



Stock # 224561



Technical Specification

and

Scope of Supply

**mtu 12V1600 DS600
DG12V1600B2N**

Customer: Curtis Power Solutions, LLC

18.01.2024



I. System Description

Product type	DG12V1600B2N
Application Group	mtu 12V1600 DS600
	3D - Emergency Standby power, IFN

Power as per MTU Sales Program

Power per genset (ISO 8528)	600	kWel
Engine speed	1.800	rpm
Intake air temperature	25	°C
Coolant temperature	0	°C
Altitude	100	m

On-site Power

Power per genset (ISO 8528)	600	kWel
Engine speed	1.800	rpm
Intake air temperature	25	°C
Coolant temperature	0	°C
Altitude	100	m

Requirements

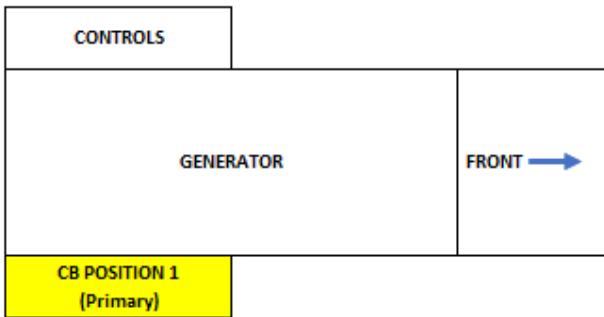
Frequency	60 Hz
Generator voltage	480 V
EngineType	12V1600G80S



II. Selection Criteria for the Scope of Supply

Criteria	Selection	for Product No.
Application	Emergency Standby (3D)	1,
Frequency	60 Hz	1,
Generator Voltage	480 V	1,
Phase	3 Phase	1,
Unit Specification	UL2200	1,
IBC Seismic Certification	Without IBC	1,
HCAI Certification	Without HCAI	1,
Engine Model	12V1600 G80S (24volts)	1,
Exhaust Emissions (EPA)	EPA Tier 2	1,
Radiator Design Temperature	50°C	1,
Temp Rise	130°	1,
Power Output	600 kW	1,
Full Load Amps	902	1,
Generator Frame and Wire Qty	572/4031 (12 Wire)	1,
Generator Wire Configuration	Wye	1,
OPU/HSD	Level 2 - Basic Sound Attenuation	1,
Fuel Tank	With Fuel Tank	1,
Control panel	With Control Panel	1,
Circuit Breaker Options	Single Circuit Breaker	1,
Breaker Wire Color Scheme	Standard Breaker Wire Color Scheme	1,
Paralleling	No Parallel Operation	1,
Acceptance testing	Factory acceptance	1,
Country of Operation	USA / Canada	1,
Emission cert. authority	18 US EPA Agency	1,

III. Scope of Supply

	valid for product no.
1 SYSTEM CONFIGURATION	1,
1.1 System Description	1,
DG12V1600B2N	1,
Application 60Hz Standby	1,
1.2 Cooling System	1,
50 Deg C Cooling System	1,
• Closed loop, liquid cooled, with radiator factory mounted on engine-generator set mounting frame and integral engine-driven coolant pump	
1.3 Circuit Breaker	1,
Circuit Breaker Position 1:	1,
800 Amp 600 Volt 3 Pole 100% LSI CB SQ-D PGL36080CU33A	1,
LSI Breaker Trip:	1,
• LSI breakers provide protection from long time overload, short time overload and instantaneous short circuit events. Specific overload current values and time delays vary with breaker type and trip unit.	
Circuit Breaker Mounted Right Side	1,
	1,
Top View	Right Side
	CB Position 1
	Left Side
	Controls
* For technical data refer to the circuit breaker enclosure data sheets located on the Business Portal	

**Circuit Breaker #1 Accessories:**valid for
product no.
1,

Standard Breaker Wire Scheme:

- Phase 1 (A) is Black label "L1"
- Phase 2 (B) is Red label "L2"
- Phase 3 (C) is Blue label "L3"
- Neutral is White label "NEU"

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1.4 Starting System

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Starting Batteries (4D) & Battery Rack

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- Battery Rack mounted and installed
- 4D Starting Batteries filled with acid
- Qty 2

Battery Charger: NRG 22-10-RCLS

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Battery Charger Mounted & AC/DC Wired

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Note - This option will be factory-wired to the distribution panel (if selected)

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Coolant Preheater

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- -20 Deg F Coolant Preheater (480V 1PH - 5000W)
- Model: CL150412-200
- Qty 1

All coolant preheaters have the AC connection wired to the distribution panel (if distribution panel is selected on order) EXCEPT for 480V or 3 Phase water heaters.

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1.5 Genset Enclosure

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Level 2 Genset Enclosure 130mph S1600

1,

Weather-protective enclosure with exhaust scoop constructed of heavy gauge steel or aluminum with fixed stormproof panels designed for 130 mph wind load rating.

Enclosure consists of:

- Bolted and welded construction
- Unit-mounted internal silencer included
- Hinged, lockable double-doors provide access on both sides of enclosure

Weather Proof Enclosure - Steel

1,



		valid for product no.
	130mph Wind Rated Steel	1,
	Exhaust Scoop - Steel	1,
	Intake Louver (Steel)	1,
1.6	Vibration Isolation	1,
	SUA46908 Pad Isolators	1,
	• 1/4 inch thick elastomeric pad in rectangular shape placed under the base frame at each of the pre-drilled isolator mounting holes	
2	ENGINE CONFIGURATION	1,
2.1	Engine System	1,
	EPA Certification Tier Level: Tier 2	1,
	Engine Model: mtu 12V1600G80S	1,
	Note Emission Compliance: The engines and/or systems, may only be certified to comply with the required country or region specific emission regulations. Where applicable, the engines and/or systems are only certified to those specific emission regulations/standards which are clearly stated in the respective RRPS/MTU defined technical specifications. It is the customer's sole responsibility to ensure that the export/import, installation and use of the engine and/or system complies with the applicable emissions regulations in the country or region where the engine and/or system will be used.	1,
2.2	Exhaust System	1,
	Unit-Mounted Silencer 6"	1,
	• Silencer Model: CPJS-06X-90041275 (RH)	
	• Silencer Model: CPJS-06X-90041274 (LH)	
	• Qty 1 each	
2.3	FUEL SYSTEM	1,
	Extended Fuel Tank exceeds genset base footprint	1,
	72 Hour 3000 Gallon Sub Base Fuel Tank 10-12V1600	1,
2.4	Air Intake System	1,
	Air Filter (Standard)	1,
	Air Filter Standard 8-12V1600	1,
	• SUA86885	
	• Qty 2	

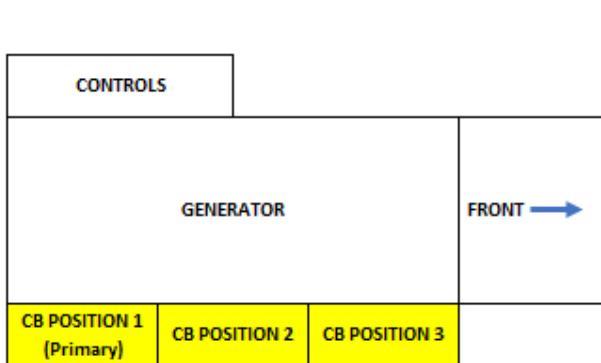


	valid for product no.
3 GENERATOR CONFIGURATION	1,
3.1 Generator system	1,
3.2 Generator accessories	1,
Generator Model Number: 572RSL7931 (Base Model: 572RSL4031)	1,
PMG with DVR 2400	1,
• True RMS Sensing - One or Three Phase Connect. Senses 100 to 600 volts ±10% at 50/60 Hertz. Patented circuitry senses true RMS voltage rather than average for superior load regulation.	
Generator Strip Heater	1,
• Strip heater mounted permanently in the generator winding to prevent condensation in the generator.	
Note - This option will be factory-wired to the distribution panel (if selected)	1,
Measuring CT	1,
4 CONTROL PANEL CONFIGURATION	1,
4.1 USMKT_S1600_REV2-0322-CONTROL PANEL SYSTEM	1,
Circuit Breaker Position 1:	1,
Ground Fault Indication (GFI)	1,
Control Panel Mounted LH Side	1,



A Rolls-Royce
solution

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Top View Right Side CB Position 1/CB Position 2/CB Position 3
Left Side Controls

* For technical data refer to the circuit breaker enclosure data sheets located on the
Business Portal

(4) Relay Option

The 4-relay board includes (4) 10 amp form C relays customizable for user defined functionality requirements. Standard outputs are as follows:

1. Engine Run
2. Engine Run
3. Engine Fail
4. Minor Alarm

Contact Expansion Module (CEM)

- The CEM is a remote device that provides additional MGC contact inputs and outputs giving the user flexibility to use the same model MGC generator set controller for simple or more complicated applications that require contact functionality or duplication of contacts for remote annunciation.

RDP-110 Annunciator Panel

- The RDP-110 is a remote annunciation device used in conjunction with the MGC family of digital generator set controllers to provide remote annunciation of the emergency standby generator system. This panel allows for two programmable alarms, two programmable pre-alarm conditions, and is compatible with NFPA 110. The MGC detects an alarm or pre-alarm condition and communicates via RS-485 to the RDP-110.

- Unit can be flush or surface mounted.

1 Remote Annunciator

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MGC-3000 Series

- Rolls Royce Power Systems Generator Set Controllers (MGC Series) are rugged, reliable, all-in-one digital generator set control and load share systems. The MGC-3000 Series is designed to be a high end controller that is well suited for mains fail, paralleled units, and systems with multiple buses. The MGC-3000 Series has all of the necessary items for



complete generator set control, protection, and metering with a massive, but easy-to-use, programmable logic system.

valid for
product no.

No Parallel Operation

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5 SERVICES AND AFTER SALES SUPPLY

5.1 Warranty

General Terms and Conditions of Sale, Warranty and After Sales Supply

Our offer is based on the attached General Terms and Conditions of Sale for Rolls Royce Power Systems Products (Rev. V-601-1803 MUS & MOE) and the Warranty will be the attached Standard Two (2) Year / 3,000 Hour Basic Standby (3D), Prime (3B), and Data Center Continuous Power (DCCP) (3F) Limited Warranty (SYS-M-GEN-S-026).

6 MISCELLANEOUS

6.1 Painting

Paint Color: RAL 7001 Grey

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6.2 Documentation

English

1 Flash Drive

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1,

Optional Manuals

Without Optional Manuals

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6.3 Additional Options

Fuel Water Separator Mounted Right-Hand Side

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Mechanical Drawing: Fuel Tank 10-12V1600
• XZ57500100052

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Mechanical Drawing: Dimensional OPU 12V1600
• XZ57500100039

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Mechanical Drawing: Dimensional HSD 12V1600
• XZ57500100041

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Electrical Drawing: Engine
• XZ574K0000004

1,

Electrical Drawing: Generator
• XZ574K0000011

1,



Electrical Drawing: Breaker Options
• XZ574K0000001

valid for
product no.
1,

Electrical Drawing: Customer Connections
• XZ574K0000002

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Electrical Drawing: MGC-3000 Control Panel
• XZ57464400002

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Electrical Drawing: Options Sheet
• XZ574K0000009

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Electrical Drawing: Options Sheet
• XZ574K0000009

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7 FUNCTIONAL TESTING

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7.1 Acceptance Testing

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Standard Commercial Test

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8 SHIPPING CONDITIONS

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8.1 Shipment

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Ship unit with fluids installed

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