



## Technical Specification for Cummins Marine Type Generator Set

### Rated Power 990KW/1238KVA CCFJ9900Y-WTP

#### **MARINE DIESEL GENERATOR DATA:**

|                 |                          |
|-----------------|--------------------------|
| Model           | : CCFJ990Y-WTP           |
| Rated power     | : 990KW/1238KVA          |
| Standby power   | : 1089KW/1361.25KVA      |
| Rated voltage   | : 400V (Can be adjusted) |
| Rated frequency | : 50HZ                   |
| Dimension       | : 5500x2050x2425 MM      |
| Weight          | : 8000KG                 |

#### **ENGINE DATA:**

|                |                                  |
|----------------|----------------------------------|
| Brand          | : CUMMINS                        |
| Model          | : K50-DM                         |
| Rated power    | : 1097KW/1206.7KVA               |
| Standby power  | : 1206.7KW/1327.37KVA            |
| Rated speed    | : 1500RPM                        |
| Bore*Stroke    | : 159*159MM                      |
| Displacement   | : 50L                            |
| Type           | : V-Type, 16 cylinders, 4 stroke |
| Aspiration     | : Turbocharger/Aftercooled       |
| Cooling system | : Sea water heat exchange cooled |
| Fuel system    | : PT Pump                        |
| Speed governor | : Electric                       |
| Starter        | : DC24V electric                 |

#### **ALTERNATOR DATA:**

|                  |                                |                  |
|------------------|--------------------------------|------------------|
| Brand            | : STAMFORD                     | : MARATHON       |
| Model            | : PM 734D                      | : MX-H-1000-4    |
| Rated power      | : 1004KW/1255 KVA              | : 1000KW/1250KVA |
| Rated speed      | : 1500RPM                      |                  |
| Rated voltage    | : 400V (Can be adjusted)       |                  |
| Rated frequency  | : 50HZ                         |                  |
| 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  $\pm 2$ (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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Please contact the salesman before ordering.

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