easYgen™ Series
Overview | ONE UNIT. INFINITE POSSIBILITIES.

WOODWARD

POWER GENERATION

Always Innovating for a Better Future

Genset Control and Power Management **Solutions**

YOUR BENEFITS

→ Benefit from **Woodward's longest legacy** and experience in genset control technology

→ **Standardize** your genset controls from simple auto start/stop applications to complex synchronizing and power management applications with an easYgen

→ **Increase availability** of your power generation assest by high precision synchronizaton in parallel operations

→ **Minimze dependency** on PLC programming with purpose-built algorithms and logics suitable for your power generation asset

→ Designed as a **global product** for local markets

The easYgen family is designed to optimize the overall lifecycle cost of your power generation asset. Right from transparency in selection of the best-fit easYgen traight through design, commissioning, O&M and retrofit/upgrade, the easYgen family offers simplicity, versatility, and longevity to OEM genset packagers, switchgear builders and system integrators.

Cogeneration Applications

Peak Shaving Applications

AMF and Stand-by Applications

Marine Applications

Product Line
Features

OVERVIEW

easYgen Series*	100	1000	2000	3000XT
Operations modes				
Island mode	•	•	•	•
Island parallel mode	-	-	•	•
Mains parallel mode	-	-	•	•
Applications				
Auto Start/Stop	•	•	•	•
Auto mains failure emergency standby	-	•	•	•
Base load (import/export)	-	-	•	•
Peak shaving	-	-	•	•
Marine approvals	-	-	•	•
Cogeneration	-	-	-	•
Load transfer options				
Open transition	•	•	•	•
Soft load/interchange	-	-	•	•
Closed transition	-	-	•	•
Busbar measurement	-	-	-	•
Protection				
Mains monitoring	-	•	•	•
Generator protection	•	•	•	•
Engine	•	•	•	•
Event recorder (# of events)	50	99+SD	300	1000
Communication hardware				
RS-232	-	•	•	-
RS-485	•	•	•	•
CAN	1	1	2	3
Ethernet	1	1	-	3
USB	1	1	-	1
Communication protocols				
J1939 ECU communication	•	•	•	•
CANopen	-	-	•	•
Modbus (RTU Slave)	•	•	•	•
Modbus TCP	•	•	-	•
I/O set				
Onboard discrete inputs/outputs	6/5	8/8	11/10	23/22
External discrete inputs/outputs	-/-	16/16	16/16	32/32
Onboard analog inputs/outputs	-/-	5/-	4/4	5/11
External analog inputs/outputs[2]	-/-	-/-	-/-	16/4
Optional external devices				
RP-3000XT – remote annunciator	-	-	-	•
LS-5 – circuit breaker control and protection	-	-	-	•
easYlite-100 – reporting unit	-	•	•	•
IKD-1 – I/O expansion modules	-	-	Up to 2	Up to 4
WWDIN16 / WWDOUT16	•	•	-	-
Phoenix expansion modules	-	-	•	•
Languages	5	3	11	14

ACCESSORIES

RP-3000XT™
Remote operator control panel with the same feel and features as the easYgen-3200XT/3500XT display. Connects on Ethernet for visualization and control of the easYgen-3100XT/3400XT models.

LS-5
Compact circuit breaker control and protection device with synchronization and soft load transfer for complex distribution systems having multiple mains power feeds and bus tie breakers. Designed for use with easYgen-3400/3500XT Series.

* Functions vary for each model. Please read the product data sheet for further information.

[1] External Woodward DPC cable required.
[2] Over CANopen. External Phoenix contact extension terminals required. Some packages of easYgen-3000 offer analog expansion over CANopen.
[3] Via J1939. External axiomatic thermocoupler modules required.
[4] Paper strips can be freely designed.

Further information can also be found in the documentation of the respective controls.

easYgen™-100 Series | FOR SINGLE GENSET APPLICATIONS

The easYgen-100 Series is an affordable, value-packed genset control for auto start/stop operations. It provides all the essential functionality for standby diesel/ gas genset application with monitoring, protection and event recording functions common to higher end controls. Available in a compact version and an advanced version with state-of-the-art features, the easYgen-100 controls are smart choices for serial standby genset production.

SIMPLICITY

The easYgen-100 Series has a serial USB interface for PC configuration. Additionally, the module's integral front panel allows adjustment to several parameters. The built-in CANbus interface allows visualization and monitoring of common J1939 messages and alarms. The controllers include purpose-built algorithms and logic to start, stop, control, and protect the genset, and open/close the circuit breakers.

FEATURE OVERVIEW

→   easYgen-600 compact start/stop controller offers a state-of-the-art LCD display, on-board I/Os, and common industrial connectivity
→   easYgen-800 advanced start/stop controller comes with a large LCD display, I/O expansion possibility, built-in ethernet and SD card connectivity
→   Easy to set up and commission
→   Comprehensive engine and generator protection
→   Engine ECU interface to electronic engines
→   Programmable I/Os
→   Dedicated heavy duty relays for engine and breaker interface
→   Password protected PC and front face programmability

Certifications & Listings
CE, UL/cUL*, EAC*
*Pending

The easYgen™-1000
Simple solution for auto start/ stop operations.

easYgen™-1000 Series | FOR AUTOMATIC MAIN FAILURE APPLICATIONS

The innovative features of the easYgen-1000, including auto start-stop logic, real and reactive power sensing, and automatic transfer switch capability make it the intelligent choice for specialized mobile power and emergency stand-by applications. Advanced CAN communication provides control of most common engine ECUs and allows connection to the I/O expansion module. Available in a compact version and an advanced version with state-of-the-art features, the easYgen-100 controls are smart choices for serial critical standby genset production.

COMMUNICATION

The easYgen-1000 Series has a serial USB interface for PC configuration. Additionally, the module's integral front panel allows adjustment to several parameters. The built-in CANbus interface allows visualization and monitoring of common J1939 messages and alarms. The controllers include purpose built algorithms and logic to start, stop, control, and protect the genset, open/close the circuit breakers and – if applicable – mains supply monitoring with automatic changeover.

FEATURE OVERVIEW

→ easYgen-1800 advanced AMF controller comes with a large liquid crystal display (LCD), I/O expansion possibility, built-in ethernet and SD card connectivity
→ easYgen-1600 compact AMF controls offer a state-of-the-art LCD, on-board I/Os, and common industrial connectivity
→ Configurable for 1 or 2 breakers in open transition
→ Comprehensive engine, generator and utility protection
→ Engine ECU interface to electronic engines
→ Programmable I/Os
→ Dedicated heavy duty relays for engine and breaker interface
→ Event log and event triggered data log
→ Password protected PC and front face programmability

Certifications & Listings
CE, UL/cUL, EAC**
**Pending*

The easYgen™-1000
Ideal solution for all standby and emergency operations

easYgen™-2000 Series | FOR ISLAND PARALLEL APPLICATIONS

The easYgen-2000 is a compact, affordable genset control and protection package for load sharing up to 16 gensets in island operation, or parallel operation of a single unit with a utility. Its integrated load-dependent start/stop programming allows the user to define how gensets are brought on- and off-line to support changing load demands. It even works with a mix of different-sized engines so you can maintain the spinning reserve you need while optimizing fuel efficiency.

FLEXIBILITY

Advanced interface capability provides communication at the genset control level, up to the system network level, and to your desktop half a world away. The easYgen-2000 works with many common industrial interfaces: CANopen for peer-to-peer load sharing; J1939 for engine ECU; Modbus RTU for PLC, HMI and SCADA; and modem for remote control and programming using Woodward Toolkit software.

FEATURE OVERVIEW

→ Load share 16 gensets in island mode, or parallel a single genset to a utility
→ Control 0, 1 or 2 breakers, open or closed transition, synchronization and soft load/unload
→ LogicsManager™ Boolean programmability for complex system control
→ Process dependent start-stop logic
→ Multi-lingual capability: 10 languages
→ Complete engine nd generator protection and mains monitoring
→ Asynchronous (inductive) and synchronous generator support

Certifications & Listings:
CE, UL/cUL, LR, ABS

The easYgen™-2000
The genset control for optimum fuel economy

Coming Soon
Enhanced easYgen-2000XT

easYgen™-3000XT Series | FOR UTILITY PARALLEL APPLICATIONS

The easYgen-3000XT is an exceptionally versatile genset control and protection package with all the flexibility and features needed to fit a wide range of critical power generation applications. It allows the user to standardize on a single, versatile control for many uses – from stand-alone emergency generators to isochronous parallel operation of up to 32 gensets with up to 16 utility or tie breakers, on up to 32 different segments – without a PLC! Common applications include emergency stand-by, cogeneration, marine ship/shore power, island prime power or utility paralleling with peak shaving and import/export control.

VERSATILITY

The easYgen-3000XT is available in two mounting styles: the back-panel-mounted easYgen-3100/3400XT has a rugged aluminum chassis for use in harsh environments or confined spaces, the flush-mounted easYgen-3200/3500XT has sealed soft keys and a large, easy to read back-lit display. The LS-5 circuit breaker control, when used with the easYgen-3400/3500XT, enables complex control of distribution systems having multiple mains and bus tie breakers. The integrated LogicsManager™ and AnalogManager™ links internal states and input signals with logical operators and time elements to implement complex control tasks.

FEATURE OVERVIEW

→ Load share 32 gensets in island mode or paralleled to utility

→ Load-dependent start/stop and redundant load share communication

→ Control 0, 1, 2 or 3 breakers, open or closed transition, with synchronization and soft load/unload

→ Can be combined with RP-3000XT remote panel and LS-5 system

→ Complete engine/generator protection + mains monitoring

→ Advanced communication (CANopen, J1939 and Modbus) to engine ECUs, PLCs, HMI, SCADA and external I/O

→ True RMS voltage/current sensing with Power Measurement
Class 1 accuracy

→ Face plate with illuminated operations modes and tactile buttons

Certifications & Listings:
CE, UL/cUL, CSA, BDEW, VDE, EAC, LR, ABS

The easYgen™-3000XT:
One Unit - Infinite Possibilities

FURTHER INFORMATION

Please visit **www.woodward.com** or contact us for further product related information.

Description	Specification	Manual
easYgen-3400XT/3500XT-P2 (-LT)	37583	37581
easYgen-3400XT/3500XT-P1 (-LT)		37580
easYgen-3100XT/3200XT-P1 (-LT)	37582	37574
RP-3000XT	37594	37593
easYgen-3400/3500 Marine	37533	37531
easYgen-3500 Rental	37553	37536
easYgen-2000	37548	37535
easYgen-2500 Rental	37553	37537
easYgen-1600/1800	37686	37699/37685
easYgen-600/800	37697	37698/37691
LS-511/521	37522	37527
LS-511/521 Marine	37545	37542
easYlite-100	37279	37307, 37481
IKD-1	37171	37135
EPU-100	37562	37561

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