

easYgen-600



easYgen-800


**easYgen-600 Unique Features**

- ✓ Compact design – optimize footprint of your control panel
- ✓ Crank disconnect function - an additional layer of engine safety
- ✓ CAN J1939 – monitor and control your EFI engine

## Genset Start/Stop Control

Do you package gensets, build switchgear or integrate systems? With several decades of experience in genset control technology Woodward's easYgen family offers a one-stop-shop standardization opportunity for all of your genset control needs. easYgen family genset controls cover full range of generator system applications ranging from simple start/stop control to complex synchronizing and power management controls.

### DESCRIPTION

Woodward easYgen-100 series is designed for single generator set used in isolated stand-by or prime power applications. The controllers include purpose built algorithms and logic to start, stop, control, and protect the genset, and open/close circuit breakers. Equipped with state of the art communication interfaces, Woodward's easYgen-100 Series AMF genset controllers provide exceptional versatility and value for the OEM genset packagers.

The easYgen-100 Series is available in two variants:

- **easYgen-600** compact start/stop controller offers a state of the art liquid crystal display (LCD), adequate on-board I/Os and common industrial connectivity
- **easYgen-800** advanced start/stop controller comes with a large LCD, I/O expansion possibility, Ethernet and SD card connectivity

Easy-to-use software **ToolKit-SC** simplifies configuring the controllers for standard applications as well as making it easy to customize it for individual solutions. Additionally, the module's integral front panel allows adjustment to several parameters.

### FEATURES

- Three-phase true RMS power sensing
- Operation modes: AUTO, STOP, and MANUAL modes accessible through front panel, discrete inputs or over interfaces
- Remote control via multiple interfaces and via discrete inputs
- Direct support of several ECUs such as Bosch, Cummins, John Deere, MTU, Perkins, Scania, Volvo, Woodward
- Two 16 A relay outputs for cranking and fuel solenoid
- Event and data logging capability with real time clock
- Maintenance scheduler with multipurpose flexible timers
- Operating hours, start, maintenance counters and monitoring
- Three switchable parameter sets of AC system winding, Rated Voltage, Rated Frequency, Rated Current, Rated Power, Rated Speed
- Can be applied on pumping units as an indicating instrument (relays are inhibited);
- Fully configurable via PC using USB, RS485 or Ethernet. Front panel configurable with password protection
- Manual breaker operation with tactile buttons on front panel
- Customizable boot-up logo with adjustable screen display time
- Multilingual capability selectable on site

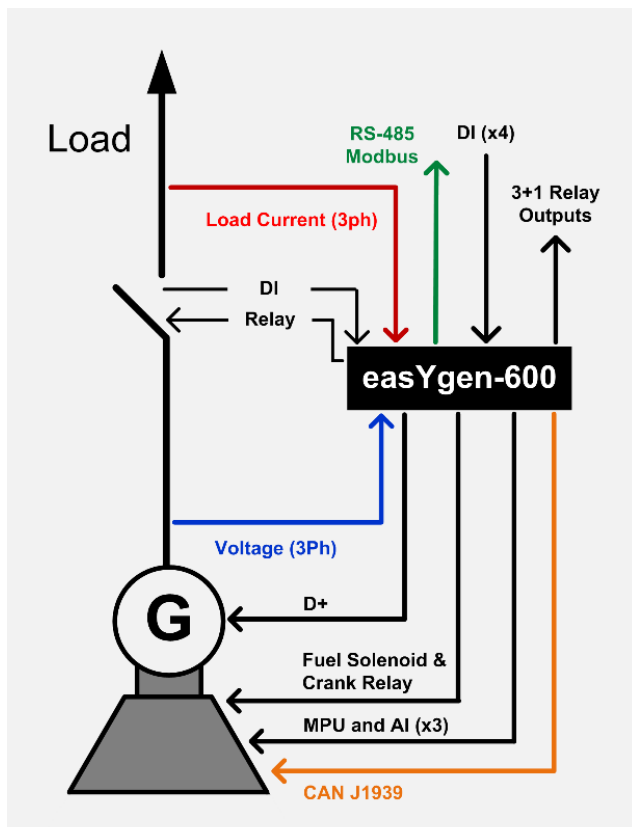
- Remote Start/Stop application in
  - Single unit isolated operation
  - Stand-by operation
  - Prime power operation
  - Rental power operation
- Easy to set up and commission
- Comprehensive engine, and generator protection
- Engine ECU interface to electronic engines
- Programmable I/Os
- Power metering
- Communication ports: CAN J1939, RS-485, USB
- Dedicated heavy duty relays for engine and breaker interface
- Switchable parameter sets for mobile genset applications
- PC and/or front panel configurable
- Event log and event triggered data log

### SPECIFICATIONS

<b>Power Supply</b>	
Operating Voltage (Reverse polarity protected)	8.0 V <sub>DC</sub> to 35.0 V <sub>DC</sub> , Continuous Power Supply.
Maximum supply voltage	Short Time 80 V (5-10 s); Long T. 50 V
Minimum supply voltage	6.5 V
Maximum operating current	(All relays closed, LCD bright) 380 mA (12 V); 188 mA (24 V)
Maximum standby current	(All relays closed, LCD dimm) 90 mA (12 V); 42 mA (24 V)
Power Consumption	<4 W (standby ≤ 2 W)
Battery voltage measurement	Accuracy: 1% (12V/24V)
<b>Alternator Input Range</b>	
	50 Hz/60 Hz
3-Phase 4-Wire	AC15V - AC360V (ph-N)
3-Phase 3-Wire	AC30V - AC620V (ph-ph)
Single-Phase 2-Wire	AC15V - AC360V (ph-N)
2-Phase 3-Wire	AC15V - AC360V (ph-N)
<b>AC-Measurement</b>	
	Phase-phase: 100 .. 624 V : 1%;
Voltage Accuracy (400/480 V % rated)	50 .. 100 V : 1.5 % Phase-neutral: 100 .. 360 V : 1% 50 .. 100 V : 1.5 %
Minimum frequency	Generator: 10 Hz; Mains: 27 Hz
Maximum frequency	Generator: 99.5 Hz; Mains: 99.5 Hz
Frequency resolution	0.1 Hz (10 .. 99 Hz)
Frequency accuracy	±0.1 Hz
Nominal CT secondary rating	5 A
Overload Measurement	Max.: 10 A
Current Accuracy	1 %

<b>Housing</b>		
Case Dimension	easYgen-600: 209 X 166 x 45 mm <sup>3</sup> easYgen-800: 237 x 172 x 45 mm <sup>3</sup>	
Panel Cutout	easYgen-600: 186 x 141 mm <sup>2</sup> easYgen-800: 214 x 160 mm <sup>2</sup>	
Working Conditions	Temperature: (-25 to +70) °C; Humidity: (20 to 93) %RH	
Storage Condition	Temperature: (-25 to +70) °C	
Protection Level	IP65 in the front, mounted with kit IP20 on rear side	
Insulating Intensity: Apply 2.2 kV <sub>AC</sub> voltage between high voltage terminal and low voltage terminal. The leakage current is not more than 3 mA within 1 min.		
Net Weight	0.85 kg	
<b>Speed Sensor</b>	Voltage	1.0 V to 24.0 V (RMS)
	Frequency	10,000 Hz (max.)
Excitation current D+	110 mA (12 V); 230 mA (24 V)	
Start Relay Output	16 A DC28V supply output	
Fuel Relay Output	16 A DC28V supply output	
Auxiliary Relay Output (1 .. 3)	7 A DC28V supply output	
Auxiliary Relay Output (4 .. 6)	7 A AC250V voltage free output	
<b>Discrete Inputs</b>		
Low level threshold	Approx. 1.3 V	
Maximum input voltage	60 V	
Minimum input voltage	0 V	
High level threshold	1.7 V	

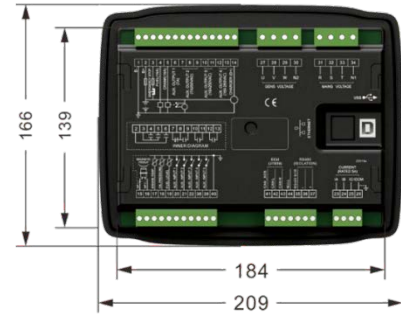
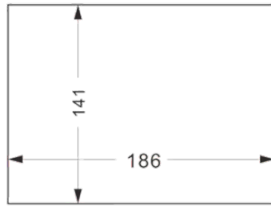
## APPLICATION



# DIMENSIONS

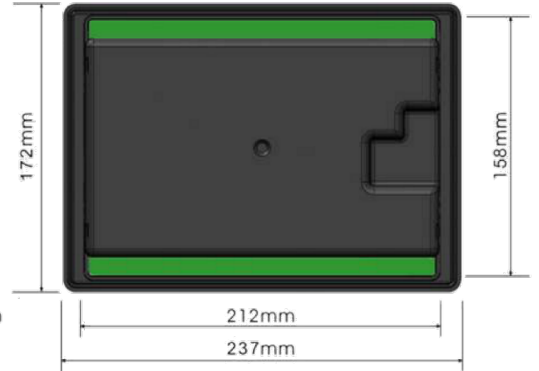
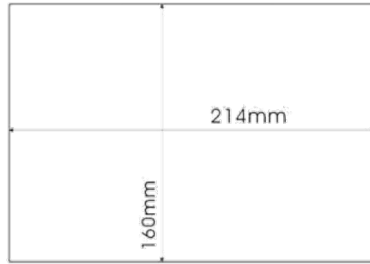
easYgen-600

CUTOUT



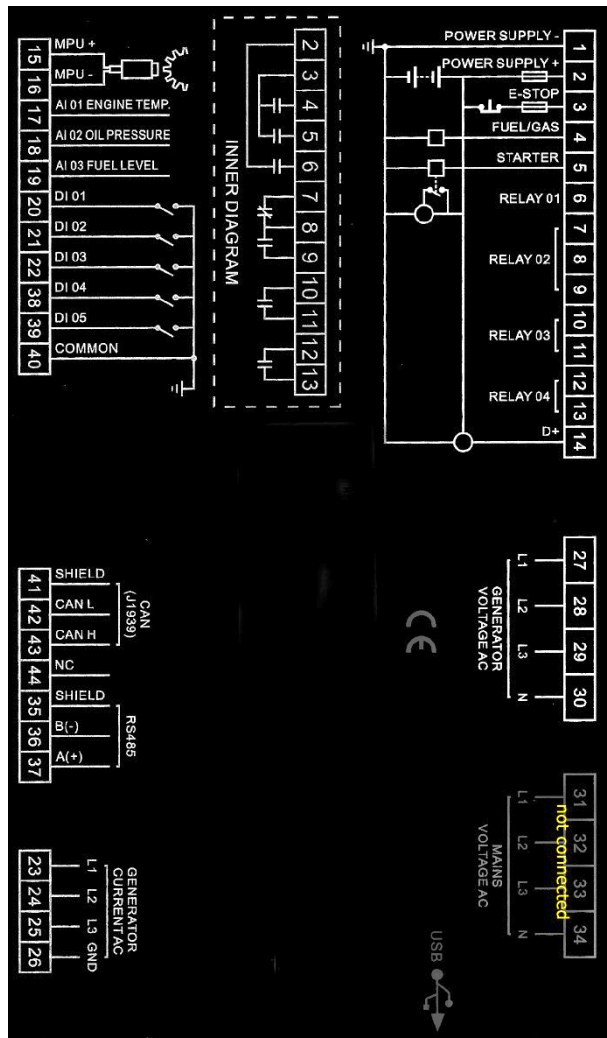
easYgen-800

CUTOUT

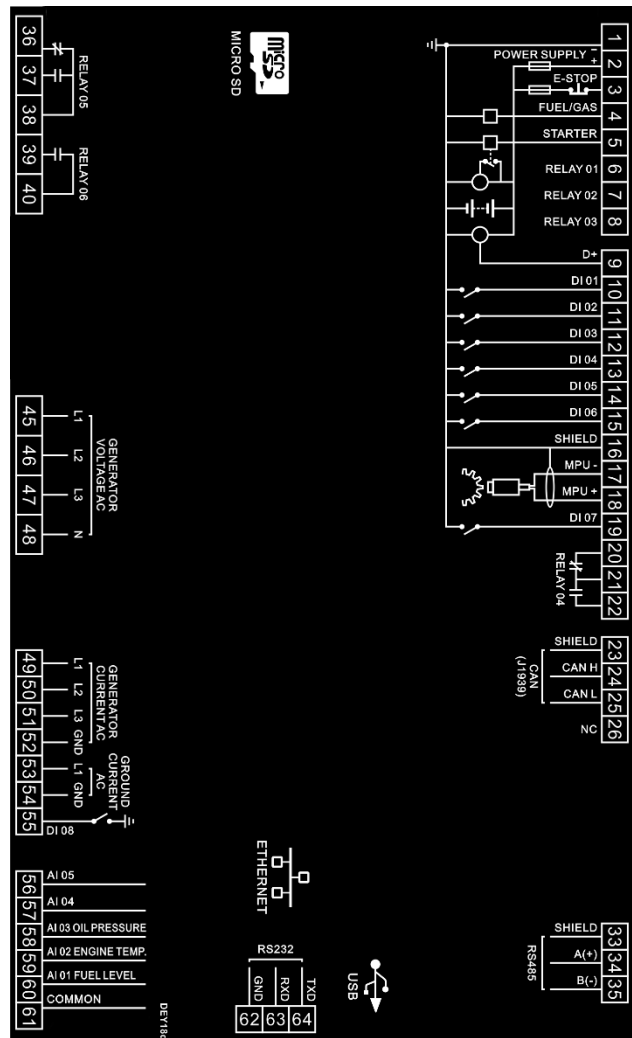


# TERMINAL DIAGRAM

easYgen-600



easYgen-800



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## FEATURES OVERVIEW

EASyGEN 100	Model	easYgen-100 Series	
		easYgen-600	easYgen-800
<b>Measuring</b>			
Generator voltage (3-phase/4-wire)		✓	
Generator current (3x true r.m.s.)			✓
Earth current (1x true r.m.s.)		-/-	✓
<b>Control</b>			
Isolated single unit operation		✓	
Stand-by operation			✓
GCB control			✓
Start/stop sequence for diesel and gas engines		Diesel	Diesel/Gas
Tactile buttons to start/stop the genset and open/close the breaker			✓
Remote monitoring and control over SMS (modem support)		-/-	✓
<b>Protection</b>			
Generator	Voltage		
	Frequency		✓
	Loss of phase		✓
	Phase sequence		✓
	Current		✓
	Reverse Power		✓
Engine	Overload		✓
	Earth fault	-/-	✓
	Over speed		✓
	Under speed		✓
	Loss of speed		✓
	Crank disconnect		✓
Battery voltage		✓	
<b>HMI, Counters, and Event Log</b>			
Integral display with tactile buttons		Monochrome LCD (132 x 64)	TFT LCD ( 480 x 272)
Customizable power-up text and image		✓	✓
Front panel configuration with PIN protection		✓	✓
Flush mounting		✓	✓
Operating hours/start/maintenance counters		✓	✓
Event recorder with real time clock		50	99 internal; extended data log using SD card
kWh, kvarh		✓	✓
Switchable parameter sets		-	✓
<b>I/Os and Interfaces</b>			
Discrete inputs		1x E-Stop, 5x configurable	1x E-Stop, 8x configurable
Relay outputs		1x Fuel (16 A), 1x Start (16 A), 4x configurable	1x Fuel (16 A), 1x Start (16 A), 6x configurable
Analog inputs		3x resistive	5x (VDO, RTD, mA)
Speed input (MPU)		1	1
Aux. excitation (D+)		1	1
Ethernet (TCP/IP)		Option	1
CAN (J1939)		1	1
USB service port		1	1
RS485		1	1
RS232		-	1
External DI/DO via CAN bus		-/-	16 / 16
Micro SD card slot		-	1
<b>Listings/Approvals</b>			
CE Marked		✓	
UL / cUL Listing		Pending	
EAC		Pending	
<b>Part Numbers</b>			
Control with connectors and fastening kit		8440-2229	8440-3003
Spare connector kit		10-004-674	10-004-675

## RELATED PRODUCTS

ToolKit-SC (Product Specification # 37695)

I/O Expansion Boards:

- **WWDIN16** (Product Specification # 37693): **P/N 10-004-620**
- **WWDOUT16** (Product Specification # 37694): **P/N 10-004-623**

Small Engine Control Module **SECM-70** (Product Specification # 36363)