BE350 Automatic Voltage Regulator

Overview

Using enhanced technology, the BE350 voltage regulator is designed for use on 50/60 Hz brushless generators. This potted regulator is economical, small in size, and ruggedly constructed. It incorporates solid state technology with frequency compensation, automatic voltage build-up and EMI (electromagnetic interference) filtering as standard.

Features

- Integrated circuitry for compact size, simplicity, and high reliability
- Extremely rugged
- Exciter field current 3.5 A continuous, 5 A forcing
- Regulation accuracy better than ±1.0% no-load to full-load
- Fast response
- Frequency compensation
- Internal fuse protection
- EMI suppression

Benefits

- Underfrequency compensation provides the ability to shed load to help improve generator recovery speed, which prevents generator damage and assists the machine to pick up critical loads.
- Integrated overexcitation protection removes excitation in potentially damaging conditions, protecting both the generator and the excitation system.
- Rugged construction and potted design for installation in harsh environments allows dependable operation to reduce or eliminate expensive service calls.
- Plug-and-play replacement for Marathon® Electric's SE350 for quick retrofitting.

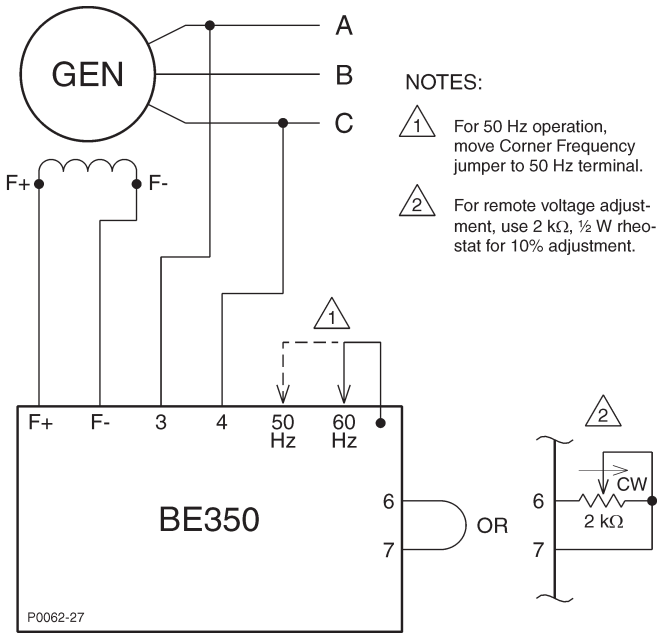

Figure 1 - BE350 Typical Connections

BE350 Automatic Voltage Regulator

Specifications

Field Output

Maximum Continuous: 3.5 Adc at 73 Vdc (255 W)
One-Minute Forcing: 5 Adc at 105 Vdc (525 W) (with 240 Vac input)
Exciter Field DC Minimum Resistance: 21 Ω

Input Power

Range: 190 to 240 Vac, ±10%, 1-phase
Frequency: 50/60 Hz, ±10%
Burden: 500 VA

Voltage Sensing

Range: 190 to 240 Vac, ±10%, 1-phase
Frequency: 50/60 Hz ±10%
Burden: < 1 VA

Power Dissipation

Maximum: 8 W

Fuse

Bussmann GDC-4A or equivalent
Rating: 4 Aac, 250 Vac
Type: Glass tube, 5 x 20 mm, time delayed

Voltage Adjustment Range

171 to 264 Vac

Regulation Accuracy

Better than ±1.0%, no-load to full-load

Response Time

< 1.5 cycles for ±5% change in sensing voltage

EMI Suppression

Internal EMI filtering

Voltage Buildup

Automatic voltage buildup occurs for residual generator voltages as low as 10 Vac.

Environmental

Operating Temp: -40°C to 60°C (-40°F to 140°F)
Storage Temp: -40°C to 85°C (-40°F to 185°F)
Shock: 20 G in three perpendicular axes
Vibration:
2 to 27 Hz: 1.3 G
27 to 52 Hz: 0.914 mm double-amplitude
52 to 1,000 Hz: 5G

Physical

Weight: 6.5 oz (184 g) net
Dimensions (WxHxD):
2.66" x 3.94" x 1.89"
(67.6 mm x 100.0 mm x 48.0 mm)

Agency/Certifications

UL recognized, CSA certified, China RoHS compliant

For complete specifications, download the instruction manual at www.basler.com.

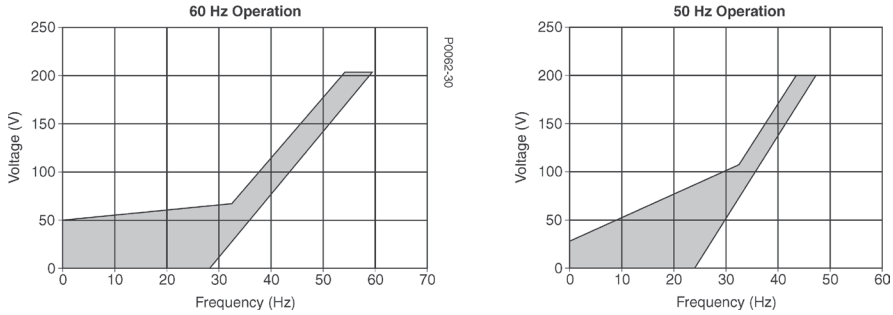

Figure 2 - Frequency Compensation Characteristics

Related Products

BE1-FLEX Protection, Automation and Control System
Designed to be configurable for nearly any Power System Application.

BE2000E Digital Voltage Regulator
Designed to control the output of brushless excited synchronous generators equipped with single-phase PMGs.

ES Series Protection Relays
Provide a wide variety of cost-saving options to simplify industrial application protection.

BE300PM Voltage Regulator
A small, rugged, automatic voltage regulator designed to be used with a 240 V PMG.

DECS-150 Digital Excitation Control System
Provides precise voltage regulation, exceptional system response, and valuable protection of the generator and excitation system.

DGC-2020HD Digital Genset Controller
A highly advanced integrated genset control system for your emergency, stand-alone, and paralleled generator set applications.

DGC-2020ES Digital Genset Controller
The total system solution for emergency and standalone generator set applications.

Accessories

Motor Operated Potentiometer
The Motor Operated Potentiometer is an electromechanical device containing a motor-driven, variable potentiometer and the limit switches required to provide remote adjustment of resistance, voltage, or frequency.

Basler Electric®

Highland, Illinois USA
Tel +1 618.654.2341
Fax +1 618.654.2351
email: info@basler.com

Suzhou, P.R.China
Tel +86.512.8227.2888
Fax +86.512.8227.2887
e-mail: chinainfo@basler.com