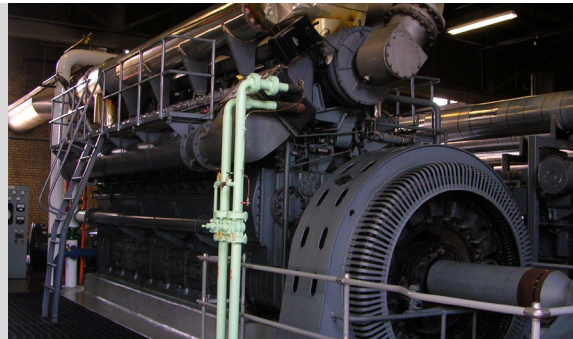


VRM-200 Voltage Regulation Module



Overview

Utilize more of the DGC-2020HD's power with the VRM-2020: a rugged, reliable, remote module which communicates with the DGC-2020HD and provides excitation to the field of a brushless exciter to achieve precise automatic voltage regulation (var/PF control).

Features

- Five pre-position setpoints for each control mode
- Internal tracking between AVR (Automatic Voltage Regulation) and FCR (Field Current Regulation) operating mode setpoints
- PID stability group with Auto Tune feature
- Real-time metering of field voltage and current
- Soft start and voltage buildup control
- Limiting functions include overexcitation (summing point and takeover), underexcitation, underfrequency, and V/Hz limiting
- Communications via CAN (Controller Area Network)

Benefits

- Expands the already extensive capabilities of the DGC-2020HD by providing field excitation for brushless exciters.
- Enhances protection by implementing up to eight RTD (resistance temperature detector) inputs.
- Maintain precise genset control with the VRM-2020's $\pm 0.25\%$ regulation accuracy (no load to full load).
- The VRM-2020's potted design provides exceptional reliability in harsh environments, easily allowing years of worry-free operation.
- A rugged power stage creates an easy solution for applications containing high waveform distortion caused by nonlinear loading.
- Integrated generator and exciter protection ensure reliable and safe operation of the entire system.

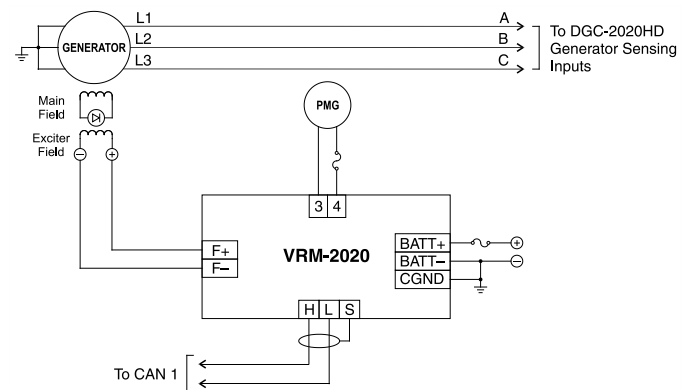


Figure 1 - VRM-2020 Connection Diagram for a Typical Application

Specifications

Power Supply

Nominal: 12 or 24 Vdc
 Range: 6 to 32 Vdc
 Burden: 1 W at 32 Vdc

Input Power

Range: 150 to 300 Vac
 Frequency: 50 to 300 Hz
 Burden: 517 VA at 3.5 Adc field output

Output Power

Max Continuous: 3.5 Adc at 63 Vdc
 10-Second Forcing: 7.5 Adc at 120 Vdc

Regulation Accuracy

Better than $\pm 0.25\%$, from no load to full load

RTD Inputs (optional)

Number of Inputs: 8
 Rating: 100 Ω platinum or 10 Ω copper
 Setting Range: -50°C to 250°C (-58°F to 482°F)
 Accuracy
 10 Ω copper: $\pm 0.078 \Omega$ at 25°C
 100 Ω platinum: $\pm 0.757 \Omega$ at 25°C

Communication

CAN Interface
 Differential Bus Voltage: 1.5 to 3 Vdc
 Maximum Voltage: -32 to +32 Vdc
 Communication Rate: 125 or 250 kbps

Agency/Certifications

UL (cURus) recognized for the US and Canada, CE UKCA EMC LVD and NFPA compliant, ABS Tier 3 recognized, China RoHS compliant, FCC 47 CFR Part 15 compliant

Environmental

Operating Temp: -40°C to 70°C (-40°F to 158°F)
 Storage Temp: -40°C to 85°C (-40°F to 185°F)
 Shock: 15 G in three planes
 Vibration: 3 to 25 Hz at 1.6 mm (0.063 in.) peak amplitude, 25 to 2,000 Hz at 5 G

Physical

Weight: 1.05 lb (0.476 kg)
 Dimensions (WxHxD): 4.897 x 5.493 x 1.952 inches (124.4 x 139.5 x 49.6 mm)

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

Style Chart

Part Number	Operating Power Configuration	Output Current	Crowbar Circuit	Eight RTD Inputs and Exciter Diode Monitor
9503800101	Single-phase, PMG only	3.5 Adc	No	No
9503800102	Single-phase, PMG only	3.5 Adc	Yes	No
9503800104	Single-phase, PMG only	3.5 Adc	Yes	Yes

Related Products

DGC-2020HD Digital Genset Controller

A highly advanced integrated genset control system for stand-alone and paralleled genset applications.

AEM-2020 Analog Expansion Module

Easily increases the functionality by seamlessly adding analog inputs and outputs.

CEM-2020 Contact Expansion Module

Each module adds 10 inputs and up to 24 outputs that are easily programmed through BESTCOMSPPlus® for easy integration into the system.

DECS-150 Digital Excitation Control System

Provides precise voltage regulation, exceptional system response, and valuable protection of the generator and excitation system.

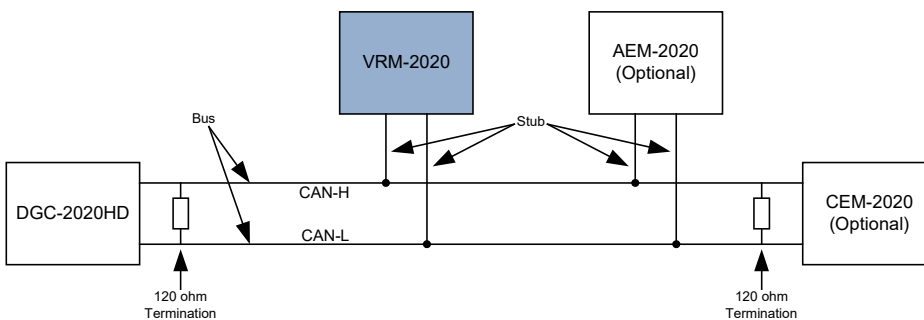


Figure 2 - VRM-2020 CAN Bus Interface