- DSE Configuration Suite PC Software

DeepSea 7400

The DSE7400 Series is a sophisticated mono display remote start (DSE7410) auto mains (DSE7420) control module packed with industry leading features to enhance single-set control. The module can be used across a wide range of generator set applications. The DSE7400 modules are compatible with electronic (CAN) and non-electronic (magnetic pickup/ alternator sensing) engines and offer a comprehensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet industry requirements.

Benefits

- Provides secure and simple off site monitoring. All ports are continuously active
- Provides access to historical alarms and operational status
- Ensures additional applications are easily integrated into the system
- Provides clear accurate power measurement information
- Allows load options and dummy load requirements to be independently controlled
- Provides current and historical status information
- Provides complete user-friendly configuration and easy-to-use high-level system control & monitoring
- Ensures the control module can be used with the latest in modern electronic engine technology

Features

- CAN and magnetic pick-up sensing
- Configurable inputs/outputs (11/8)
- Remote communications (RS232, RS485, Ethernet, Modbus, RTU/TCP)
- Configurable event log (250)
- Integral PLC editor
- Power monitoring (kW h, kVAr, kv Ah, kV Ar h)
- Reverse power protection
- kW overload protection
- Load switching, load shedding & dummy load outputs
- Data logging (HDD/USB)
- DSE Configuration Suite PC Software

ComAp InteliLite MRS 16

The inteliLite MRS 16 is a single generator set controller allowing you to effectively operate, monitor, and control your generator set, either manually on the generator set itself, or remotely using any internet enabled device (smartphone, tablet, or PC). Featuring extensive reporting and performance logs, with full generator set monitoring and protection, the MRS 16 controller also has range of plug-in extension modules available enabling I/O upgrades and additional communication options.

Features

- Easy to install, configure and use
- 5 languages in the controller
- 3 level of password
- 3 sets of alternative configuration
- Wide range of communication capabilities including:
  - connection via RS232, RS485, CAN and USB
  - internet access using Ethernet, GPRS or 4G
  - support for Modbus and SNMP protocols
- Internal PLC support with PLC editor and monitor
- included in LiteEdit
- Active SMS and emails in different languages
- SNMP traps
- Option for up to 16 additional binary inputs/ outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- Comprehensive generator set protections
- Multipurpose flexible timers
- True RMS measurement

† Available through Power Solutions

ComAp InteliGen 200

The inteliGen 200 is a comprehensive paralleling generator set controller capable of managing up to 32 generator sets. Direct communication is via the Engine Control Unit and the controller also offers the ability to monitor your generator set remotely.

Features

- Multiple Island or Single Parallel to Mains applications both in one controller
- PLC support with PLC editor and monitor
- Perfect solution for rental applications:
- Rental timers
- Droop and Emergency droop
- Load sharing and VAr sharing via CAN
- Wide communication capabilities including:
  - Integrated USB for configuration
  - Isolated RS485 port on board for MODBUS
  - Integrated USB Host for uploading/downloading
- FW/Configuration with USB key
- High accuracy of voltage and current measurement
- Cloud-based monitoring and control
- Active SMS and emails in different languages*
- Up to 5 languages in the controller
- Configurable MODBUS
- Support of MODBUS RTU/TCP* or SNMP* v1/v2c
- Detailed history with up to 350 events
- Load shedding, dummy load capability
- Tier 4 Final support
- Automatic temperature based cooling/heating
- Comprehensive generator set protections
- Multipurpose flexible timers with full calendar
- True RMS measurement
- Low temperature version available

easYgen 2500

The easYgen 2500 is a generator set-to-set controller for paralleling and load sharing applications of up to 16 generator sets. A special feature of the easYgen 2500 is the enhanced load sharing system. This provides advanced generator load dependent start / stop functionality with automatic generator set selection to ensure optimal system efficiency.

Benefits

- Capable of set-to-set synchronising for up to 16 generator sets
- User friendly interface
- Easy system navigation via programmable soft keys
- Multiple communication protocols for communication with Engine Control Units (ECUs), external I/O boards, PLCs and modems
- Multilingual capability: English, Chinese, French, German, Italian, Japanese, Polish, Portuguese, Russian, Spanish and Turkish
- Capable of working with all common industrial interfaces

Features

- Power and reactive power load sharing up to 16 units including load-dependent start / stop
- Engine start / stop and generator set measuring and protection
- Running hours balancing
- Breaker control: synchronisation, open-close control, only-open control, breaker monitoring
- Dead bus closure negotiation
- PLC-like programming with Logics Manager
- 300-entry, time and date stamp log
- Operating hours / start / maintenance counters
- Configurable trip levels / delays / alarm classes
- Field configurable application settings
- Multi-level password protection

easYgen 3000

The easYgen 3000 series is a versatile control unit, incorporating all the features of the easYgen 2500 including enhanced load sharing. The easYgen 3000 combines complete engine-generator control and protection with advanced, peer-to-peer paralleling functionality and innovative features in a robust, attractive and user-friendly package. Typical applications include co-generation, standby, AMF, peak shaving, import / export or distributed generation. This control panel is suitable for synchronising up to 32 generator sets running in island mode, mains parallel and multiple unit mains parallel operations.

Protection

Generator Set

- Over / under voltage
- Over / under frequency
- Dead bus detection
- Overload
- Reverse / reduced power
- Time over current
- Instantaneous over current
- Inverse time over current
- Phase rotation
- Unbalanced load
- Power factor

Engine

- Over / under speed
- Battery over / under voltage
- Speed / frequency mismatch

Inputs / Outputs (I/O)

- 3 phase true r.m.s. generator set current / power
- 1 speed input (magnetic / switching)
- 10 configurable discrete alarm inputs
- 5 configurable analogue inputs
- 4 configurable analogue outputs (+/– 10 V, +/– 20 mA, PWM; configurable)
- 2 CAN bus interface (load share, Toolkit)
- 11 Relay Outputs Isolated
- RS485 Modbus interface
- Service Port – (RS232 – Woodward DPC cable required)

Deif AGC-4

Currently available on our PRO rental range this controller is suitable for a wide range of applications. The Deif AGC-4's standard sequences include backup power, start/stop, synchronisation and load sharing. The controller also supports serial communication protocols including Modbus (RS485, USB and TCP/IP) and Profibus.

Key Features

- The Automatic Gen-set Controller, AGC, contains all necessary functions for protection and control of your generator set
- Multiple operating modes including backup power, start/stop, synchronisation, and load sharing
- Fully compatible with AGC3
- Synchronisation of up to 56 breakers
- Multi-master power management
- Load-dependent start and stop
- Load management
- Emulation for Fast Training & I/O test
- Hot Standby – Change to backup generator set controller on the fly

ComAp Intelligen

The ComAp InteliVision 5 premium operator panel is equipped with a 5.7" colour screen to visualise and control your generator set in a wide range of rental applications. Coupled together with the InteliGen NTC BaseBox it allows for both single and multiple (parralel) generator sets operation. Generator set performance log for easy problem tracing and easy remote supervising and servicing.

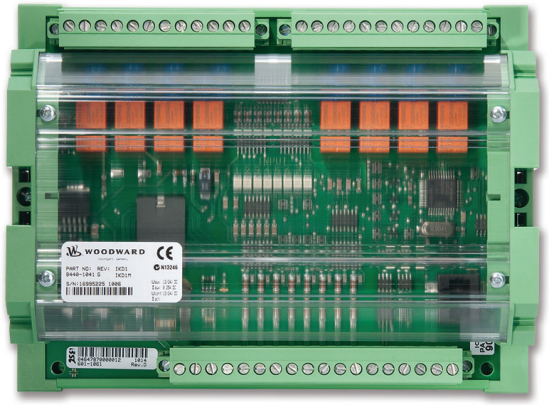
Key Features - Intelivision 5

- 5.7" colour display with 320 x 240 pixel resolution
- Local and Remote display for single controller monitoring
- Plug and play operation
- Direct connection to the controller
- Simple, fast and intuitive control
- Easy drag and drop screen configuration
- Five active buttons – fast access to important data
- Configurable active buttons
- Same language support as the controller including graphic languages
- Communication connection via RS-485
- Operating temperature: -30°C to +70°C
- Face is sealed to IP65

Key Features - InteliGen Basebox

- Controller for single or multiple generator sets operating in standby or parallel modes
- Multiple communication connection options – easy remote supervising and servicing
- Support of engines with ECU
- Generator set performance log and event-based history
- Automatic synchronising and power control
- AMF function, Baseload, Import / Export, Peak shaving, Voltage and PF control (AVR)
- Generator set measurement, mains measurement
- Inputs and outputs configurable for various customer needs
- Controller redundancy
- Event-based history (up to 1000 records)
- Integrated PLC programmable functions
- Integrated fixed and configurable protections

Control Panel Options



I/O Expansion Module†

Remote management

Connection to and from external system devices enabling more flexibility to meet your specfic power requirements.

Key Features

- 8 configurable discrete alarm inputs
- 8 configurable relay outputs
- Connection to easYgen control panel via CAN bus
- Input and output configuration via onboard easYgen relay manager
- Remote control of output relays via CAN bus
- The I/O Expansion Module can be used with other manufacturer's controls. Consult Woodward product manual 37135 for information regarding the address assignments of the CAN bus interface

† Available through Power Solutions

Features and Options

	FG100	DSE4520	DSE7320	DSE7410	DSE7420	PW1.1	PW 1.1+	PW 2.1	PW2.1+	MRS16	IG200	EG2500
Control Function	Auto Start	Auto Mains Failure	Auto Mains Failure	Auto Start	Auto Mains Failure	Auto Start	Auto Start	Auto Start	Auto Start	Auto Start	Sync	Sync
I/O												
Digital Inputs	6	4	8	8	8	4	6	6	6	7	8	10
Dedicated E'stop Input	×	×	✓	✓	✓	✓	✓	✓	✓	×	✓	×
Digital Outputs	5	4*	6	6	6	6	6	8	8	6	8	11
Dedicated Fuel And Crank O/Ps	×	✓	✓	✓	✓	×	×	×	×	×	×	×
Analog Input	3	3	6	6	6	2	3	3	3	4	4	4
Mpu Input	×	×	✓	✓	✓	✓	✓	✓	✓	✓**	✓	✓
Rs232	×	×	✓	✓	✓	×	×	×	×	Option	Option	×
Rs485 Modbus	Option	×	✓	✓	✓	×	×	✓	✓	Option	✓	✓
Can Bus Engine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2Nd Can Bus	×	×	×	✓	✓	×	×	✓	✓	×	✓	✓
USB	✓	✓	✓	✓	✓	×	×	×	×	✓	✓	×
Ethernet	×	×	×	✓	✓	×	×	×	×	Option	×	×
Snmp	×	×	×	✓	✓	×	×	×	×	✓	✓	×
Power Measurement												
kW	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
kVA	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
kVAr	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
pf	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
kWh	×	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
kVAh	×	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
kVArh	×	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
Event Recording And Plc Function												
Real Time Clock	✓	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓
Event Log	400	50	250	250	250	40***	40***	40***	40***	350	350	300
Plc Capability	×	×	Y	Y	Y	×	×	×	Y	Y	Y	Y

* 2 are used if in Auto Mains Failure configuration

** Consumes 1 Analogue input

*** Has 40 event slots each of which can record up to 40 instances of an event

FG Wilson manufactures product in the following locations:
Northern Ireland • Brazil • China • India

With headquarters in Northern Ireland, FG Wilson operates through a Global Dealer Network.
To contact your local Sales Office please visit the FG Wilson website at www.FGWilson.com.

FG Wilson is a trading name of Caterpillar (NI) Limited.

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