

200KW Cummins DIESEL GENERATOR



GENERAL INFORMATION & KEY FEATURES

- **Power:** 200kW / 250kVA at 60 Hz
- **Engine:** Cummins 6LTAA8.9-G2
- **Cylinder:** 6-cylinder, in-line
- **Cooling:** Water-cooled
- **Displacement:** 8.9 Liter
- **Aspiration:** Turbocharged & Aftercooled
- **Bore x Stroke:** 114x145 mm
- **Voltage:** 120 to 600V available, or any voltage can be customized
- **Phase:** Single phase or 3-phase options available
- **Operating Speed:** 1800 rpm
- **Noise Level:** 69 db @ 7m
- **Enclosure Type:** Silent IP-65, soundproof and weatherproof customizable enclosure
- **Controller:** DSE GenSet 6110
- **Fuel Tank:** 125 or 275 gallons, extended fuel tank capacity options
- **Dimensions:** L*W*H - 130 x 51.2 x 71 (in.)
- **Weight:** 5732 lbs.
- **Certifications:** Certified ISO:9001, ISO:17025, ISO:8258, EPA Tier 1, UL2200



DONGFENG CUMMINS ENGINE Co., Ltd.
ENGINE DATASHEET—for G-drive

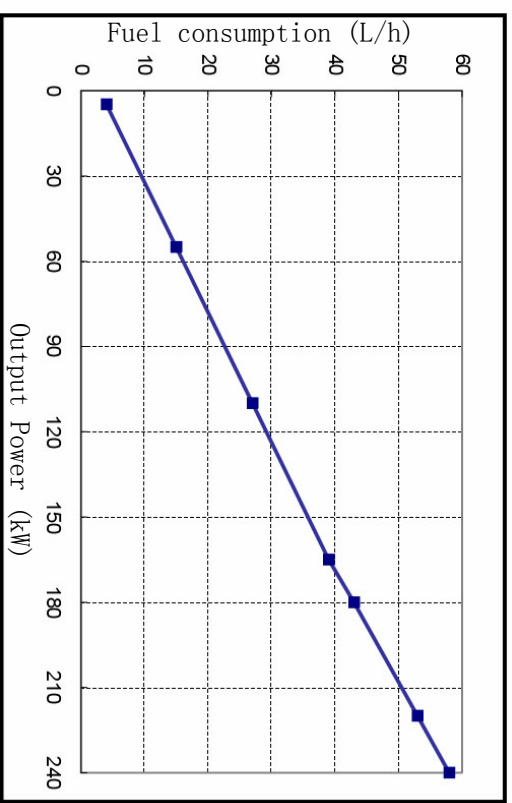
ENGINE MODEL 6L TAA8.9-G2	PERFORMANCE CURVE FR92516
ENGINE FAMILY D56	CPL 3079
	2007/06

Displacement	8.9 L	Air intake way	Air-air after-cooled, turbo-charged
Cylinder bore	114 mm	Cylinder quantity	6
Stroke	145 mm		kw(BHP) 220(295)
Fuel system	P7100 pump _ GAC governor / BYC ASIMCO		@RPM 1500
			Speed-droop 5%

Engine testing with fuel system, water pump and oil pump, without air compressor, alternator, fan, other options and driving accessory.
Testing condition : air intake resistance 250 mmHg, exhaust back pressure 50 mmHg.

Engine Speed-RPM	Standby Power		Base Output Power		Continuous Power	
	KW	HP	KW	HP	KW	HP
1500	240	322	220	295	180	241

Output Power	Fuel consumption			
	g/kW.h	L/h		
%	KW	HP	g/kW.h	L/h
Standby Power				
100	240	322	199	58
Base Output Power				
100	220	295	197	53
75	165	221	197	39
50	110	147	201	27
25	55	74	220	15
Continuous Power				
100	180	241	196	43





DONGFENG CUMMINS ENGINE Co., Ltd.
XiangFan Hubei P.R.CHINA
ENGINE DATASHEET—for G-drive

ENGINE MODEL	PERFORMANCE CURVE
6L TAA8.9-G2	FR92516
ENGINE FAMILY	ENGINE FAMILY
D56	D56
CPL	
3079	

Typical engine data

- Net weight 650
- Rotate part instantaneous inertia _ without flywheel 0.72
- Distance between gravity center and rear surface of cylinder block 427
- Distance between gravity center and center line above of crankshaft 163

Engine installation

- Static bent torque permitted—rear surface of cylinder block 1356
- Static bent torque permitted—front surface of cylinder block N/A
- Static bent torque permitted—flank surface of flywheel-house N/A

Exhaust system

- Max. back pressure 10.1
- Diameter of exhaust pipe recommended N/A

Air intake system

- Max. air intake resistance 6.2
- Dirty filter 3.7
- Normal air cleaner and clean filter N/A
- Heavy duty cleaner and clean filter N/A
- Diameter of intake pipe recommended N/A

Lubrication system

- Normal oil pressure range

Low idle
Rated speed
Max. oil temperature permitted in oil pan
Oil pan capacity (Max _ Min)
Lubrication system Min. capacity (oil pan + oil filter)
Usage inclining degree permitted (any direction)

KPa 103
KPa 276_414
°C 121
L N/A
L 27.6
° N/A

Fuel system

Fuel injection pump model
Max. fuel input resistance of transfer pump
Max. overflow fuel resistance at overflow pipe of injector
Total fuel overflow amount

BYC P7100 pump with GAC governor

KPa 20.3
KPa 33.9
L/h 83

Cooling system

Coolant capacity-engine only
Max. coolant cycling resistance exterior engine
Thermostat adjusting temperature (range)
Min. opening pressure of radiator cap
Max. coolant temperature permitted _ Standby Power/Base output Power

L 11.1
KPa N/A
°C 82_93
KPa 103
°C 110/104

Electric system

Starter
Battery charging system
Max. starting circuit resistance
Min. battery capacity_ -12°C (CCA: Cold Cranking Ampere)

12V 24V
100A 70A
0.001Ω 0.002Ω
1500CCA 750CCA

Technical data _ under standard fuel delivery rate FR92516
Engine speed _ RPM

Base output Power 1500 **Standby Power** 1500

Output Power _ kW	220	240
Torque _ Nm	1401	1528
Low idle _ RPM	850-950	850-950
Friction energy output _ kW	26	26
Piston speed _ m/s	7.25	7.25
Engine coolant flow _ L/sec	3.3	3.3
Air intake flow _ L/sec	N/A	N/A
Exhaust flow _ L/sec	N/A	N/A
Exhaust temperature _ °C	430	470
Environment energy output _ kW	N/A	N/A
Coolant energy output _ kW	95	105
Fuel energy output _ kW	0.1	0.1

All data's error within ±5%.

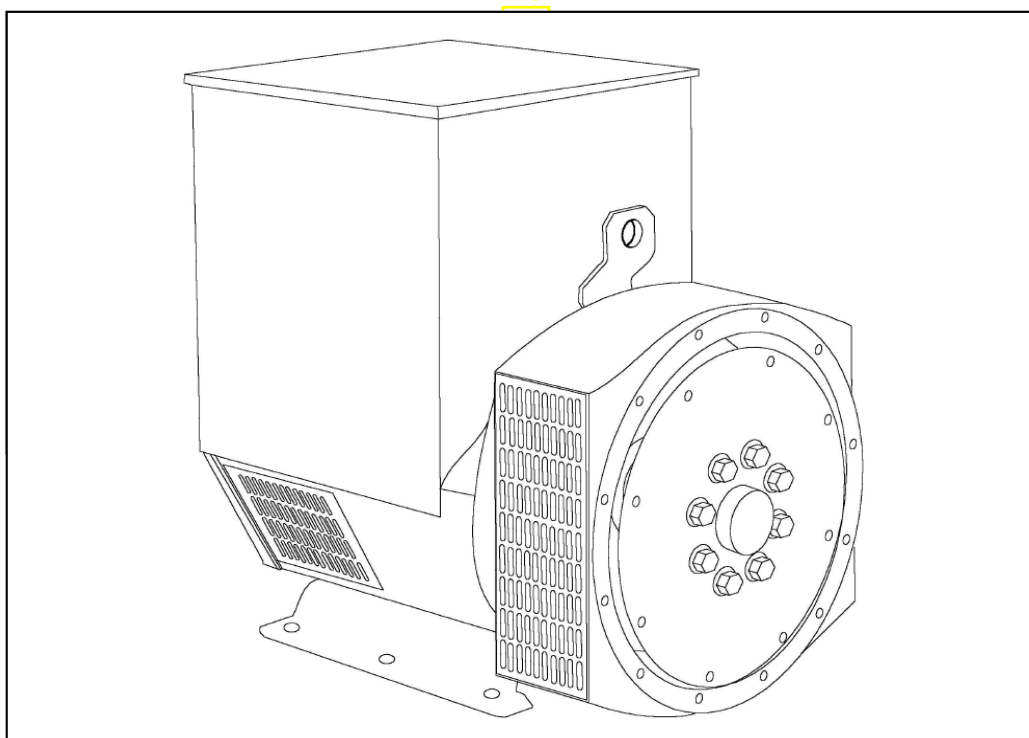
Excuse for none notice anymore in case of data changed

DONGFENG CUMMINS ENGINE Co., Ltd.

STAMFORD®

UCI274H - Winding 17

Technical  Data Sheet



UCI274H

STAMFORD**WINDING 17**

CONTROL SYSTEM	SEPARATELY EXCITED BY P.M.G.		
A.V.R.	MX321	MX341	
VOLTAGE REGULATION	± 0.5 %	± 1.0 %	With 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVES (page 5)		
CONTROL SYSTEM	SELF EXCITED		
A.V.R.	SX460	AS440	
VOLTAGE REGULATION	± 1.5 %	± 1.0 %	With 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT	SERIES 4 CONTROL DOES NOT SUSTAIN A SHORT CIRCUIT CURRENT		
INSULATION SYSTEM	CLASS H		
PROTECTION	IP23		
RATED POWER FACTOR	0.8		
STATOR WINDING	DOUBLE LAYER CONCENTRIC		
WINDING PITCH	TWO THIRDS		
WINDING LEADS	12		
STATOR WDG. RESISTANCE	0.028 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED		
ROTOR WDG. RESISTANCE	1.82 Ohms at 22°C		
EXCITER STATOR RESISTANCE	20 Ohms at 22°C		
EXCITER ROTOR RESISTANCE	0.091 Ohms PER PHASE AT 22°C		
R.F.I. 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%		
MAXIMUM OVERSPEED	2250 Rev/Min		
BEARING DRIVE END	BALL. 6315-2RS (ISO)		
BEARING NON-DRIVE END	BALL. 6310-2RS (ISO)		
	1 BEARING	2 BEARING	
WEIGHT COMP. GENERATOR	626 kg	641 kg	
WEIGHT WOUND STATOR	253 kg	253 kg	
WEIGHT WOUND ROTOR	227.53 kg	216.57 kg	
WR ² INERTIA	1.9349 kgm ²	1.8843 kgm ²	
SHIPPING WEIGHTS in a crate	659 kg	673 kg	
PACKING CRATE SIZE	123 x 67 x 103(cm)	123 x 67 x 103(cm)	
TELEPHONE INTERFERENCE	THF<2%	TIF<50	
COOLING AIR	0.617 m ³ /sec 1308 cfm		
VOLTAGE SERIES STAR	600V		
VOLTAGE PARALLEL STAR	300V		
VOLTAGE SERIES DELTA	346V		
KVA BASE RATING FOR REACTANCE VALUES	255		
X _d DIR. AXIS SYNCHRONOUS	2.07		
X' _d DIR. AXIS TRANSIENT	0.16		
X'' _d DIR. AXIS SUBTRANSIENT	0.11		
X _q QUAD. AXIS REACTANCE	1.26		
X'' _q QUAD. AXIS SUBTRANSIENT	0.17		
X _L LEAKAGE REACTANCE	0.08		
X ₂ NEGATIVE SEQUENCE	0.13		
X ₀ ZERO SEQUENCE	0.08		
REACTANCES ARE SATURATED		VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED	
T' _d TRANSIENT TIME CONST.	0.042s		
T'' _d SUB-TRANSTIME CONST.	0.012s		
T' _{do} O.C. FIELD TIME CONST.	1.1s		
T _a ARMATURE TIME CONST.	0.012s		
SHORT CIRCUIT RATIO	1/X _d		

UCI274H

STAMFORD

Winding 17 / 0.8 Power Factor

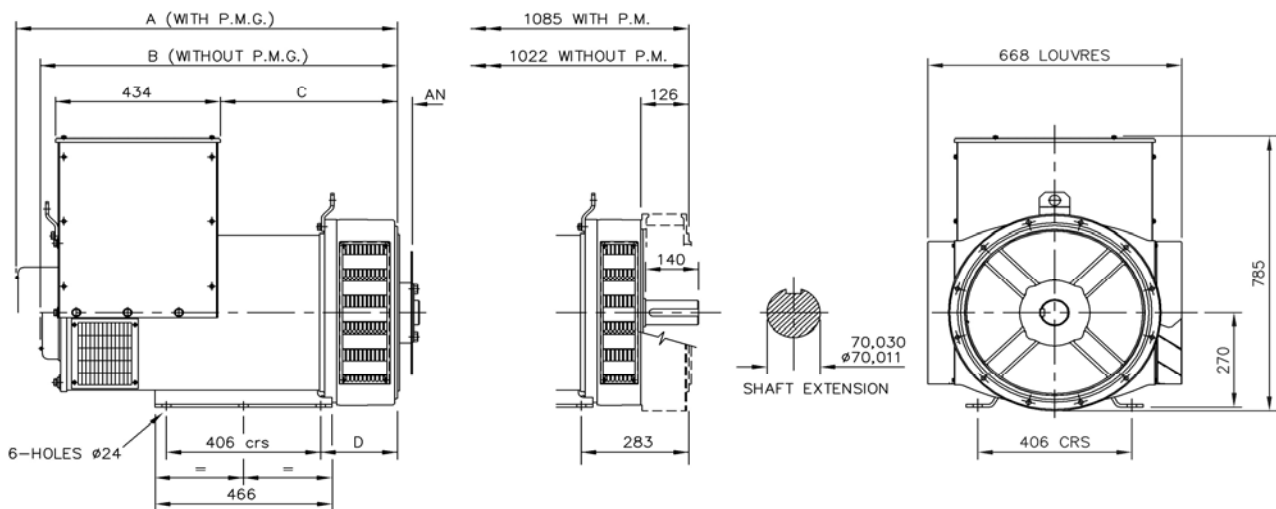
60Hz

RATINGS

Class - Temp Rise	Cont. F - 105/40°C	Cont. H - 125/40°C	Standby - 150/40°C	Standby - 163/27°C
Series Star (V)	600	600	600	600
Parallel Star (V)	300	300	300	300
Series Delta (V)	346	346	346	346
kVA	235.0	255.0	275.0	280.0
kW	188.0	204.0	220.0	224.0
Efficiency (%)	93.7	93.6	93.4	93.3
kW Input	200.6	218.0	235.6	240.0

APPROXIMATE

DIMENSIONS



SINGLE BEARING MACHINES ONLY						
ADAPTOR	A	B	C	D	COUPLING DISCS	AN
SAE 1	1018,3	955,3	479,3	216,3	SAE 10	53,98
SAE 2	1004	941	465	202	SAE 11,5	39,68
SAE 3	1004	941	465	202	SAE 14	25,40

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	PART NO.
DSE6110 MKIII & DSE6120 MKIII Installation Instructions	053-240
DSE6110 MKIII & DSE6120 MKIII Operator Manual	057-289
DSE6110 MKIII & DSE6120 MKIII Configuration Suite PC Manual	057-290

DEEP SEA ELECTRONICS

Highfield House, Hunmanby Industrial Estate, Hunmanby YO14 0PH
TELEPHONE +44 (0) 1723 890099 **FACSIMILE** +44 (0) 1723 893303
EMAIL sales@deepseapl.com **WEBSITE** www.deepseapl.com

DEEP SEA ELECTRONICS INC USA

3230 Williams Avenue, Rockford, IL 61101-2668 USA
TELEPHONE +1 (815) 316 8706 **FACSIMILE** +1 (815) 316 8708
EMAIL sales@deepseausa.com **WEBSITE** www.deepseausa.com

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

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 optional sealing gasket.

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

