



The DGC-2020HD Digital Genset Controller is a rugged, reliable, all-in-one genset control and load share system. It is designed to be a complete and adaptive controller that is well suited for mains fail, paralleled units, and systems with multiple buses. The DGC-2020HD has all of the necessary features for complete genset control, protection, and metering with an extensive, but easy-to-use programmable logic system.

FEATURES

- Three-phase generator metering
- Up to two buses with three-phase voltage metering
- Three dedicated generator CTs with up to four auxiliary CTs
- Engine metering and genset control
- Standard generator protection includes 27, 59, 810/U, 32, and 40Q
- Enhanced generator protection includes 46, 47, 51, 78, and 81ROCOF in addition to the standard generator protection elements
- Enhanced Plus Differential option includes neutral (87N) and generator phase (87G) differentials with the enhanced sensing option
- Resistive sender inputs for oil pressure and coolant temperature (analog senders are optional)
- Dual CAN bus ports: One for SAE J1939 engine ECUs and one for expansion modules
- Dual Ethernet ports (fiber Ethernet is optional)
- Load sharing of kW and kvars over Ethernet
- Soft loading/unloading with zero-power transfer capability
- Two analog inputs standard and up to four with analog sender option
- Governor and AVR bias outputs with the ability to be programmed as standard analog outputs
- Sixteen programmable contact inputs, 12 programmable contact outputs, three pre-programmed outputs (Prestart, Start, Run)
- Three programmable LEDs for customized annunciation
- Color touch screen LCD (optional)
- Connects to up to four AEM-2020 Analog Expansion Modules, four CEM-2020 Contact Expansion Modules, and one VRM-2020 Voltage Regulation Module
- Peak Shave and Import/Export power control modes maximize system efficiency during peak hours
- Load anticipation function improves speed recovery during large load application and rejection
- Various system breaker configurations provide the DGC-2020HD with the flexibility to control systems in a wide range of applications
- Automatic load shedding functionality ensures that a system will remain up, even if it's at a reduced capacity

BENEFITS

- Microprocessor-based controller with easy-to-use integrated programmable logic and load sharing capabilities reduces space and installation costs while providing increased flexibility and functionality.
- Rugged, potted design provides ultimate reliability in extreme environments.
- The Offline Simulator, provided in BESTlogic™ Plus, helps test and troubleshoot logic without the need for expensive hardware.
- Fully programmable I/O, including an option for two analog inputs, provides exceptional flexibility in all applications.
- Feature-rich design provides exceptional control for advanced paralleling, load sharing, and protection.
- Capable of monitoring a generator and up to two buses with up to seven current transformers (CTs), the DGC-2020HD provides metering and protection for a wide array of applications.
- Built-in real-time monitor for analysis during commissioning and tuning eliminates the need for external monitoring and decreases commissioning time and costs.
- Capable of communicating with up to four AEM-2020 Analog Expansion Modules, four CEM-2020 Contact Expansion Modules, and one VRM-2020 Voltage Regulation Module, vastly increasing the I/O capabilities and overall flexibility of the DGC-2020HD and eliminating the need for external peripheral devices.
- Selectable breaker schemes in BESTlogicPlus make breaker control with the DGC-2020HD quick and simple.
- Contains an extensive number of communication options which allow for easy integration into a wide variety of control systems.
- Segmented system capabilities allow for system control and management, making the DGC-2020HD a fit for any system.
- Tie Breaker Control mode now widens the applications for the DGC-2020HD, allowing for wider applications such as Main-Tie-Main.

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FOR ADDITIONAL INFORMATION.

SPECIFICATIONS

Power Supply

Nominal:	12 or 24 Vdc
Range:	6 to 32 Vdc
Power Consumption:	
Sleep Mode:	12.7 W
Normal Operation:	18.1 W
Maximum Operation:	25 W
Battery Ride Through:	Starting at 10 Vdc, withstands cranking ride through down to 0 Vdc for 50 ms

Current Sensing

	5 Aac Units	1 Aac Units
Continuous Rating:	0.1 to 7.5 Aac	0.02 to 1.5 Aac
One-Second Rating:	50 Aac	10 Aac
Burden:	1 VA	
Metering Range:	0 to 5,000 Aac	
Metering Accuracy:	±1% of rated	

Voltage Sensing

Range:	12 to 576 Vac, L-L
Frequency:	50/60 Hz
Frequency Range:	10 to 90 Hz
One-Second Rating:	720 Vac
Burden:	1 VA
Metering Range:	0 to 576 Vac
Metering Accuracy:	±1% of rated

Frequency

Metering Range:	10 to 90 Hz
Metering Accuracy:	±0.25%

Engine Speed Sensing

Magnetic Pickup:	
Voltage Range:	6 to 70 Vpp
Frequency Range:	32 to 10,000 Hz
Generator Voltage Range:	12 to 576 Vac

Resistive Senders

Fuel Level:	0 to 250 Ω
Coolant Temp Sensing:	10 to 2,750 Ω
Oil Pressure Sensing:	0 to 250 Ω

Inputs and Outputs

Analog Input Ratings:	4 to 20 mA, ±10 Vdc
AVR Bias Output:	4 to 20 mA, ±10 Vdc
Governor Bias Output:	4 to 20 mA, ±10 Vdc, or PWM
Load Share Line:	0 to 10 Vdc
Contact Output Ratings:	
Start, Run, Prestart Relays:	30 Adc at 28 Vdc, 3 A pilot duty
Programmable (12):	2 Adc at 28 Vdc, 1.2 A pilot duty

Generator Protection

(27) Undervoltage, (32) Reverse/Forward Over/Under Power, (40Q) Loss of Excitation/Reverse vars, (46) Current Imbalance, (47) Phase Voltage Imbalance, (51) Timed Overcurrent, (59) Overvoltage, (78) Vector Shift, (81O/U) Overfrequency/Underfrequency, (81ROCOF) Rate of Change of Frequency, (87G) Phase Current Differential, and (87N) Neutral Current Differential

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)
* The default screen maintains operation over the entire operating temperature range. The color touch screen maintains operation from –20°C to 70°C (–4°F to 158°F).	
Humidity:	IEC 68-2-78
Salt Spray:	IEC 60068
Ingress Protection:	IEC IP56 for the front panel
Shock:	15 G in three perpendicular planes
Vibration:	Tested eight hours in three perpendicular planes, 3 to 25 Hz at 1.6 mm (.063") peak amplitude 25 to 2,000 Hz at 5 G

Agency/Certifications

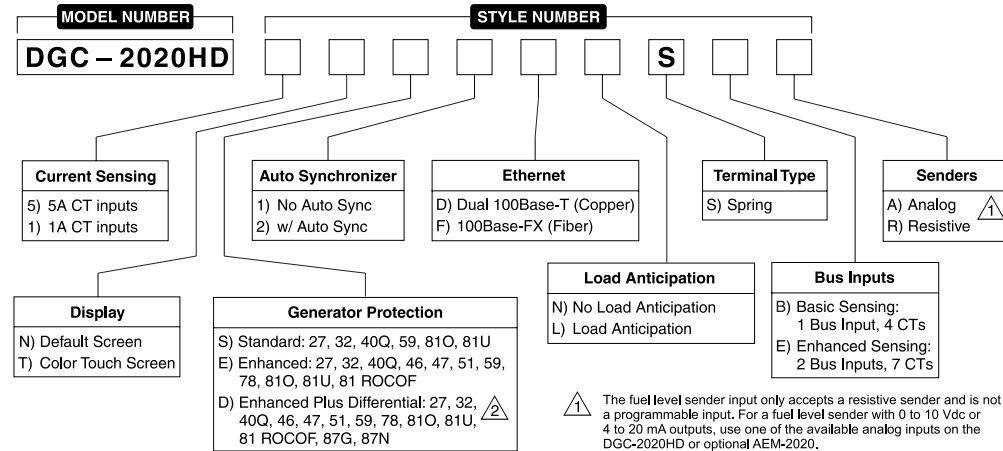
CSA approved, NFPA compliant, CE compliant (LVD and EMC), UL approved (evaluated to UL6200), ground fault protection circuit compliant with UL1053, EAC certified, American Bureau of Shipping (ABS) recognized

Physical

Weight:	5.70 lb (2.59 kg)
Dimensions (WxHxD):	12.29 x 8.79 x 3.32 inches (312 x 223 x 84 mm)

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

STYLE CHART



RELATED PRODUCTS

- [BE1-11g Generator Protection System](#)
 - A complete generator control and protection system.
- [DECS-250 Digital Excitation Control System](#)
 - Total control in a compact package provides precise voltage, var and Power Factor regulation, exceptional system response, and generator protection.
- [DECS-150 Digital Excitation Control System](#)
 - Provides precise voltage regulation, exceptional system response, and valuable protection of the generator and excitation system.
- [BE2000E Digital Voltage Regulator](#)
 - A high-powered, time-proven, feature-rich, design that is an exact field replacement for the Marathon® Electric DVR®2000E and DVR®2000EC.

ACCESSORIES

- [CEM-2020 Contact Expansion Module](#)
 - Provides additional contact I/O for large or complex logic schemes.
- [AEM-2020 Analog Expansion Module](#)
 - Provides additional metering and control with external peripherals through analog I/O.
- [VRM-2020 Voltage Regulation Module](#)
 - Provides excitation to the field of a brushless exciter.



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