

# DSP-10

## Genset Multi-Function Display Module



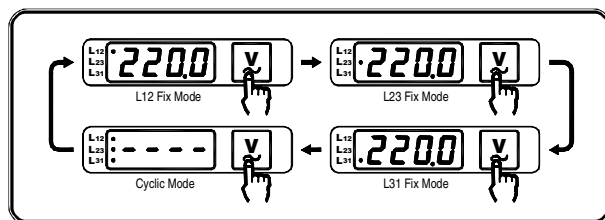
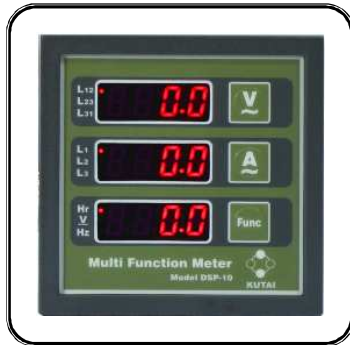
Model DSP-10 is a small integrated digital display showing Voltage, Amp, Hz, and Hour Meter. It can be used individually or jointly with a GCU-10 (Automatic Engine Control Module) and a GCU-11R (Relay Module); jointly they reduce cost, and installation time, simplifying equipment set up.

This attractive little display is multitasking and its uses are only limited by your imagination. It is equipped with DIN terminal plugs that improve serviceability. The DSP-10 display can be used in any number of applications where accurate reading of Voltage, Amps and Hertz are needed

### Front Panel Layout and Operation

DSP-10 Display panel has three four Digits bright LED's that shows (RMS) Voltage - Amps - Hertz - Hour Meter and Battery Voltage. The operator can change the display to be fixed or cycling from phase to phase by simply using the button next to each display.

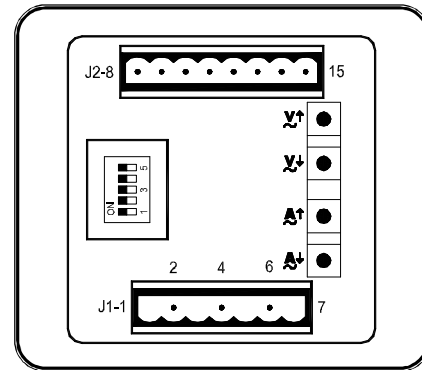
To change the display mode, press the button next to it. See diagram.



### Running Hour (Hr) Reset

To reset the Engine Running Hour to zero, press (Func) button on the front panel until the (Hr) mode is displayed, and then press (V) + (A) button together for 5 seconds erasing the EEPROM and the hour meter back to zero.

### Rear Panel Layout



Recommended Cut-Out :  $66 \times 66 \pm 0.5 \text{ mm}$

### Voltage and Current Adjustment (If Need)

In the back of the DSP-10 module we have 4 push buttons for voltage **【V↑ & V↓】** and current **【A↑ & A↓】** adjustment. The Module comes factory tested and calibrated and normally no changes are necessary. But if any modifications are required, follow the procedures below.

#### Voltage Adjustment

**(Please use and accurate RMS Voltmeter as your reference)**

1. Start the generator. Set your reference AC voltage using your Voltmeter.
2. Select the desire phase you need to re-calibrate using the front display **【V】** button on the display and hold.
3. Repeatedly press **【V↑】** or **【V↓】** on back of module to adjust the displayed voltage equivalent to your voltmeter.
4. Release the front **【V】** button. The LED display will flash continuously for 5 seconds.
5. After for 5 seconds then the system will automatically record the new setting and return to normal.
6. If the display shows **【FAIL】** the setting is invalid, and step 3 must be repeated.

#### Current Adjustment Procedure

**(Please use Standard RMS Current meter for readings)**

1. Set the dip switches to the correct **【CT】** in use.
2. Start the generator. And wait for the generator to stabilize.
3. Slowly add load to the genset until maximum rated load current is reached for the CT in use.
4. Select desire phase current to calibrate using the front **【A】** button.
5. Repeatedly press **【A↑】** or **【A↓】** on the back panel to adjusts the displayed current to its equivalent on the current meter.
6. Release the front **【A】** button. The LED on the display will flash continuously for 5 seconds.
7. After 5 seconds the system will automatically record the new setting and return to normal.
8. If the panel display shows **【FAIL】** then the previous setting is invalid, please return to step 5.

## Setting the CT value

Set the 5 pin dip switch for the CT (Current Transformer) and the system phase you are using.

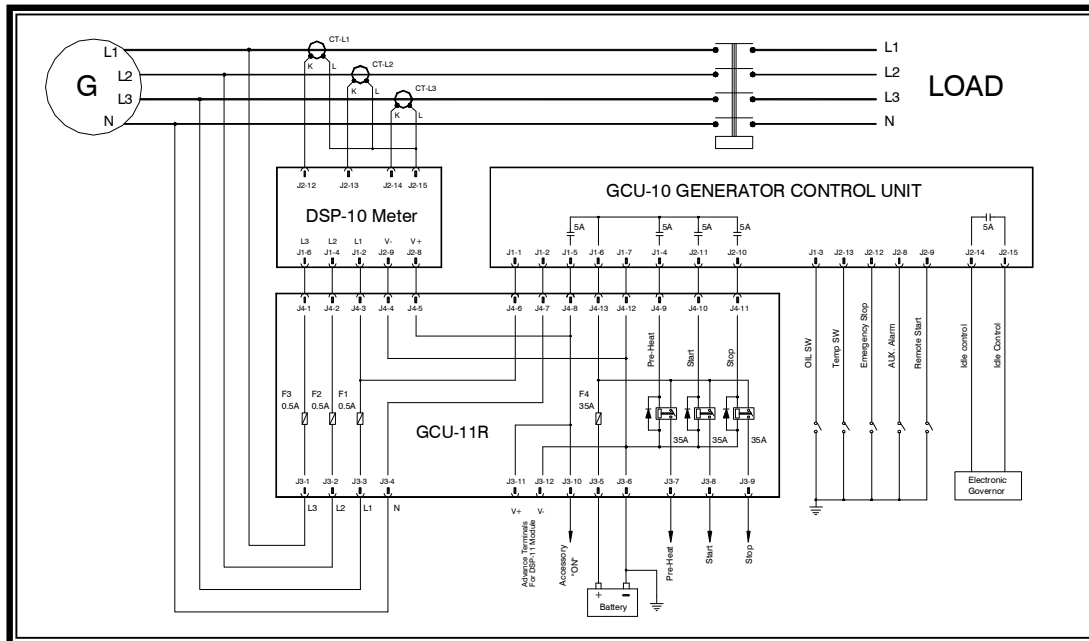
## Dip Switch Setting Reference Diagram

Current Transformer (CT) Programmer Table				=ON				=OFF			
1	2	3	4	1	2	3	4	1	2	3	4
50/5A	250/5A	600/5A	1500/5A								
100/5A	300/5A	800/5A	1600/5A								
150/5A	400/5A	1000/5A	2000/5A								
200/5A	500/5A	1200/5A	3000/5A								
System Phase select				5				5			
				= 3 Phase				= 1 Phase			

## Specification

ITEM	DESCRIPTION
DC Supply	9.0 ~ 36 V
Alternator Input Range	10 ~ 500VAC(Ph-Ph)
Alternator Input Frequency	50/60 Hz
CT Burden	Above 2.5VA
CT Secondary	5A
Max. CT Rated	3000A/5A
Operating Temperature	-20 °C to +70 °C
Relative Humidity	90% or Below
Power Consumption	Below 2VA
Weight	200 gram

## Three Phase System Standard Wiring Diagram



## Single Phase System Standard Wiring Diagram

