



## Overview

A highly advanced integrated genset control system, this device provides genset control, transfer switch control, metering, protection, and programmable logic in a simple, easy-to-use, reliable, rugged, and cost effective package.

## Features

- Generator metering (includes three-phase mains)
- Engine and generator protection: 27, 32R, 40Q, 59, 810/U
- Optional enhanced generator protection: 47, 51, 78, and 81ROCOF
- Load sharing and generator sequencing (via LSM-2020 Load Share Module)
- Var sharing over Ethernet (via LSM-2020)
- BESTCOMSPPlus® Software
  - Programming and setup
  - Intuitive and powerful
  - Remote control and monitoring
  - Programmable logic
  - USB communications
- Automatic transfer switch control
- Automatic synchronizer (optional)
- Exercise timer
- SAE J1939 engine ECU communications
- Automatic generator configuration detection
- Expandable functionality via add-on modules
  - [LSM-2020 Load Share Module](#)
  - [CEM-2020 Contact Expansion Module](#)
  - [AEM-2020 Analog Expansion Module](#)
- Multilingual capability
- Remote communications to Basler's RDP-110 (remote display panel)
- Sixteen programmable contact inputs
- Up to 15 contact outputs: 3 contacts rated for 30 Adc and up to 12 programmable contacts rated for 2 Adc

## Benefits

- Provides integrated engine-genset control, protection, and metering in a single package.
- The Offline Simulator, provided in BESTlogic™Plus, helps test and troubleshoot logic without the need for expensive hardware.
- Flexible programmable logic and programmable I/O make it easy to expand the DGC-200's inputs and outputs with the CEM-2020 (Contact Expansion Module) and the AEM-2020 (Analog Expansion Module). This saves time and money by eliminating unnecessary external PLCs and control relaying.

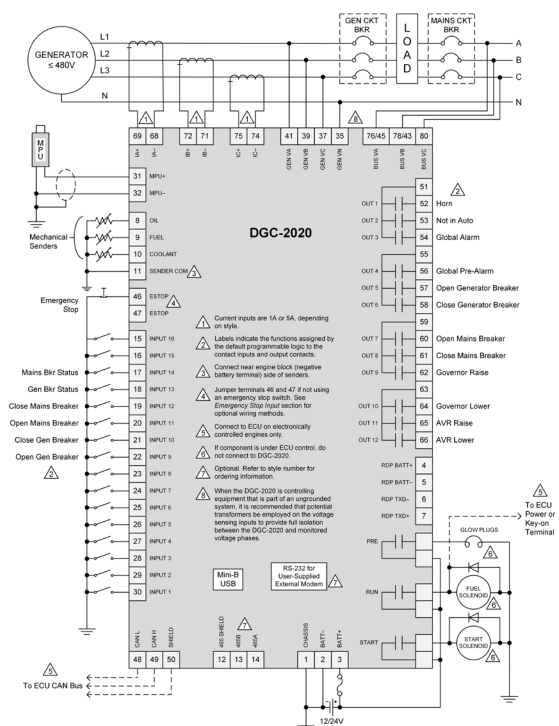


Figure 1 - DGC-200 Connection Diagram for a Typical Application

## Specifications

### Power Supply

Nominal: 12 or 24 Vdc  
 Range: 6 to 32 Vdc  
 Battery Ride Through: Starting at 10 Vdc, withstands cranking ride-through down to 0 V for 50 ms

### Power Consumption

Sleep Mode: 5 W  
 Normal Operation: 7.9 W  
 Maximum: 14.2 W

### Current Sensing

1 A Sensing: 0.02 to 1.0 Aac, continuous  
 2 Aac for 1 second  
 5 A Sensing: 0.1 to 5.0 Aac, continuous  
 10 Aac for 1 second  
 Burden: 1 VA

### Voltage Sensing

Range: 12 to 576 Vrms L-L  
 Frequency Range: 10 to 72 Hz for 50/60 Hz style,  
 10 to 480 Hz for 400 Hz style  
 Burden: 1 VA  
 One-second Rating: 720 Vrms

### Contact Sensing

Contact Inputs (16): Accepts normally open (N.O.),  
 Dry Contacts, programmable  
 Emergency Stop: Normally closed (N.C.), Dry  
 Contact

### Engine Speed Sensing

Magnetic Pickup  
 Voltage Range: 6 to 70 Vpp  
 Frequency Range: 32 to 10,000 Hz  
 Generator Frequency  
 Generator Voltage Range: 12 to 576 Vrms  
 via ECU over J1939

### Resistive Senders

Fuel Level Sender: 0 to 250 ohm nominal  
 Coolant Temp Sender: 10 to 2,750 ohm nominal  
 Oil Pressure Sender: 0 to 250 ohm nominal

### Output Contacts

Fuel Solenoid, Engine Crank,  
 Pre-Start Relays Rating: 30 Adc at 28 Vdc-  
 make, break, and carry  
 Programmable Relays: Up to 12  
 Rating: 2 Adc at 28 Vdc-make,  
 break, and carry

### Protection

Generator: 27, 32R, 40Q, 59, 810/U (standard)  
 47, 51, 78, 81, ROCOF (optional)  
 Engine: Oil pressure, coolant temperature,  
 overcrank, ECU-specific elements,  
 and diagnostic reporting.

### Agency Approvals

CSA certified, NFPA compliant, CE compliant, UL  
 recognized (Hazardous Location certification  
 available upon request), EAC certified

### Communication

USB Port: USB 2.0, Mini-B jack  
 RS-485 (optional): 9600 baud, 8 data bits, no parity  
 RDP-110 (optional): 4,000 ft (1,219 m) max wire  
 length, 20 AWG (0.52 mm<sup>2</sup>) min  
 wire size  
 Modem (optional): DB-9 connector (male)  
 CAN Bus: 250 kb/s communication rate,  
 1.5 to 3 Vdc differential bus

### Environmental

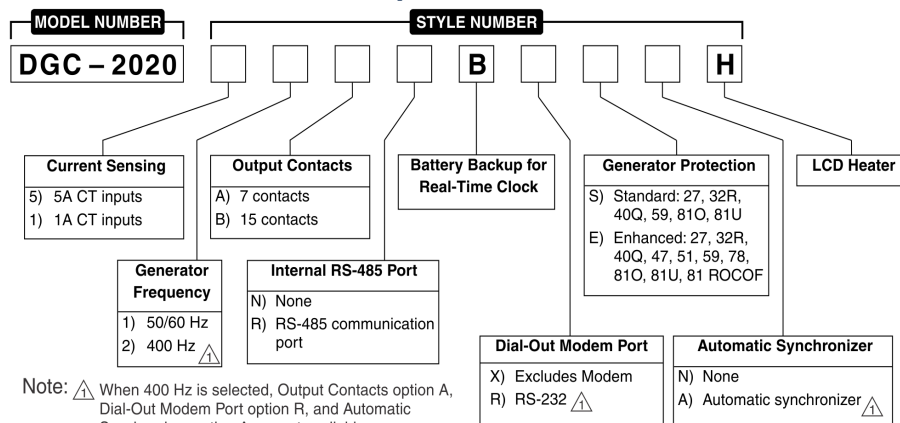
Operating Temp: -40°C to 70°C (-40°F to 158°F)  
 Storage Temp: -40°C to 85°C (-40°F to 185°F)  
 Humidity: IEC 68-2-38  
 Salt Fog: ASTM B 17-73, IEC 68-2-11  
 Ingress Protection: IEC IP54 for front panel  
 Shock: 15 G in three perpendicular  
 planes  
 Vibration  
 5 to 29 Hz: 1.5 G peak  
 29 to 52 Hz: 0.036" (0.914 mm) double  
 amplitude  
 52 to 500 Hz: 5 G peak

### Physical

Weight: 4.4 lb (2 kg)  
 Dimensions (WxHxD): 11.77 x 8.27 x 2.69 inches  
 (299 x 210 x 69 mm)

For complete specifications, download the instruction manual at [www.basler.com](http://www.basler.com).

## Style Chart



## Related Products

### BE1-11g Generator Protection System

Combines with the DECS-150 to offer a complete generator control and protection system.

### DECS-250 Digital Excitation Control System

Provides precise voltage, var and Power Factor regulation, and exceptional system response, plus generator and motor protection.

## Accessories

### 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 24 outputs that are easily programmed through BESTCOMSPlus® for easy integration into the system.

### LSM-2020 Load Share Module

The simple-to-use LSM-2020 easily adds paralleling capabilities with little effort and expense.

### RDP-110 Remote Display Panel

Provides remote alarm and pre-alarm indication and annunciation of system status, easily meeting the annunciation requirements of NFPA-110 applications.