Stock #: 261861

Technical Specification

and

Scope of Supply

mtu 16V2000 DS1000
DG16V2000B1N

Customer: INDEL Power Group LLC

05.07.2023

I. System Description

Product type	DG16V2000B1N mtu 16V2000 DS1000
Application Group	3D - Emergency Standby power, IFN

Power as per MTU Sales Program

Power per genset (ISO 8528)	1.000	kWel
Engine speed	1.800	rpm
Intake air temperature	25	°C
Coolant temperature	45	°C
Altitude	100	m

On-site Power

Power per genset (ISO 8528)	1.000	kWel
Engine speed	1.800	rpm
Intake air temperature	25	°C
Coolant temperature	45	°C
Altitude	100	m

Requirements

Frequency	60 Hz
Generator voltage	480 V
EngineType	16V2000G86S

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	16V2000G86S (24volts)	1,
Exhaust Emissions (EPA)	EPA Stationary EMERG T2 (40CFR60)	1,
Radiator Design Temperature	50°C	1,
Temp Rise	130°	1,
Power Output	1000 kW	1,
Full Load Amps	1504	1,
Generator Frame and Wire Qty	LSA 49.1 L11 (6 Wire)	1,
Generator Wire Configuration	Wye	1,
OPU/HSD	Level 0 - Open Power Unit	1,
Fuel Tank	Without 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,
Publications	Standard Publications (English)	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,

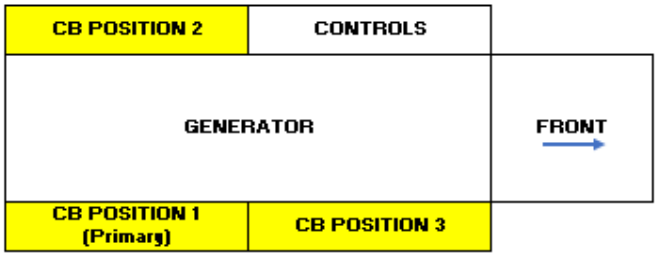
1.2 Cooling Package 1,

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,

1,

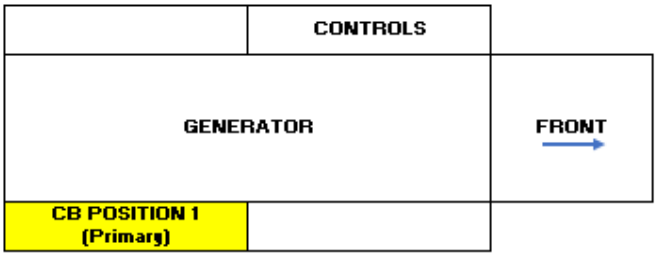


Top View **Right Side** CB Position 1/CB Position 3
Left Side Controls/CB Position 2

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

Non-Service Entrance Rated 1,

1,



Top View **Right Side** CB Position 1
Left Side Controls

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Circuit Breaker Position 1: 1,

Circuit Breaker Motor Operator 1,

Circuit Breaker Position 1: 1,

1600 Amp 600 Volt 3 Pole 100% LSI MO Square-D WL1EEX33A9SCBBXXXA 1,

valid for product no.

Circuit Breaker #1 Accessories: 1,

Standard on NW Frame CB: 1,

- CB Closing Device (XF)
- Spring Charging Motor (MCH)
- CB Opening Device (MX1) wired to Control Panel

Auxillary Contact (OF1) 1,

Overcurrent Fault Switch (SDE) 1,

Circuit Breaker Position 1: 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.

Standard Breaker Wire Scheme: 1,

- 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”

1.4 Starting Aids 1,

Starting Batteries (8D) with Battery Rack 1,

- 8D Battery filled with Acid
- Battery Rack mounted and installed
- Qty 4 of each

Battery Charger: NRG-22-10-HCLS 1,

Battery Charger Mounted & DC Wired 1,

Battery Charger mounted on the same side of unit as the control panel or No Control Panel box. 1,

__Note__ - This option will be factory-wired to the distribution panel (if selected) 1,

Coolant Preheater 1,

- -20 Deg F Coolant Preheater (208V 1PH - 9000W)

valid for product no.

- Model: CSM10908-000
- Qty 1

Coolant Preheater Mounted 1,

With Coolant Preheating System Isolation Valves 1,

1.5 Genset Enclosure 1,

Open Power Unit 1,

1.6 Vibration Isolation 1,

Non-Seismic Spring Isolator RJE-2860/RJE-4240 1,

- Freestanding, open-spring isolators designed to be used in docile environments (limited seismic activity, low wind loading) where customer wants enhanced level of vibration isolation.
- Model: RJE-2860
- Model: RJE-4240

Notice: Selected springs are rated from the factory for this unit's specific configuration. If modifications are made to this unit outside of the MTU factory the rating of the springs will need to be re-evaluated and may result in additional costs. 1,

2 ENGINE CONFIGURATION 1,

2.1 Engine System 1,

Oil Drain 1,

Note Emission Compliance: 1,
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.

2.2 Exhaust System 1,

No Exhaust Silencer 1,

2.3 FUEL SYSTEM 1,

Fuel Water Separator - Standard (Dual) 1,

2.4 Air Intake System 1,

Air Filter (Standard) 1,

valid for product no.

MTU Air Filter 1,
- SUA90069
- Qty 2

3 GENERATOR CONFIGURATION 1,

3.1 Generator Specification 1,

Includes D510C Regulator 1,

With PMG 1,

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,

IP23 Ingress Protection 1,
• IP23 provides Ingress Protection against objects larger than 12 mm and Protection against dripping water ±60° angle.

LSA 49.1L11 1,

4 CONTROL PANEL CONFIGURATION 1,

4.1 Control panel 1,

Circuit Breaker Position 1: 1,

Ground Fault Indication (GFI) 1,

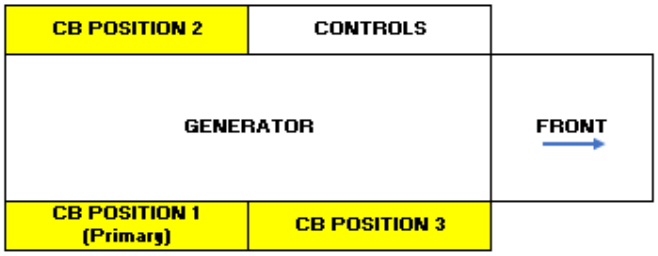
Modbus RTU 1,
- ModBus RTU connects the MGC to Programmable Logic Controllers by means of communication transmission over serial lines (RS485).

Modem RS-232 1,
- The MGC controller includes an external modem interface permitting an external modem to be connected to the controller via RS-232. A dial-out modem enables remote control, monitoring, and setting of the controller. When an alarm or pre-alarm condition occurs, the controller can dial up to four telephone numbers in sequence until an answer is received and the condition is annunciated.
    - Note: Only an external modem interface is provided. The external modem must be supplied by a third party

valid for product no.

Control Panel Mounting 1,

1,



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

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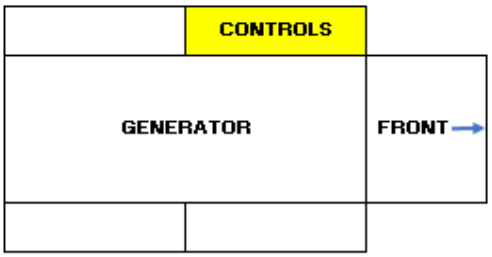
Control Panel Mounted LH Side 1,

1,



Top View **Right Side**
left Side Controls

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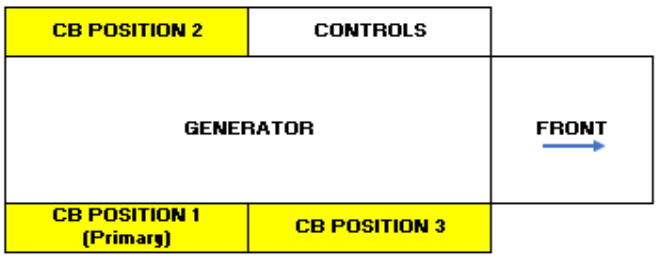
1,



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Contact Expansion Module (CEM) 1,

- 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

valid for product no.

complicated applications that require contact functionality or duplication of contacts for remote annunciation.

RDP-110 Annunciator Panel 1,

- 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-alarms, 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 1,

MGC-3000 Series 1,

- MTU Onsite Energy 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.

No Parallel Operation 1,

5 SERVICES AND AFTER SALES SUPPLY 1,

5.1 Warranty 1,

General Terms and Conditions of Sale, Warranty and After Sales Supply 1,
Our offer is based on the attached General Terms and Conditions of Sale for MTU 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 1,

6.1 Painting 1,

Paint Color: RAL 7001 Grey 1,

6.2 Documentation 1,

Application 60Hz Standby 1,

English 1,

1 Flash Drive 1,

		valid for product no.
	English	1,
	No Hard Copy	1,
	No Flash Drive	1,
	French	1,
	No Hard Copy	1,
	No Flash Drive	1,
	Spanish	1,
	No Hard Copy	1,
	No Flash Drive	1,
6.3	**Additional Options**	1,
	Unit Includes One (1) Convenience Receptacle	1,
	Convenience Receptacle is mounted on the same side of the outlet box as the Control Panel/No Control Panel options.	1,
	Note - This option will be factory-wired to the distribution panel (if selected)	1,
	Mechanical Drawing: Genset Dimensional OPU • XZ54500100021	1,
	Mechanical Drawing: Spring Isolator Installation 12V2000 • XZ54500100050	1,
	Electrical Drawing: Engine Starter Single • XZ54530900048	1,
	Electrical Drawing: Engine ECU • XZ54530900063	1,
	Electrical Drawing: Generator • XZ54530900060	1,
	Electrical Drawing: Circuit Breakers • XZ54530900065	1,
	Electrical Drawing: Control Panel MGC 3000 Series • XZ54530900101	1,
	Electrical Drawing: Options Sheet • XZ54530900064	1,

valid for
product no.

7 CUSTOM OPTIONS 1,

7.1 CUSTOM OPTIONS 1,

SYSTEM DESCRIPTION: 1,
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COOLING PACKAGE: 1,
****

CIRCUIT BREAKER: 1,
****

Denomination
Adder ERMS

STARTING AIDS: 1,
****

Genset Enclosure 1,

VIBRATION ISOLATION: 1,
****

ENGINE SYSTEM: 1,
****

Exhaust System 1,

FUEL SYSTEM: 1,
****

AIR INTAKE SYSTEM: 1,
****

GENERATOR SPECIFICATION: 1,
****

GENERATOR ACCESSORIES: 1,
****

CONTROL PANEL: 1,
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