

Technical Specification for Cummins Marine Type Generator Set

Rated Power 450KW/563KVA CCFJ450Y-WTP

MARINE DIESEL GENERATOR DATA:

Model	: CCFJ450Y-WTP
Rated power	: 450KW/563KVA
Standby power	: 484KW/618.75KVA
Rated voltage	: 495/254V (Can be adjusted)
Rated frequency	: 60HZ
Dimension	: 3010x1220x1750 MM
Weight	: 4000KG

ENGINE DATA:

Brand	: CUMMINS
Model	: K19-DM
Rated power	: 507KW/633.75KVA
Standby power	: 563KW/703.75KVA
Rated speed	: 1800RPM
Bore*Stroke	: 159*159MM
Displacement	: 19L
Type	: In-line,6 cylinders,4 stroke
Aspiration	: Turbocharger After-cooled
Cooling system	: Sea water heat exchange cooled
Fuel system	: PT Pump
Speed governor	: Electric
Starter	: DC24V electric

ALTERNATOR DATA:

Brand	: STAMFORD	: MARATHON
Model	: HCM5E IP44	: MX-H-400-4
Rated power	: 452KW/565 KVA	: 468KW/585 KVA
Rated speed	: 1800RPM	
Rated voltage	: 440/254V (Can be adjusted)	
Rated frequency	: 60HZ	
Type	: Brushless,self-excited,AVR	
Protection class	: IP23	
Insulation	: H	
Phase&wire	: 3P3W	
Power factor	: 0.8(lagging)	

CONTROL SYSTEM DATA:

Cummins Original Gauges and Switches of KCM-IIG

A. Instrument gauge

1. Tachometer 0r/min~3000r/min ± 2 (digital indicator) 50r/bar (Light bar)
2. Hour gauge 0h~9999h 1h
3. Water temperature gauge 60°C~120°C 2°C/bar
4. Oil temperature gauge 60°C~150°C 3°C/bar
5. Oil pressure gauge 0MPa~0.8MPa 0.02MPa/bar ($P < 0.4\text{MPa}$) ; 0.04MPa/bar ($P > 0.4\text{MPa}$)
6. Battery voltage gauge 20V~32V 0.4V/bar



NOTE:

All gauges accuracy is better than 2.5%F • S. Power source: 24V DC $\pm 4\text{V}$

B. Control switch

1. Power switch: control power ON/OFF and stop engine normally.
2. 'M. power' / 'A. power' switch—select main or auxiliary power Source for panel.
3. Remote ST- 0 - Start switch—select to crank engine on machine or remote.
4. Protect ON/protect OFF switch—select “protect ON” for normal running or “protect OFF” for running in an emergency.
5. Run/IDLE switch—select engine to run at high speed or idle.

C.Warning lamps equipment

A. Prime warning by gauge

1. Water temperature high (WTH—Yellow lamp) $T > 98^\circ\text{C} \pm 2^\circ\text{C}$
2. Oil pressure low (OPL—Yellow lamp) $P < 0.12\text{MPa} \pm 0.02\text{MPa}$
3. Oil temperature high $T > 115^\circ\text{C} \pm 3^\circ\text{C}$
4. Battery voltage high or low (B • V—2 Colors Lamp) $V < 22\text{V}$ -Yellow lamp $V > 30\text{V}$ —Red Lamp
5. Running indicator (RUN—Yellow lamp) when $n > 680\text{r/min}$
6. Stop indicator (STOP—Red Lamp) when push down the emergency stop button.
7. Auxiliary power (AP—Red Lamp) when auxiliary power is used.
8. Three auxiliary alarm indicators (Supply warning item can be selected by customer, and input warning single by customer.)

B. Stop warning

1. Over speed (SPH—Red Lamp)(controlled by tachometer to monitor) $N > 1725\text{r/min}$ 50Hz $N > 2070\text{r/min}$ 60Hz
2. Water temperature high (WTH—Red Lamp)(controlled by temperature alarm switch monitor) $T > 106^\circ\text{C} \pm 2^\circ\text{C}$
3. Oil pressure low (OPL—Red Lamp)(controlled by pressure alarm switch monitor) $P < 0.1\text{MPa} \pm 0.02\text{MPa}$
4. Electronic fuel control governor

This module used in panel to control engine speed. Adjust “RUN” to adjust the rated speed according to G-set frequency, but it is usually not in need. If combine G-set or inspect over speed function and so on, and need to adjust this module, the following should be noted:

1. A 5.1K 1W potentiometer should be connected to No.7, No.8 and No.9 terminal to realize speed adjustment by hand or automatic.
2. The quality of potentiometer must be good, especially its contact.
3. When applying all other type combining module to automatic speed adjustment, it should meet the requirement of Cummins system. For example, when applying GAC module, another module should be added.
4. All other adjust points should be adjust carefully, especially the gain and droop adjustment. Gain usually be set to 50%, and droop usually be set to 1~2 scale.
5. 'IDLE' and 'RUN' adjusting potentiometer is without limit, so when being adjusted, should take care, or can't reset.

5. RELAY ALARM OUTPUT INTERFACE AND CONTROL CONNECT BOARD

This board supplies alarm output terminals for customer

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1. 8 terminals used to connect the KCM-IIIG remote panel.
2. 2 terminals used to connect PC computer when want to transmit the measuring data from KCM-IIIG to it (should use a RS485/232 transducer and a programmer according to the agreement of KCM-IIIG).
3. 2 terminals to connect auxiliary power for panel.
4. 4 terminals to connect the emergency “stop button” and indicator from outside.
5. 26 terminals without power are the alarm signals to connect out. (The alarm relay’ s contacts capability are AC 250V 5A and DC 32V 2A, and they can be used to connect sounder and indicator.)

SCOPE OF SUPPLY:

Marine diesel generator	1 Set
Control system	1 Set
Muffler	1 Pcs
Maintenance-free battery DC24V and connection wires	1 Set
Flange	1 Pcs
Bellows	1 Pcs
Standard maintenance tool	1 Set

OPTION:

*Silent canopy	*Wet type exhaust muffler
*Water heater	*Oil heater
*Oil-water separator	*Droop Kit for synchronizing work
*PMG excitation	*Remote Control panel
*Anti Condensation Heater	*Paralleling System

DOCUMENTATION:

Engine documents including CCS certificate	1 Set
Alternator documents including CCS certificate	1 Set
Control system documents	1 Set
Generator set operation&manual	1 Pcs
Generator set testing report	1 Pcs
Electric drawing	1 Set
Generator set CCS certificate	1 Pcs

FACTORY ACCEPTANCE TEST (FAT):

The safety function test for the generator set will be carried out in Tontek Power Limited factory in China. All consumables items during the test will be provided. We inspect marine generator set with CCS rules.

WARRANTY:

18 months starting from the date on which the goods arrive at the destination port or 12 months after the vessel delivery to the shipowner whichever comes first.

Contact Us

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TONTEK POWER LIMITED reserves the right to make changes in model, technical specification, color, configuration and accessories without prior notice.

Please contact the salesman before ordering.

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