

650KW Cummins Natural Gas Generator (Prime)

Silent Type | Cummins Engine | Natural Gas & Propane

General

Model	WDG-650-CUM-P
Fuel Type	Natural Gas
Power Rating	650 kW 813 kVA
Frequency	60 Hz
Voltage	Any voltage can be customized
Phase	Single Phase or Three Phase
Enclosure Type	Silent, Weatherproof
Engine Brand	Cummins
Alternator Brand	Stamford
Controller Model	Deep Sea DSE 7310/7320



Engine Data

Engine Model	Cummins GTA50
Continuous Power Rating	650 kW / 813 kVA
Configuration	V16
Aspiration	Turbocharged & Aftercooled
Bore x Stroke (in.)	6.25 x 6.25 (in.)
Rated Speed (RPM)	1800
Displacement (L)	50.3
Compression Ratio	8.5:1
Governor	Electronic

Alternator Data

Alternator Model	Stamford S5L1D-F4
Type	Self-excited, Brushless
Power Factor	0.8
Voltage Regulation	AVR
Insulation System	Class H
Protection Level	IP23

Size & Dimensions

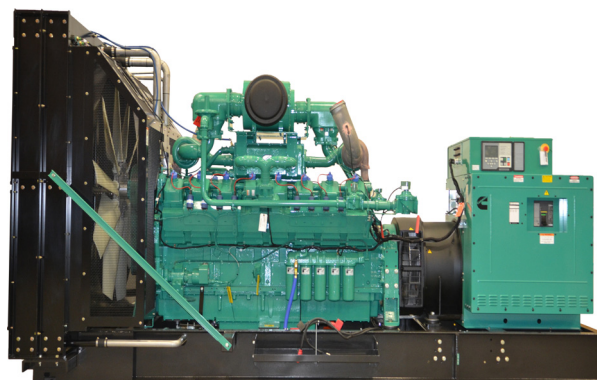
Dimensions (L x W x H)	228 x 88 x 100 (in.)
Net Weight (lbs.)	19,500



Specification sheet

Gaseous fuel generator set

GTA50 engine series
650 kW - 815 kW 60 Hz
Non-regulated



Description

The Cummins GTA50-series commercial Generator Set (GenSet) boasts a fully-integrated power generation system providing optimum performance, reliability, and versatility for stationary standby and continuous power applications.

Features

- Cummins engine - cutting-edge technology since 1919
- Stamford rugged and reliable alternator with state-of-the-art technology
- One-year warranty backed by a worldwide Cummins twenty-four hour, seven days-a-week, distributor network
- Accepts 100% rated load in a single step
- Surge rating - 110% of nameplate
- The GenSet accepts full rated load in a single step in accordance with NFPA 110 Type 10 (ten seconds) for Level 1 and Level 2 Emergency or Standby Power Supply Systems (EPSSs)
- Standard Power Command Control (PCC) 3300 technology provides digital (precise) frequency and voltage regulation
- Efficient and convenient operation monitoring and control options:
 - Modbus over the Internet (monitor and control)
 - Remote HMI (monitor and control)
 - Field server reliable interface to a building management system Supervisory Control and Data Acquisition (SCADA) (monitor, only)

Model	Standby power rating* 60Hz kW (kVa)	Continuous power rating 60Hz kW (kVa)	Data sheet
C760 N6	760 (950)	650 (813)	FR 60105/FR 60376
C815 N6	815 (1018)		FR 60106

* Tested at 0.8 power factor (PF) per NFPA 110.

GenSet specifications

Voltage regulation, no load to full load	±1%
Random voltage variation	±1% (three-phase only)
Frequency regulation	Isochronous
Random frequency variation	±0.5%

Engine specifications

Base Engine	Cummins Model GTA50
Displacement	50.3 L (3069 in ³)
Regenerative Power	32 kW
Cylinder Block Configuration	Cast iron with replaceable wet cylinder liners
Cranking Current	1800 CCA at ambient temperature of 0 °C (32 °F)
Battery Charging Alternator	43 amps
Battery Type	8D (x4)
Starting Voltage	24-volt, negative ground
Standard Cooling System	See derates on Engine Data Sheet
Lube Oil Filter Types	Four spin-on canisters-combination full flow with bypass

Alternator specifications

Design	Brushless, 4-pole, drip-proof revolving field
Stator	2/3 pitch
Rotor	Direct-coupled by flexible disc
Insulation System	Class H per NEMA MG1-1.65 or better
Standard Temperature Rise*	125 °C
Exciter Type	Permanent Magnet Generator (PMG)
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct-drive centrifugal blower

* For UL 1004 ratings, refer to temperature rise at 120 °C or below, and ambient temperature up to 40 °C

Full-load amperage (FLA) at rated voltage

Model	Rating	Voltage*								
		120/240 (1 Ph)	120/208	127/220	139/240	220/380	240/416	254/440	277/480	347/600
C760N6	Continuous	N/A	2637	2493	2285	1443	1319	1247	1143	914
C760N6	Standby	N/A	2637	2493	2285	1443	1319	1247	1143	914
C815N6	Standby	N/A	2828	2674	2451	1548	1414	1337	1225	980

*Three-phase FLA based on 0.8 power factor (PF).

Rated load fuel consumption in standard cubic feet per hour (CFH)*

Model	Rating	Load			
		1/4	1/2	3/4	Full
C760N6	Continuous	3512	5448	7425	9444
C760N6	Standby	N/A	5378	7282	9250
C815N6	Standby	3527	5491	7508	9579

*See Fuel installation requirements on page 4.

NOTE: Fuel inlet pressure, measured at the fuel shut off valve while under full load, must be 381 to 508 mm WC (15 to 20 in. WC). Fuel supply pressure must not exceed 635 mm WC (25 in. WC) under any conditions.

PowerCommand 3.3 control system



An integrated microprocessor based generator set control system providing voltage regulation, engine protection, alternator protection, operator interface and isochronous governing. Refer to document S-1570 for more detailed information on the control.

AmpSentry - Includes integral AmpSentry protection, which provides a full range of alternator protection functions that are matched to the alternator provided.

Power management - Control function provides battery monitoring and testing features and smart starting control system.

Advanced control methodology - Three-phase sensing, full wave rectified voltage regulation, with a PWM output for stable operation with all load types.

Communications interface - Control comes standard with PCCNet and Modbus interface.

Regulation compliant - Prototype tested: UL, CSA and CE compliant.

Service - InPower PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.

Easily upgradeable - PowerCommand controls are designed with common control interfaces.

Reliable design - The control system is designed for reliable operation in harsh environment.

Multi-language support - English, Spanish, French (standard); other languages (optional).

Operator panel features

Operator/display panel

- Displays paralleling breaker status.
- 320 x 240 pixels graphic LED backlight LCD.
- Provides direct control of the paralleling breaker.
- Alphanumeric display with pushbuttons.
- Auto, manual, start, stop, fault reset, and lamp test/panel lamp switches.
- LED lamps indicating GenSet running, remote start, not in auto, common shutdown, common warning, manual run mode, auto mode and stop.

Paralleling control functions

- First Start Sensor System selects first genset to close to bus.
- Phase Lock Loop Synchronizer with voltage matching.
- Sync check relay.
- Isochronous kW and kVar load sharing.
- Load govern control for utility paralleling.
- Extended Paralleling (baseload/peak shave) Mode.
- Digital power transfer control, for use with a breaker pair to provide open transition, closed transition, ramping closed transition, peaking and base load functions.

Other control features

- 150 watt anti-condensation heater.
- DC distribution panel.
- AC auxiliary distribution panel.

Alternator data

- Line-to-neutral and line-to-line AC volts.
- Three-phase AC current.
- Frequency.
- kW, kVar, and power factor kVa (three-phase and total).
- Winding temperature (optional).
- Bearing temperature (optional).

Engine data

- DC voltage and engine speed.
- Lube oil pressure and temperature.
- Coolant temperature.
- Comprehensive FAE data.

Other display data

- GenSet model data.
- Start attempts, starts, running hours, kW hours.
- Load profile (operating hours at % load in 5% increments).
- Fault history – up to 32 events.
- Data logging and fault simulation (requires InPower™).
- Air cleaner restriction indication.
- Exhaust temperature in each cylinder.

Standard control functions

Digital governing

- Temperature dynamic governing.
- Integrated digital electronic isochronous governing.

Digital voltage regulation

- Configurable torque matching.
- 3-phase, 4 wire line-to-line sensing.
- Integrated digital electronic voltage regulator.

AmpSentry AC protection

- AmpSentry protective relay.
- Over current and short circuit shutdown.
- Over current warning.
- Single and three-phase fault regulation.
- Low oil pressure warning and shutdown.
- High coolant temperature warning and shutdown.
- Low coolant level warning and shutdown.
- Low coolant temperature warning.
- Over and under voltage shutdown.
- Over and under frequency shutdown.
- Overload warning with alarm contact.
- Reverse power and reverse var shutdown.
- Field overload shutdown.
- Fuel-in-rupture-basin warning or shutdown.
- Full authority electronic engine protection.
- AMM arc flash provision

Engine protection

- Cranking lockout; overspeed shutdown; and battleshort.
- Sensor failure indication.
- Low fuel level warning or shutdown.
- Fail to start (overcrank) and fail to crank shutdown.
- Full authority electronic engine protection.
- Battery voltage monitoring, protection, and testing.

Control functions

- Data logging and cycle cranking.
- Load shed.
- Remote emergency stop.
- Time delay start and cooldown.
- Configurable inputs and outputs (20).
- Real time clock for fault and event time stamping.
- Exerciser clock and time of day start/stop.

GenSet options and accessories

Engine

- 240/480 V, 4000 W coolant heaters (2)
- 240 V, 300 W lube oil heater

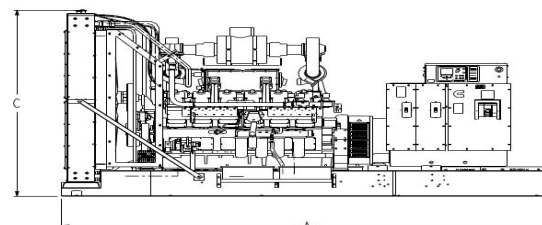
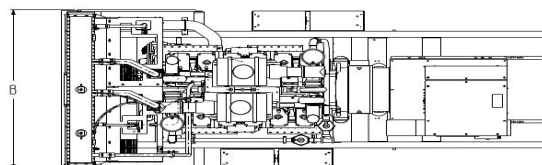
Alternator

- 80 °C rise
- 105 °C rise

Exhaust system - catalyst addition or removal (model-specific)

Generator set (model-specific)

- PowerCommand Network Aux 101, 102 module
- Modbus to BACnet Module
- Weather-protective enclosure (F001) with silencer
- Level I and Level II enclosure w/silencer
- 2-year standby and 5-year basic power warranty



This outline drawing is for reference only.

Do not use for installation design.

	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)
All Models	5182 (204)	2286 (90)	2721 (107)

NOTE: Consult drawings for applicable weights. Contact the factory for additional information. See enclosure Specification Sheet for enclosure dimensions.

Codes and standards

Codes or standards compliance may not be available with all model configurations - consult factory for availability.



CSA Group tests products under a formal process to ensure that they meet the safety and/or performance requirements of applicable standards. This GenSet is certified to: CSA 22.2 No. 100 Motors and Generators; CSA 22.2 No. 0.4-044 Bonding of Electrical Equipment; CSA 22.2 No. 14 Industrial Control Equipment; and CSA 22.2 No. 0 General Requirements - Canadian Electrical Code, Part II. (See Fuel Installation Requirements on this page.)



This product has been manufactured under the controls established by a Bureau Veritas Certification approved management system that conforms to ISO 9001:2015.

Fuel installation requirements

Gas supply pressure is specified at the inlet to the fuel shut-off solenoid (FSO). If this engine is equipped with two FSOs in series, this value should be measured at the inlet to the downstream FSO. Each FSO can reduce the supply pressure up to 5" W.C. at full load. Additional options added to the fuel train such as those for CSA or UL compliance, strainers and/or flex connections can add restriction that must be considered in the site installation.

Ratings definitions

Emergency Standby Power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power is in accordance with ISO 3046, AS 2789, DIN 6271, and BS 5514.

Prime Power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271, and BS 5514.

Base Load (Continuous) Power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271, and BS 5514.

Demand Response Power Rating - Spark Ignited Gas (DRP):

Applicable for supplying electrical power in parallel with commercially available power in variable and non-variable load applications. This fuel rating is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engine operation is limited to a total of 500 hours per year. Engines may be operated in parallel to the public utility for up to 500 hours per year, with an average load factor no greater than 80% of rated Demand Response Power. Engines with Standby Power ratings available can be run in Emergency Standby applications up to the Standby Power rating for up to 50 hours per year. The customer should be aware, however, that the life of any engine will be reduced by constant high load operation.



Warning: Backfeed to a utility system can cause electrocution and/or property damage. Do not connect GenSets to any building electrical system except through an approved device or after the building main disconnect is open. Neutral connection must be bonded in accordance with National Electrical Code.

Specifications are subject to change without notice.

Power You Can Rely On

To order, contact centralregionorders@cummins.com.



Cummins Sales and Service
875 Lawrence Drive
DePere, Wisconsin 54115

cummins.com

S5L1D-F4 Wdg.311 - Technical Data Sheet

Standards

STAMFORD industrial alternators meet the requirements of the relevant parts of the IEC 60034 and the relevant sections of other international standards such as BS5000-3, ISO 8528-3, VDE 0530, NEMA MG1-32, CSA C22.2-100 and AS 60034. Other standards and certifications can be considered on request.

Quality Assurance

Alternators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.



Excitation and Voltage Regulators

Excitation System					
AVR Type	AS440	MX341	MX321	MX322	
Voltage Regulation	± 1%	± 1%	± 0.5%	± 0.5%	with 4% Engine Governing
AVR Power	Self-Excited	PMG	PMG	PMG	

No Load Excitation Voltage (V)	9.9 - 8.5
No Load Excitation Current (A)	0.62 - 0.54
Full Load Excitation Voltage (V)	44
Full Load Excitation Current (A)	2.6
Exciter Time Constant (seconds)	0.099

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Electrical Data								
Insulation System	H							
Stator Winding	Double Layer Lap							
Winding Pitch	2/3							
Winding Leads	12							
Winding Number	311							
Number of Poles	4							
IP Rating	IP23							
RFI Suppression	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. Refer to factory for others							
Waveform Distortion	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%							
Short Circuit Ratio	1/Xd							
Steady State X/R Ratio	19.28							
50 Hz					60 Hz			
Telephone Interference	THF<2%				TIF<50			
Cooling Air Flow	1.12 m³/sec				1.3 m³/sec			
Voltage Series Star (V)	380	400	415	440	416	440	460	480
Voltage Parallel Star (V)	190	200	208	220	208	220	230	240
Voltage Series Delta (V)	220	230	240	254	240	254	266	277
kVA Base Rating (Class H) for Reactance Values (kVA)	670	670	670	650	738	775	800	825
Saturated Values in Per Unit at Base Ratings and Voltages								
Xd Dir. Axis Synchronous	2.90	2.62	2.43	2.10	3.20	3.01	2.84	2.69
X'd Dir. Axis Transient	0.16	0.14	0.13	0.11	0.17	0.16	0.15	0.14
X" d Dir. Axis Subtransient	0.11	0.10	0.09	0.08	0.12	0.11	0.11	0.10
Xq Quad. Axis Reactance	2.43	2.19	2.03	1.76	2.68	2.51	2.37	2.25
X" q Quad. Axis Subtransient	0.25	0.23	0.21	0.18	0.28	0.26	0.25	0.24
XL Stator Leakage Reactance	0.04	0.04	0.04	0.03	0.05	0.05	0.04	0.04
X2 Negative Sequence Reactance	0.16	0.14	0.13	0.11	0.17	0.16	0.15	0.14
X0 Zero Sequence Reactance	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Unsaturated Values in Per Unit at Base Ratings and Voltages								
Xd Dir. Axis Synchronous	3.48	3.14	2.92	2.52	3.84	3.61	3.41	3.23
X'd Dir. Axis Transient	0.18	0.16	0.15	0.13	0.20	0.18	0.17	0.17
X" d Dir. Axis Subtransient	0.13	0.12	0.11	0.09	0.14	0.13	0.13	0.12
Xq Quad. Axis Reactance	2.50	2.26	2.10	1.81	2.76	2.59	2.44	2.31
X" q Quad. Axis Subtransient	0.31	0.28	0.26	0.22	0.34	0.32	0.30	0.28
XL Stator Leakage Reactance	0.05	0.05	0.04	0.04	0.06	0.05	0.05	0.05
Xlr Rotor Leakage Reactance	0.08	0.08	0.07	0.06	0.09	0.09	0.08	0.08
X2 Negative Sequence Reactance	0.19	0.17	0.16	0.13	0.21	0.19	0.18	0.17
X0 Zero Sequence Reactance	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.01

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Time Constants (Seconds)		
T'd Transient Time Const.	0.080	
T''d Sub-Transient Time Const.	0.012	
T'do O.C. Field Time Const.	2.500	
Ta Armature Time Const.	0.019	
T''q Sub-Transient Time Const.	0.0192	
Resistances in Ohms (Ω) at 22°C		
Stator Winding Resistance (Ra), per phase for series connected	0.00302	
Rotor Winding Resistance (Rf)	1.88	
Exciter Stator Winding Resistance	17	
Exciter Rotor Winding Resistance per phase	0.092	
PMG Phase Resistance (Rpmg) per phase	1.91	
Positive Sequence Resistance (R1)	0.0038	
Negative Sequence Resistance (R2)	0.0043	
Zero Sequence Resistance (R0)	0.0038	
Saturation Factors	400V	480V
SG1.0	0.318	0.293
SG1.2	1.23	1.059
Mechanical Data		
Shaft and Keys	All alternator rotors are dynamically balanced to better than ISO 21940-11 Grade 2.5 for minimum vibration in operation. Two bearing generators are balanced with a half key.	
	1 Bearing	2 Bearing
SAE Adaptor	SAE 1, 0, 0.5	
Moment of Inertia	10.1532 kgm²	-
Weight Wound Stator	805kg	-
Weight Wound Rotor	624kg	-
Weight Complete Alternator	1705kg	-
Shipping weight in a Crate	1795kg	-
Packing Crate Size	166 x 87 x 124(cm)	-
Maximum Over Speed	2250 RPM for two minutes	
Bearing Drive End	-	-
Bearing Non-Drive End	Ball 6314	-

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RATINGS AT 0.8 POWER FACTOR

Class - Temp Rise		Standby - 163/27°C				Standby - 150/40°C				Cont. H - 125/40°C				Cont. F - 105/40°C			
50 Hz	Series Star (V)	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
	Parallel Star (V)	190	200	208	220	190	200	208	220	190	200	208	220	190	200	208	220
	Series Delta (V)	220	230	240	254	220	230	240	254	220	230	240	254	220	230	240	254
	kVA	738	738	738	715	710	710	710	690	670	670	670	650	620	620	620	600
	kW	590	590	590	572	568	568	568	552	536	536	536	520	496	496	496	480
	Efficiency (%)	94.4	94.6	94.8	95.1	94.6	94.8	94.9	95.1	94.8	95.0	95.1	95.3	95.0	95.2	95.3	95.4
	kW Input	625	624	623	602	601	599	598	580	565	564	564	546	522	521	521	503

60 Hz	Series Star (V)	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
	Parallel Star (V)	208	220	230	240	208	220	230	240	208	220	230	240	208	220	230	240
	Series Delta (V)	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
	kVA	806	844	878	906	781	819	848	875	738	775	800	825	688	719	731	750
	kW	645	675	702	725	625	655	678	700	590	620	640	660	550	575	585	600
	Efficiency (%)	94.7	94.8	94.8	94.9	94.8	94.9	94.9	95.0	95.0	95.0	95.1	95.1	95.1	95.2	95.3	95.3
	kW Input	681	712	741	764	659	691	715	737	622	652	673	694	579	604	614	629

De-rates

All values tabulated above are subject to the following reductions:

- 5% when air inlet filters are fitted
- 3% for every 500 meters by which the operating altitude exceeds 1000 meters above mean sea level
- 3% for every 5°C by which the operational ambient temperature exceeds 40°C @ Class H temperature rise (please refer to applications for ambient temperature de-rates at other temperature rise classes)
- For any other operating conditions impacting the cooling circuit please refer to applications

Note: Requirement for operating in an ambient exceeding 60°C and altitude exceeding 4000 meters (for <690V) or 1500 meters (for >690V) must be referred to applications.

Dimensional and Torsional Drawing

For dimensional and torsional information please refer to the alternator General Arrangement and rotor drawings available on our website (<http://stamford-avk.com/>)

Note: Continuous development of our products means that the information contained in our data sheets can change without notice, and specifications should always be confirmed with Cummins Generator Technologies prior to purchase.

DSE7310/20 MKII

AUTO START & AUTO MAINS FAILURE CONTROL MODULES



KEY FEATURES

- Configurable power-up mode
- MPU fail delay
- Enhanced graphical user interface
- Drag & drop advanced PLC editor
- MSC ID within PLC GenComm override
- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232 & RS485 communication
- Front panel configuration with PIN protection
- Power save mode
- 3 phase generator sensing and protection
- 3 phase mains (utility) sensing and protection (DSE7320 MKII only)
- Automatic load transfer control (DSE7320 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 2 configurable volt-free relay outputs
- 6 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- 8 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of RS232 and RS485 communication ports
- True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
- MODBUS RTU support with configurable MODBUS pages.
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Modules can be integrated into building management systems (BMS) using MODBUS RTU

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements.

SPECIFICATIONS

DC SUPPLY

CONTINUOUS VOLTAGE RATING

8 V to 35 V Continuous
5 V for upto 1 minute

CRANKING DROPOUTS

Able to survive 0 V for 100 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

MAXIMUM OPERATING CURRENT

510 mA at 12 V, 240 mA at 24 V

MAXIMUM STANDBY CURRENT

330 mA at 12 V, 160 mA at 24 V

CHARGE FAIL/EXCITATION RANGE

0 V to 35 V

GENERATOR & MAINS (UTILITY)

VOLTAGE RANGE

15 V to 415 V AC (Ph to N)
26 V to 719 V AC (Ph to Ph)

FREQUENCY RANGE

3.5 Hz to 75 Hz

MAGNETIC PICKUP

VOLTAGE RANGE

+/- 0.5 V to 70 V

FREQUENCY RANGE

10,000 Hz (max)

INPUTS

DIGITAL INPUTS A TO H

Negative switching

ANALOGUE INPUTS A & F

Configurable as:
Negative switching digital input
0 V to 10 V sensor
4 mA to 20 mA sensor
Resistive sensor

ANALOGUE INPUTS B, C, D & E

Configurable as:
Negative switching digital input
Resistive sensor

OUTPUTS

OUTPUT A & B (FUEL & START)

15 A DC at supply voltage

OUTPUTS C & D

8 A AC at 250 V AC (Volt-free)

AUXILIARY OUTPUTS E, F, G, H, I & J

2 A DC at supply voltage

DIMENSIONS

OVERALL

245 mm x 184 mm x 51 mm
9.6" x 7.2" x 2.0"

PANEL CUT-OUT

220 mm x 160 mm
8.7" x 6.3"

MAXIMUM PANEL THICKNESS

8 mm
0.3"

STORAGE TEMPERATURE RANGE

-40°C to +85°C
-40 °F to +185 °F

OPERATING TEMPERATURE RANGE

-30°C to +70°C
-22 °F to +158 °F

HEATED DISPLAY VARIANT

-40 °C to +70 °C
-40 °F to +158 °F

RELATED MATERIALS

TITLE

DSE7310 MKII & DSE7320 MKII Installation Instructions
DSE7310 MKII & DSE7320 MKII Operator Manual
DSE7310 MKII & DSE7320 MKII Configuration Suite PC Manual

PART NO.

053-181
057-253
057-243

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DSE7310/20 MKII

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

The DSE7310 MKII is an Auto Start Control Module and the DSE7320 MKII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

The DSE7320 MKII will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

Both modules are compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality. Dual mutual standby is now available on both the DSE7310 MKII & DSE7320 MKII using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true engine hours balancing.

The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available.

ENVIRONMENTAL TESTING STANDARDS

ELECTRO-MAGNETIC COMPATIBILITY

BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

ELECTRICAL SAFETY

BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

TEMPERATURE

BS EN 60068-2-1
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +70 °C

VIBRATION

BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz at +/-7.5 mm,
8 Hz to 500 Hz at 2 gn

HUMIDITY

BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 °C
at 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 °C
at 93% RH 48 Hours

SHOCK

BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 ms

DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

BS EN 60529
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS

