

500KW Cummins Diesel Generator

Standby | 60Hz | 1800 RPM | EPA Tier 2



GENERAL INFORMATION & KEY FEATURES

- **Power:** 500KW / 625KVA at 60 Hz
- **Engine:** Cummins KTA19-G3A
- **Cylinder:** 6-cylinder
- **Cooling:** Water-cooled
- **Displacement:** 19 Liter
- **Aspiration:** Turbocharged & Aftercooled
- **Bore x Stroke:** 6.25 x 6.25 (in.)
- **Voltage:** Any voltage can be customized
- **Phase:** Single phase or 3-phase options available
- **Operating Speed:** 1800 rpm
- **Noise Level:** 79 db @ 7m
- **Enclosure Type:** Silent IP-65, soundproof and weatherproof customizable enclosure
- **Controller:** DSE GenSet 6110
- **Dimensions:** L*W*H - 188.9 x 62.9 x 96.8 (in.)
- **Weight:** 12500 lbs.
- **Certifications:** Certified ISO:9001, ISO:17025, ISO:8258, EPA Tier 2, UL2200



CHONGQING CUMMINS ENGINE COMPANY LTD. ENGINE PERFORMANCE CURVE

CONFIGURATION
D193091DX02

ENGINE MODEL: KTA19-G3A

CURVE NUMBER: FR-4212

CPL No.: 4153

DATE: 2013/6/25

Displacement: 19L (1150)

Aspiration: Turbocharged, Aftercooled

RATING

BoreXStroke: 159X159mm

(6.25X6.25 in.)

Fuel System: Cummins PT

563 kW(755 BHP)@1800r/min

Compress Ratio: 13.9:1

No. of Cylinder: 6

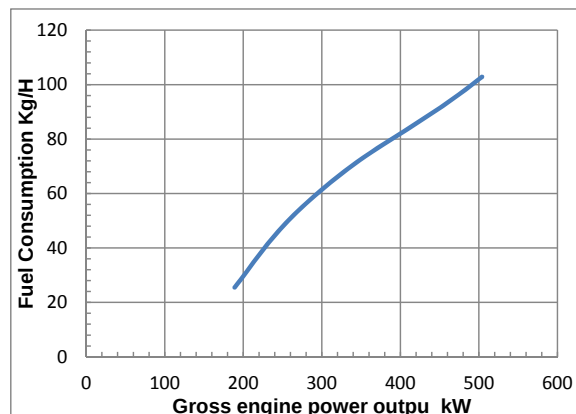
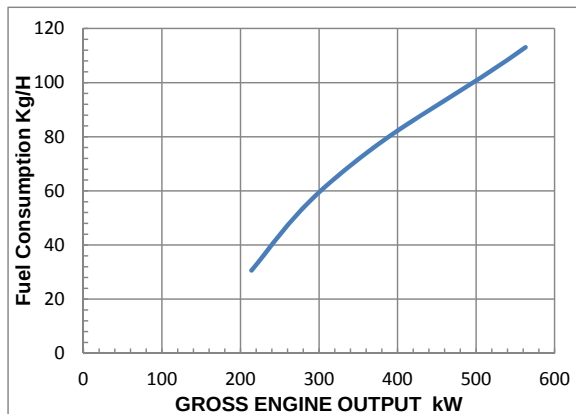
504 kW(675 BHP)@1500r/min

All data is based on the engine operating with fuel system, water pump, and 20 in. H₂O(4.98kPa) inlet air restriction with 5.8 in.(147mm) inner diameter, and with 2 in. Hg(7kPa) exhaust restriction with 8 in.(203mm) inner diameter; not included are alternator, fan, optional equipment and driven components. Coolant flows and heat rejection data based on coolant as 50% ethylene glycol/50% water. All data is subject to change without notice.

GROSS ENGINE POWER OUTPUT

SPEED rpm	STANDBY POWER		PRIME POWER		CONTINUOUS POWER	
	BHP	kW	BHP	kW	BHP	kW
1800	755	563	680	507	575	429
1500	675	504	600	448	475	354

FUEL CONSUMPTION



OUTPUT POWER			CONSUMPTION		BFSC	
%	BHP	kW	Lb/h	Kg/h	g/kW.h	Lb/BHP.h
1800RPM						
STANDBY						
100	755	563	249	113	201	0.330
PRIME						
100	680	507	225	102	201	0.331
75	510	380	172	78	206	0.338
50	383	285	122	55	194	0.318
25	287	214	67	31	143	0.235
CONTINUOUS						
100	575	429	190	86	201	0.331
1500RPM						
STANDBY						
100	675	504	227	103	204	0.336
PRIME						
100	600	448	201	91	203	0.334
75	450	336	154	70	207	0.341
50	338	252	107	48	192	0.316
25	254	189	56	26	135	0.221
CONTINUOUS						
100	475	354	157	71	202	0.331

Curves shown above represent gross engine performance capabilities obtained and corrected in accordance with SAE J1995 conditions of 29.61 in. Hg(100kPa) barometric pressure [300ft.(91m) altitude] 77deg F (25 deg C) inlet temperature, and 0.30 in. Hg(1kPa) water vapor pressure with No.2 diesel fuel.

TECHNICAL DATA DEPT.

CERTIFIED WITHIN 5%

CHIEF ENGINEER

Cummins Confidential



POWER RATING APPLICATION GUIDELINES FOR GENERATOR DRIVE ENGINES

These guidelines have been formulated to ensure proper application of generator drive engines in A.C. generator set installations. Generator drive engines are not designed for and shall not be used in variable speed D.C. generator set applications.

STANDBY POWER RATING is applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the standby Power rating.

This rating should be applied where reliable utility power is available. A standby rated engine should be sized for a maximum of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power rating. Standby ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency.

CONTINUOUS POWER RATING

Applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

PRIME POWER RATING is applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories:

UNLIMITED TIME RUNNING PRIME POWER

Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of period of 250 hours.

The total operating time at 100% Prime Power shall not exceed 500 hours per year.

A 10% overload capability is available for a period of 1 hour within a 12 hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

LIMITED TIME RUNNING PRIME POWER

Prime Power is available for a limited number of hours in a non-variable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines may be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation exceeding 750 hours per year at Prime Power rating should use the Continuous Power rating.

Reference Standards:

BS-5514 and DIN-6271 standards are based on ISO-3046.

Operation At Elevated Temperature And Altitude:

The engine may be operated at:

1800RPM up to 5,000 ft.(1500m) and 104°F (40°C) without power deration.

1500RPM up to 7,500 ft.(2280m) and 104°F (40°C) without power deration.

For sustained operation above these conditions, derate by 4% per 1,000ft. (300m), and 1% per 10°F (2% per 11°C).



CHONGQING CUMMINS ENGINE COMPANY LTD. ENGINE DATA SHEET

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ENGINE MODEL: **KTA19-G3A**

STAND_BY: 755 BHP @1800r/min
563 kW
PRIME: 680 BHP @1800r/min
507 kW

REFERENCE INFORMATION:

CONFIGURATION..... D193091DX02
CPL NUMBER 4153
PERFORMANCE CURVE NUMBER..... FR-4212

GENERALENGINE DATA

Type..... 4 Cycle , In-line , 6 Cylinder
Aspiration..... Turbocharged , Aftercooled
Bore— $\text{in. (mm)} \times \text{stroke—in. (mm)}$ 6.25 $\times$ 6.25 (159 $\times$ 159)
Displacement— $\text{in}^3(\text{L})$ 1150 (19)
Compression Ratio..... 13.9:1
Dry Weight
Fan Hub to Flywheel Engine — lb (kg) 3725 (1690)
Radiator Cooled Engine — lb (kg) 5900 (2676)
Wet Weight
Fan Hub to Flywheel Engine — lb (kg) 3880 (1760)
Radiator Cooled Engine — lb (kg) 6300 (2858)
Moment of Inertia of Rotating Components (Excluding Flywheel) — $\text{lb}_m \cdot \text{ft}^2 (\text{kg} \cdot \text{m}^2)$ 43 (1.82)
·With FW 4001 Flywheel — $\text{kg} \cdot \text{m}^2 (\text{lb}_m \cdot \text{ft}^2)$ 7.16 (170.0)
·With FW 4006 Flywheel — $\text{kg} \cdot \text{m}^2 (\text{lb}_m \cdot \text{ft}^2)$ 8.39 (199.0)
C.G. Distance From Front Face of Block— in (mm) 23.6 (598)
C.G. Distance Above Crank Centerline— in (mm) 9 (229)
Maximum Allowable Bending Moment at Rear Face of Block — $\text{N} \cdot \text{m (lb} \cdot \text{ft)}$ 2000 (907)
Firing Order..... 1-5-3-6-2-4

ENGINE MOUNTINC

Moment of Inertia About Roll Axis — $\text{lb} \cdot \text{ft}^2 (\text{kg} \cdot \text{m}^2)$ 1876 (79)

EXHAUST SYSTEM

Maximum Allowable Back Pressure (1500/1800 rpm) — in. Hg (kPa) 2.3/3 (7.8/10.2)
Maximum Allowable Back Pressure — in. Hg (kPa) 3 (10)
Exhaust Pipe Size Normally Acceptable — in (mm) 5 (127)

AIR INDUCTION SYSTEM

Maximum Allowable Intake Air Restriction With Heavy Duty Air Cleaner

Clean Element — $\text{in. H}_2\text{O (kPa)}$ 15 (3.73)
Clean Element — $\text{in. H}_2\text{O (kPa)}$ 15 (3.73)
Intake Air Alarm Temperature (1500/1800 rpm)— $^{\circ}\text{C} (^{\circ}\text{F})$ 82 (180)

COOLING SYSTEM

Coolant Capacity

After-cooler Only — U.S. Gal (L) 6 (23)
With heat exchanger HX 6076 (With out explanation tank) — U.S. Gal (L) 53 (199)
With explanation tank & LTA— U.S. Gal (L) 30 (112)

Main Engine Circuit

Maximum Coolant Friction Heat External to Engine @1800 rpm — PSI (kPa) 10 (68.9)
@1500 rpm — PSI (kPa) 10 (68.9)
Maximum Allowable Air Friction Across radator — $\text{in. H}_2\text{O (kPa)}$ 0.5 (0.1)
Minimum Raw Water Flow @ 90 $^{\circ}\text{F} (32^{\circ}\text{C})$ to Heat Exchanger With HX 6076 — GPM (L/mi 108) (408.8)

CHONGQING CUMMINS ENGINE COMPANY LTD.

CHONGQING, CHINA

All Data is Subject to Change Without Notice- consult the following Cummins intranet site for most recent data:

<http://www.ccec.easia.cummins.com> - /Publish/design/



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Maximum Raw Water Inlet Pressure @ Heat Exchanger HX 6076 —PSI(kPa).....	50	(344.7)
Maximum Allowable Top Tank Temperature (Stand_by/Prime) —°F(°C).....	220/212	(104/100)
Standard Thermostat (modulating) Range— °F(°C).....	180-200	(82-93)
Maximum Allowable Coolant Temperature —°F(°C).....	205	(96.1)
Minimum Coolant Makeup Capacity —U.S.Gal(L).....	1.6	(6.1)
Maximum Raw water Inlet Friction —PSI(kPa).....	10	(254.0)
Minimum Allowable Fill Rate —U.S.GPM(L/min).....	5	(18.9)
Maximum Allowable Initial Fill Time —min.....	5	
Minimum Allowable Coolant Expansion Space —% of System Capacity.....	5	
Maximum Allowable Inlet Coolant Temperature at Limited situation (Stand_by/Prime) —°F(°C).....	160/150	(71/66)

LUBRICATION SYSTEM

Oil Pressure

@ Idle —PSI(kPa).....	20	(138)
@ Rated Speed —PSI(kPa).....	50-70	(345-483)
Oil Flow at Rated Speed —U.S.GPM(L/min).....	40	(151.4)
Maximum Allowable Oil Temperature —°F(°C).....	250	(121.0)

By-Pass Filter Capacity

Spin-on Cartridge Type —U.S.Gal(L).....	0.7	(2.6)
Replaceable Element Type —U.S.Gal(L).....	2.9	(11.0)

Oil Pan Capacity (Option OP4019)

High —U.S.Gal(L).....	10.0	(37.9)
Total System Capacity (Excluding By-Pass Filter) —U.S.Gal(L).....	22.3	(84.4)
Total System Capacity (Excluding By-Pass Filter) —U.S.Gal(L).....	13.2	(50.0)

Angularity of Standard Oil Pan (Option OP

Front Down.....	30°	
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FUEL SYSTEM

Fuel Injection System..... Cummins PT

Maximum Fuel Consumption at Maximum Rated Output and Speed —lb/h(kg/h).....

Maximum allowable Restriction to PT Fuel Pump

With Clean Fuel Filter —in.Hg(kPa).....	4	(13.55)
With Dirty Fuel Filter —in.Hg(kPa).....	9	(30.48)

Maximum Fuel Supply at Rated Power and Speed —lb/h(kg/h).....

Maximum Allowable Injector Return Line Restriction

With Check Valves —in.Hg(kPa).....	7	(22)
Less Check Valves —in.Hg(kPa).....	3	(8)

Minimum Allowable Fuel Tank Vent Capability —ft³/h (L/h)..... 15 (425)

(With 2.5 in. Hg (63 mm Hg) or Less Back Pressure)

Starter (Heavy, Anode)—Volt..... 24

Battery Recharge System,Negative ground—A..... 35

Maximum Allowable Resistance of Starting Circuit—Ω..... 0.002

Minimum Recommended Battery Capacity

·Cold Soak at 50°F(10°C) or Above—0°F CCA.....	600
·Cold Soak at 32~50°F(0~10°C) or Above—0°F CCA.....	640
·Cold Soak at 0~32°F(-18~0°C) or Above—0°F CCA.....	900



CHONGQING CUMMINS ENGINE COMPANY LTD. ENGINE DATA SHEET

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PERFORMANCE DATA

All data is based on the engine operating with fuel system, water pump, lubricating oil pump, air cleaner, and muffler, not included are alternator, compressor, fan, optional equipment and driven components. Data represents gross engine performance capabilities obtained and corrected in accordance with SAE J1349 conditions for 29.61 in Hg(100 kPa) barometric pressure[300ft. (90 m) altitude], 77°F (25 °C) inlet air temperature, and 0.30 in. Hg (1kPa) water vapor pressure with No. 2 diesel fuel or a fuel corresponding to ASTM D2. All data is subject to change without notice

	STAND_BY		PRIME	
	60 Hz	50 Hz	60 Hz	50 Hz
Engine Speed r/min.....	1800	1500	1800	1500
Idle Speed r/min.....	675-775	675-775	675-775	675-775
Gross Power Output BHP(kW).....	755(563)	675(504)	680(507)	600(448)
Brake Mean Effective Pressure PSI(kPa).....	287(1978)	308(2125)	258(1781)	274(1889)
Piston Speed ft/min(m/s).....	1870(9.5)	1555(7.9)	1870(9.5)	1555(7.9)
Friction Horsepower BHP(kW).....	83(62)	54(40)	83(62)	54(40)
Intake Air Flow CFM(L/s).....	1517(716)	1226(579)	1455(687)	1126(531)
Exhaust Gas Flow CFM(L/s).....	3945(1862)	3398(1604)	3673(1734)	3039(1434)
Exhaust Gas Temperature °F(°C).....	939(504)	1034(557)	898(481)	1000(538)
Heat Rejection to Ambient BTU/min(kW).....	4522(80)	4108(72)	4050(0)	3645(64)
Heat Rejection to Coolant BTU/min(kW).....	22830(401)	20530(361)	20824(366)	18125(319)
Engine Water Flow L/s(U.S.GPM) @ 3psi.....	196(12.4)	162(10.2)	196(12.4)	162(10.2)

Change Log

Date	Author	Change Description
2013/6/25	Jiang Li	Release



S5L1D-D4 Wdg.311 - Technical Data Sheet

Standards

STAMFORD industrial alternators meet the requirements of the relevant parts of the IEC EN 60034 and the relevant section of other international standards such as BS5000, VDE 0530, NEMA MG1-32, IEC34, CSA C22.2-100 and AS1359. 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		
Voltage Regulation	± 1%	± 1%	± 0.5%		with 4% Engine Governing
AVR Power	Self-Excited	PMG	PMG		

No Load Excitation Voltage (V)	9.5 - 8.7
No Load Excitation Current (A)	0.6 - 0.55
Full Load Excitation Voltage (V)	44
Full Load Excitation Current (A)	2.6
Exciter Time Constant (seconds)	0.099

STAMFORD

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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	15.69							
50 Hz					60 Hz			
Telephone Interference	THF<2%				TIF<50			
Cooling Air Flow	1.12 m³/sec				1.34 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)	500	550	500	500	575	594	625	644
Saturated Values in Per Unit at Base Ratings and Voltages								
Xd Dir. Axis Synchronous	3.01	2.99	2.53	2.25	3.47	3.20	3.08	2.92
X'd Dir. Axis Transient	0.15	0.15	0.13	0.11	0.17	0.16	0.15	0.15
X''d Dir. Axis Subtransient	0.11	0.11	0.09	0.08	0.13	0.12	0.11	0.11
Xq Quad. Axis Reactance	2.48	2.46	2.08	1.85	2.85	2.63	2.54	2.40
X''q Quad. Axis Subtransient	0.28	0.28	0.24	0.21	0.32	0.30	0.29	0.27
XL Stator Leakage Reactance	0.04	0.04	0.03	0.03	0.05	0.04	0.04	0.04
X2 Negative Sequence Reactance	0.19	0.19	0.16	0.14	0.22	0.20	0.20	0.19
X0 Zero Sequence Reactance	0.10	0.10	0.08	0.08	0.12	0.11	0.10	0.10
Unsaturated Values in Per Unit at Base Ratings and Voltages								
Xd Dir. Axis Synchronous	3.61	3.59	3.03	2.70	4.16	3.84	3.70	3.50
X'd Dir. Axis Transient	0.17	0.17	0.15	0.13	0.20	0.18	0.18	0.17
X''d Dir. Axis Subtransient	0.13	0.13	0.11	0.10	0.15	0.14	0.13	0.13
Xq Quad. Axis Reactance	2.55	2.53	2.14	1.90	2.94	2.71	2.61	2.47
X''q Quad. Axis Subtransient	0.34	0.34	0.28	0.25	0.39	0.36	0.35	0.33
XL Stator Leakage Reactance	0.05	0.05	0.04	0.03	0.05	0.05	0.05	0.04
Xlr Rotor Leakage Reactance	0.09	0.09	0.07	0.07	0.10	0.09	0.09	0.09
X2 Negative Sequence Reactance	0.23	0.23	0.19	0.17	0.26	0.24	0.24	0.22
X0 Zero Sequence Reactance	0.12	0.12	0.10	0.09	0.14	0.13	0.12	0.11

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Time Constants (Seconds)		
T'd Transient Time Const.	0.08	
T''d Sub-Transient Time Const.	0.0120	
T'do O.C. Field Time Const.	2.2	
Ta Armature Time Const.	0.0180	
T''q Sub-Transient Time Const.	0.0190	
Resistances in Ohms (Ω) at 22 ⁰ C		
Stator Winding Resistance (Ra), per phase for series connected	0.0049	
Rotor Winding Resistance (Rf)	1.77	
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)	0.0061	
Negative Sequence Resistance (R2)	0.0071	
Zero Sequence Resistance (R0)	0.0061	
Saturation Factors	400V	480V
SG1.0	0.361	0.365
SG1.2	1.461	1.309
Mechanical Data		
Shaft and Keys	All alternator rotors are dynamically balanced to better than BS6861: Part 1 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	8.0068 kgm²	-
Weight Wound Stator	657kg	-
Weight Wound Rotor	563kg	-
Weight Complete Alternator	1413kg	-
Shipping weight in a Crate	1505kg	-
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(ISO)	-

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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	550	590	550	530	515	575	515	515	500	550	500	500	450	495	450	450
	kW	440	472	440	424	412	460	412	412	400	440	400	400	360	396	360	360
	Efficiency (%)	94.1	94.0	94.5	94.8	94.4	94.1	94.7	94.9	94.5	94.3	94.8	94.9	94.8	94.7	95.0	95.1
	kW Input	468	502	466	447	437	489	435	434	423	467	422	421	380	418	379	378

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	606	644	673	694	588	625	655	675	575	594	625	644	519	538	563	588
	kW	485	515	538	555	470	500	524	540	460	475	500	515	415	430	450	470
	Efficiency (%)	94.3	94.3	94.4	94.4	94.4	94.4	94.5	94.5	94.5	94.6	94.6	94.7	94.7	94.8	94.9	94.9
	kW Input	514	546	571	588	498	529	555	571	487	502	528	544	438	454	475	496

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.

DSE6110/20 MKIII

AUTO START & AUTO MAINS (UTILITY) FAILURE CONTROL MODULES



DSE6110 MKIII



DSE6120 MKIII

KEY FEATURES

- 4-line back-lit LCD text display
- Multiple display languages
- Five-key menu navigation
- LCD alarm indication
- Customisable power-up text and screen images.
- DSENet® expansion compatibility
- Data logging facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB communications
- Front panel configuration with PIN protection
- Power save mode
- 3-phase generator sensing and protection
- 3-phase mains (utility) sensing and protection (DSE6120 MKIII only)
- Automatic load transfer control (DSE6120 MKIII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains (utility) current and power monitoring (kW, kvar, kVA, pf) (DSE6120 MKIII only)
- kW overload alarm
- Over current protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 4 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- 8 configurable digital inputs
- 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 level alarms
- 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 optional gasket) offers increased resistance to water ingress
- Configurable CAN read & transmitted information.
- 1 alternative configuration.

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE6120 MKIII 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 up to 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

260 mA at 12 V, 150 mA at 24 V

MAXIMUM STANDBY CURRENT

145 mA at 12 V, 85 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 & D

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

ANALOGUE INPUTS B & C

Configurable as:
Negative switching digital input
Resistive sensor

OUTPUTS

OUTPUT A & B (FUEL & START)

10 A DC at supply voltage

AUXILIARY OUTPUTS C, D, E, F, G & H

2 A DC at supply voltage

DIMENSIONS

OVERALL

216 mm x 158 mm x 43 mm
8.5" x 6.2" x 1.5"

PANEL CUT-OUT

184 mm x 137 mm
7.2" x 5.3"

MAXIMUM PANEL THICKNESS

8 mm
0.3"

STORAGE TEMPERATURE RANGE

-40°C to +85°C
-40 °F to +185 °F

OPERATING TEMPERATURE RANGE

NON-HEATED DISPLAY VARIANT

-30°C to +70°C
-22 °F to +158 °F

HEATED DISPLAY VARIANT

-40 °C to +70 °C
-40 °F to +158 °F

OPTIONAL PARTS

PART	PART NUMBER
IP65 Gasket	020-521

RELATED MATERIALS

TITLE

DSE6110 MKIII & DSE6120 MKIII Installation Instructions
DSE6110 MKIII & DSE6120 MKIII Operator Manual
DSE6110 MKIII & DSE6120 MKIII Configuration Suite PC Manual

PART NO.

053-240
057-289
057-290

DEEP SEA ELECTRONICS

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DSE6110/20 MKIII

AUTO START & AUTO MAINS (UTILITY) FAILURE CONTROL MODULES

The DSE6110 MKIII is an Auto Start Control Module and the DSE6120 MKIII 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 and remote PC.

The DSE6120 MKIII will also monitor the mains (utility) supply. The modules include USB connection and 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.

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

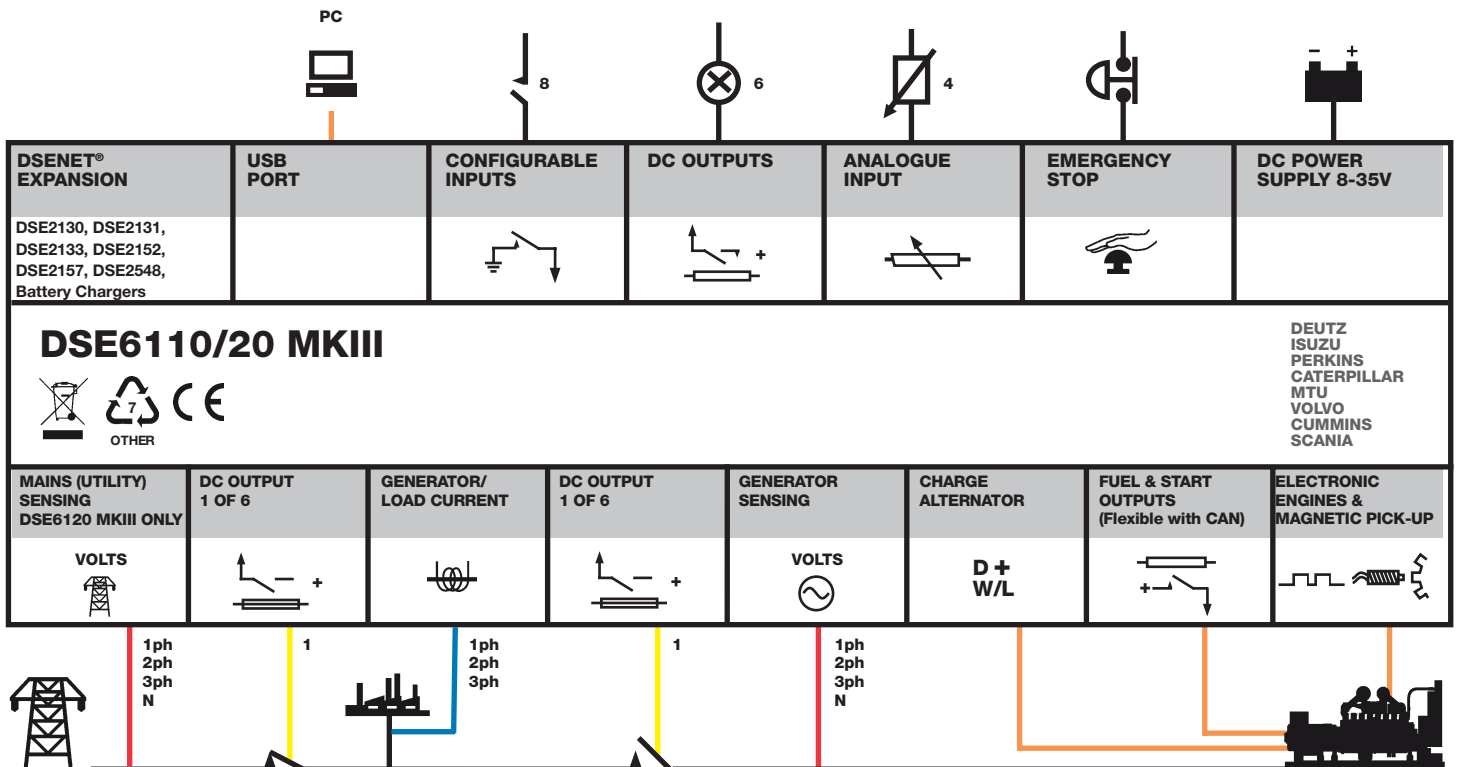
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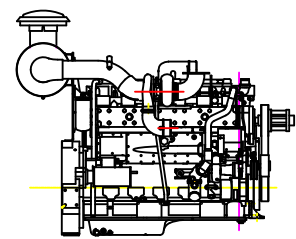
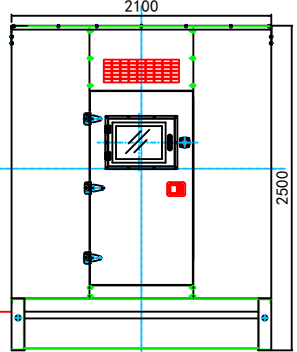
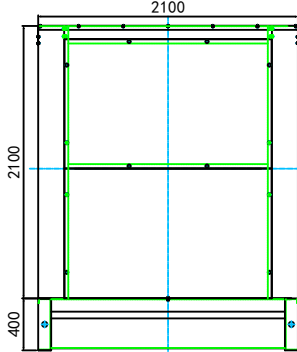
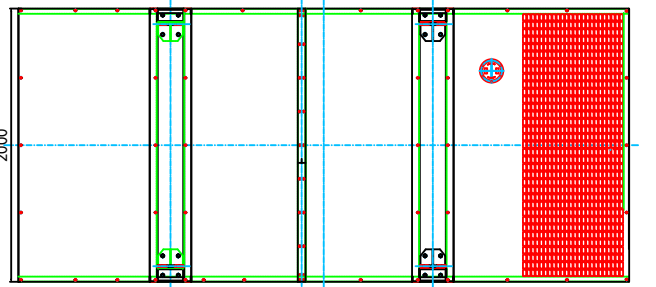
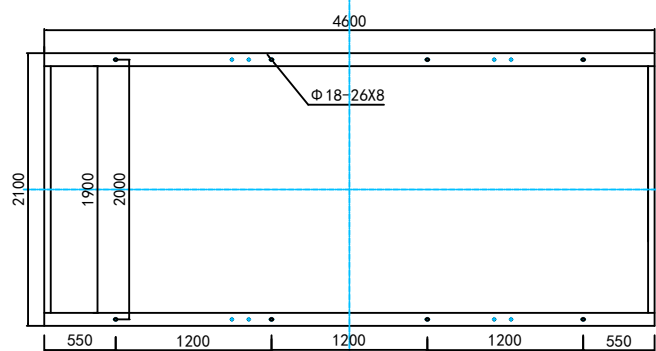
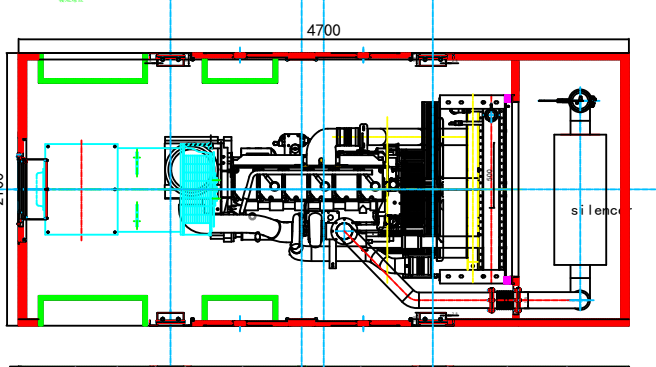
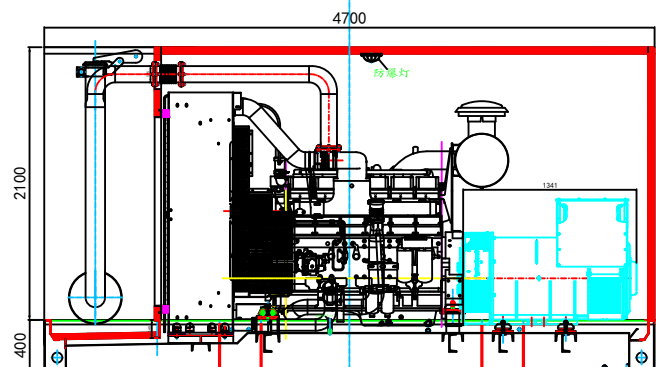
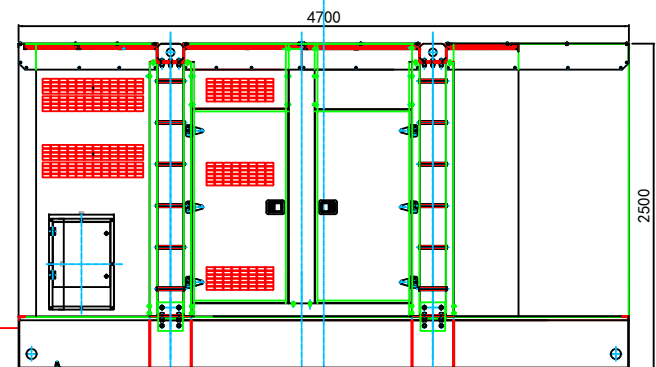
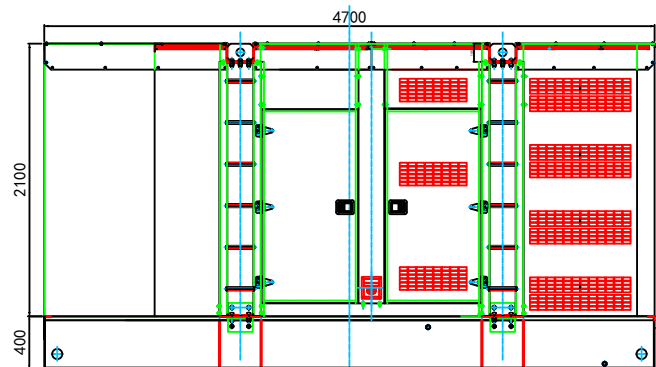
BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 ms

DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

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

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





500KW Silent Diesel Generator
With Cummins engine KTAA19-G5
With Stamford alternator S5L1D-D41
With 1800L base fuel tank

This drawing is a design
proposal, and is for reference only.
There's are slight adjustments in the
production process, please refer to the
actual situation.