WOODWARD

EASYGEN 100

easYgen-400 / easYgen-600 / easYgen-800

easYgen-600 Unique Features
- ✓ Compact design – optimize footprint of your control panel
- ✓ CAN J1939 – direct communication with electronic engines
- ✓ Crank disconnect function - an additional layer of engine safety

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 solution for all of your genset control needs. easYgen family genset controls cover the full range of generator system applications, ranging from simple functions, such as start/stop of a genset to complex ones, like synchronizing and power management of large fleet of gensets.

- **Manual and Remote Start/Stop application in**
  - **Single-unit isolated operation**
  - **Stand-by operation**
  - **Prime power operation**
  - **Rental power operation**

DESCRIPTION

The Woodward easYgen-100 series is designed for a 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 of genset controllers provides exceptional versatility and value for OEM genset packagers.

The easYgen-100 Series is available in three versions:

- **easYgen-400** small start/stop controller contains a big liquid crystal display (LCD), configurable I/Os and electronic engine support.

- **easYgen-600** compact start/stop controller offers a state of the art LCD, adequate on-board I/Os and common industrial connectivity

- **easYgen-800** advanced start/stop controller comes with a large LCD, I/O expansion capability, Ethernet and SD card connectivity

ToolKit-SC is a single service tool for configuring easYgen-100 and –1000 series controllers. The module's password-protected integral front panel lets you adjust various parameters on-site.

- **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**

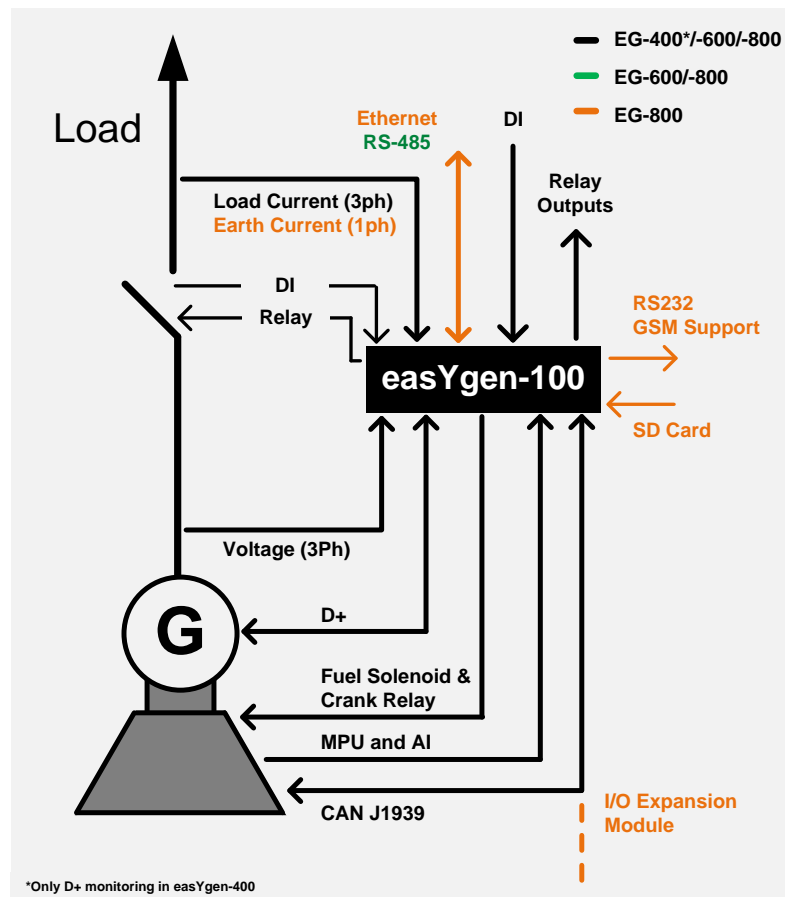- **Switchable parameter sets for mobile genset applications**

- **Can be configured from computer or front panel**
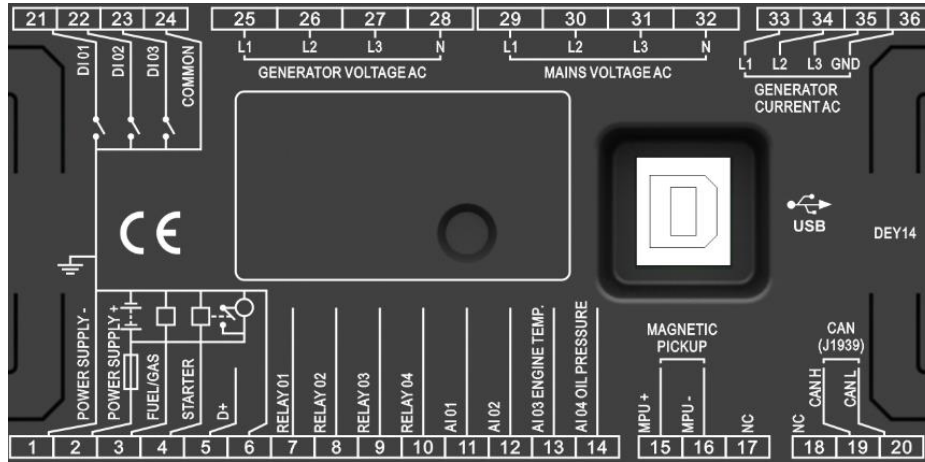
- **Event log and event-triggered data log**

FEATURES

- Three-phase true RMS power sensing
- Operation modes: AUTO, STOP, and MANUAL modes accessible through front panel, discrete inputs or via interfaces
- Remote control via multiple interfaces and discrete inputs
- Direct support of several ECUs such as Bosch, Cummins, John Deere, MTU, Perkins, Scania, Volvo, Woodward
- Two heavy duty relay outputs for cranking and fuel solenoid
- Event and data logging capabilities 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)
- Can be configured from computer via USB or front panel with password protection
- Manual breaker operation with tactile buttons on front panel
- Custom boot-up logo with adjustable screen display time
- Multilingual customizable user interface

SPECIFICATIONS

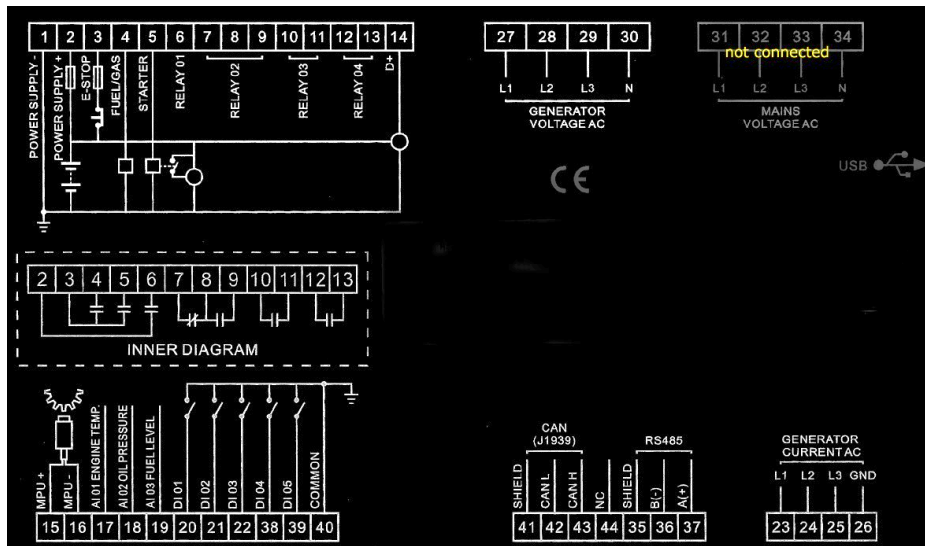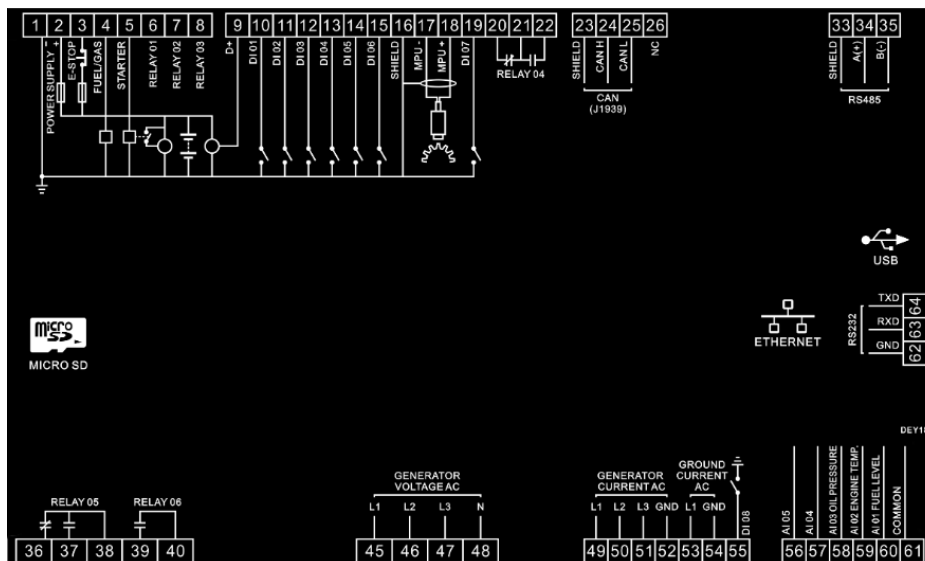| Power Supply	
Operating Voltage (Reverse polarity protected)	8.0 V_{DC} to 35.0 V_{DC}, Continuous Power Supply.
Maximum supply voltage	Short Time 80 V (5-10 s); Long T. 50 V
Minimum supply voltage	6.5 V
Maximum operating current (easYgen-800)	(All relays closed, LCD bright) 450 mA (12 V); 220 mA (24 V)
Maximum standby current (easYgen-800)	(All relays closed, LCD dimm) 420 mA (12 V); 200 mA (24 V)
Power Consumption	<4 W (standby ≤ 2 W)
Alternator Input Range 3-Phase 4-Wire 3-Phase 3-Wire Single-Phase 2-Wire 2-Phase 3-Wire	50 Hz/60 Hz AC15V - AC360V (ph-N) AC30V - AC620V (ph-ph) AC15V - AC360V (ph-N) AC15V - AC360V (ph-N)
AC-Measurement Voltage Accuracy (400/480 V % rated)	Phase-phase: 100 .. 624 V : 1%; 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 %
Excitation current D+ (easYgen-600 and easYgen 800)	110 mA (12 V); 230 mA (24 V)
Start Relay and Fuel Relay Outputs	16 A DC28V supply output in EG-600/-800 5 A DC28V supply output in EG-400
Housing	
Case Dimensions	easYgen-400: 135 x 110 x 44 mm easYgen-600: 209 X 166 x 45 mm easYgen-800: 237 x 172 x 45 mm
Panel Cutout	easYgen-400: 114 x 88 mm easYgen-600: 186 x 141 mm easYgen-800: 214 x 160 mm
Operating 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
Net Weight	easYgen-400: 0.3 kg easYgen-600: 0.56 kg easYgen-800: 0.85 kg

APPLICATION

*Only D+ monitoring in easYgen-400

TERMINALS

easYgen-400

easYgen-600

easYgen-800

For more information contact:

FEATURES OVERVIEW

EASYGEN 100 / Model	**easYgen-100 Series**		
	easYgen-400	easYgen-600	easYgen-800
Measuring			
Generator voltage (3-phase/4-wire)	✓		
Generator current (3x true r.m.s.)	✓		
Earth current (1x true r.m.s.)	-	-	✓
Control			
Isolated single unit operation	✓		
Stand-by operation	✓		
GCB control	✓		
Start/stop sequence for diesel and gas engines	Diesel	Diesel	Diesel/Gas
Tactile buttons to start/stop the genset and open/close the breaker	✓		
Remote monitoring and control over SMS (modem support)	-	--	✓
Protection			
Generator — Voltage	✓		
Generator — Frequency	✓		
Generator — Loss of phase	✓		
Generator — Phase sequence	✓		
Generator — Current	✓		
Generator — Reverse Power	✓		
Generator — Overload	✓		
Generator — Earth fault	-	--	✓
Engine — Over speed	✓		
Engine — Under speed	✓		
Engine — Loss of speed	✓		
Engine — Crank disconnect	✓		
Battery voltage	✓		
HMI, Counters, and Event Log			
Integral display with tactile buttons	Monochrome LCD (132 x 64)	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	50	99 internal; extended data log using SD card
kWh, kvarh	✓/-	✓	✓
Switchable parameter sets	-	-	✓
I/Os and Interfaces			
Discrete inputs	3 (+2 switchable as AI/DI)	1x E-Stop, 5x configurable	1x E-Stop, 8x configurable
Relay outputs	1x Fuel (5A), 1x Start (5A), 4x configurable	1x Fuel (16 A), 1x Start (16 A), 4x configurable	1x Fuel (16 A), 1x Start (16 A), 6x configurable
Analog inputs	4x resistive (2 switchable as AI/DI)	3x resistive	5x (VDO, RTD, mA)
Speed input (MPU)	1	1	1
Aux. excitation (D+)	1	1	1
Ethernet (TCP/IP)	-	-	1
CAN (J1939)	1	1	1
USB service port	1	1	1
RS485	-	1	1
RS232	-	-	1
External DI/DO via CAN bus	-	-/-	16 / 16
Micro SD card slot	-	-	1
Listings/Approvals			
CE Marked	✓		
UL / cUL Listing	Pending		
EAC			
Part Numbers			
Control with connectors and fastening kit	**8440-2231**	**8440-2229**	**8440-3003**
Spare connector kit	**10-009-352**	**10-004-674**	**10-004-675**

RELATED PRODUCTS

- Configuration tool **ToolKit-SC** (Product Specification # 37695)
- I/O Expansion Board **IKD1** (Product Specification # 37171): P/N 8440-2116
- Small Engine Control Module **SECM-70** (Product Specification # 36363)