SURDHI ®

SDV-VAF96/1VAF96
Operating Instructions

MECHANICAL INSTALLATION
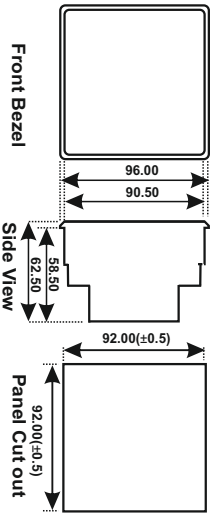
Note : All dimensions are in mm.

Front Bezel — 96.00 / 90.50

Side View — 58.50 / 62.50 / 92.00(±0.5)

Panel Cut out — 92.00(±0.5)

SPECIFICATION

Display : 3 rows of 3 digits Seven segment Red color display of 0.56" digit height.

Wiring Input : 3Ø-4 wire, 1Ø-2 wire and 3Ø-3 wire System 3Ø-3 wire to be mentioned while ordering .

Rated Input Voltage (True RMS) : 11 to 325V AC(L-N) and 19V to 563 VAC(L-L).

Rated Input Current (True RMS). : Nominal 5A AC (Min. : 100mA - Max 6A AC)

Frequency Range : 10.0-88.0 Hz.

C.T Ratio : 5A - 25,000A AC i.e, 25.0KA by 5 A CT & 1A - 5000A AC i.e, 5.00KA by 1 A CT (Programmable for any value, 5000 is max. multiplier).

Example : a) For Current range upto 200A, select **Ctr** = 200/5=**40** for /5A C.T and 200/1=**200** for /1A C.T.
b) For Current range upto 5000A or 5.00KA select **Ctr** = 5000/5=**1000** for /5A C.T and 5000/1=**5000** for /1A C.T.
(Programmable for any value, 5000 is max. multiplier)

P.T Ratio :

Example : a) 11.0KV/110V, Select **Ptr** = 100.
b) 33.0KV/110V, Select **Ptr** = 300.
c) 220KV/110V, Select **Ptr** = 2000.
d) 440KV/110V, Select **Ptr** = 4000.

ACCURACY

|		
RPM	:	80 - 10560 (for pole selection between 1 - 15) and for Freq. Range 10 Hz - 88Hz.
Run Hour	:	0 - 99999.9Hr.
Burden	:	0.5VA @ 5A Per Phase.
Auxiliary Supply Range	:	230 VAC (±20%), 50Hz, 110 VAC (±20%), 60Hz. [Seperally mention at the time of Ordering]
Temperature Range	:	0 - 50 °C (Operating), -20 to 70 °C (Storage).
Humidity	:	Upto 85%. RH (non-condensing).
Mounting	:	Panel Mounting.
Voltage (VLN)	:	± 1.0%
Voltage (VLL)	:	± 1.0%
Average Voltage (VLN)	:	± 1.0%
Average Voltage (VLL)	:	± 1.0%
Current	:	± 1.0%
Average Current	:	± 1.0%
Frequency	:	± 0.1Hz
Run Hour	:	± 1%
RPM	:	± 0.5%

RESOLUTION

Voltage / Current	:	Depends on P.T and C.T Ratio settings.
Frequency	:	0.1 Hz.
RPM	:	1 RPM.
Run Hour	:	0.1 Hr (6 minutes).

WIRING DIAGRAM

1) 3ø 4 Wire

2) 1ø 2 Wire
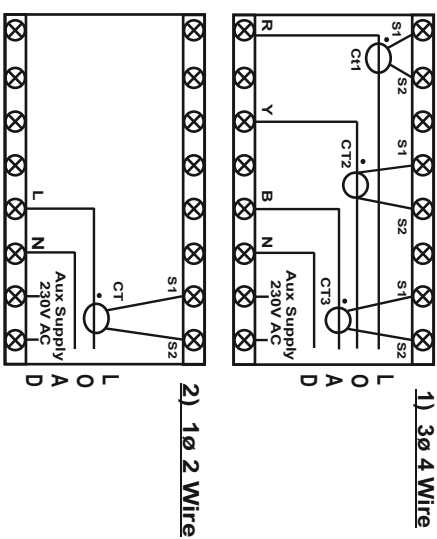
WORKING

Step 1 : Make the connection as per the Wiring Diagram. Then **Switch - ON** the device.

Step 2 : It will start displaying all the digits from 0-9, then it will work with *default settings* and start displaying **1st page** (Phase to phase voltage), **2nd page** (Phase to Neutral Voltages) , **3rd page** (Line Current), **4th page** (Avg Phase to phase Vol, Vol, Line Current, Freq.), **5th page** (Avg Phase to neutral Vol, Line Current, Freq.), **6th page** (RPM), **7th page** (Engine Run Hour) with 6 sec. interval between each page.

Default setting are : a) CTR Ratio : 1
b) PTR Ratio : 1
c) No. of Poles : 4
d) Scroll : Enable (Auto).

Step 3 : Select PT Ratio, **Ptr** between 0000-5000 with the help of **UP** and **DOWN** Keys as shown in **Fig. (1).**

Press set key again to go to next parameter setting, CT Ratio i.e Ctr.

Step 4 : Select **Ctr** between 0000-5000 as shown in **Fig. (2)** with the help of **UP** and **DOWN** Keys, **example :** .

C.T Ratio: 5A - 25,000A AC by 5 A CT & 1A - 5000A AC by 1A CT (Programmable for any value, 5000 is max. multiplier).

Example : a) For Current range upto 200A, select **Ctr** = 200/5=**40** for /5A C.T and 200/1=**200** for /1A C.T.
b) For Current range upto 5000A or 5.00KA select **Ctr** = 5000/5=**1000** for /5A C.T and 5000/1=**5000** for /1A C.T.

Step 5 : Select no. of **Poles , PoL : 1 - 15**, to calculate **RPM** as shown in **Fig.(3)**. Now press **SET** key again to go to next selection.

Customized Settings : For customized setting go to set mode by pressing **Set key**.

Step 6 : **SCROLL ENABLE (AUTO) / SCROLL DISABLE (MANUAL) MODE SELECTION :** Press **UP** or **DOWN KEY** to toggle between ENABLE / DISABLE.
As shown in **Fig.(4)**.
Now press SET key again to go to next selection.

Step 7 : **Run Engine Hour Enable / Disable :** As shown in **Fig. (5)**. Now press SET key again to go to next selection.

Step 8 : **Select 3 Phase or 1 (Single Phase) :** As shown in **Fig. (6).** Now press SET key again to go to next selection.

Step 9 : **Now store/Enter these values with Yes or no :** As shown in **Fig. (7).**
If yes , then press SET key to come out of the SET mode .
Page 7 and Vice -Versa at an interval of 6 seconds between each page and if it is in Scroll Disable Mode(**Manual**) then it will keep on displaying single page and if u want to go to other page then keep on pressing any of the UP/Down key till you reach to the desired page.

Note : You can also toggle between Scroll Enable mode(**Auto**) and Scroll Disable mode (**Manual**) while in **Running mode** by pressing **UP and DOWN Keys** simultaneously.
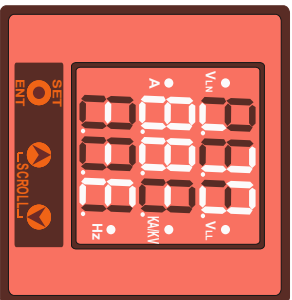**If no** then it will Enter back to the SET Mode.
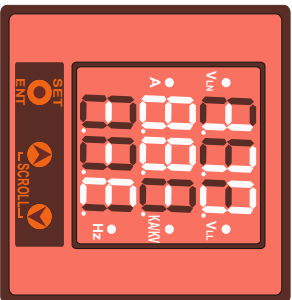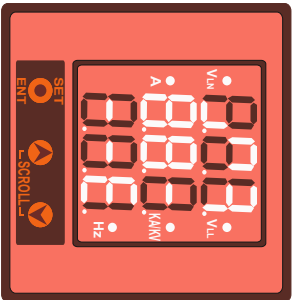
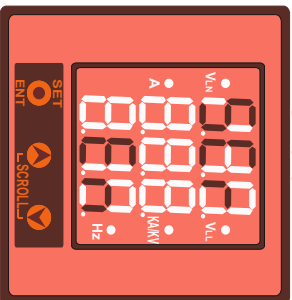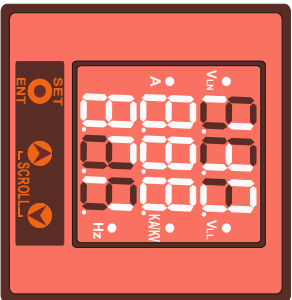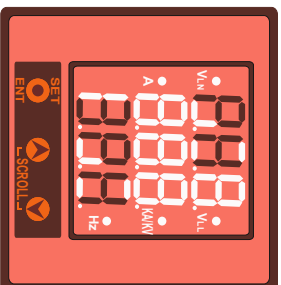...........Next Page

SET /ENTER Mode Description

Fig. (1)

Fig. (2)

Fig. (3)

Fig. (4)

Fig. (5)
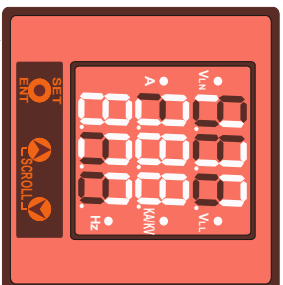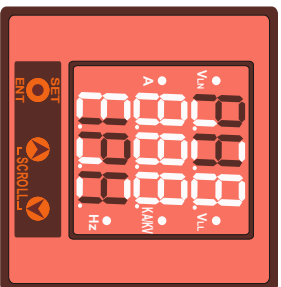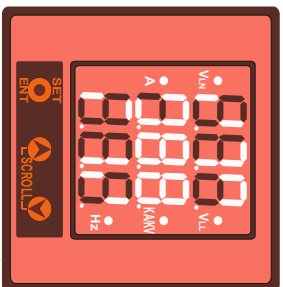
Page wise Description

Fig. (6)

Fig. (7)
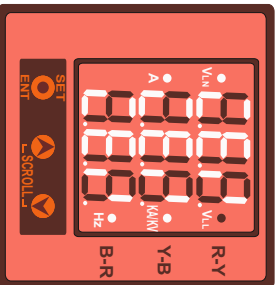
Page 1 (Vol. Line-Line)
R-Y   Y-B   B-R
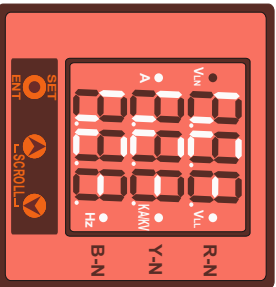
Page 2 (Vol. Line-Neutral)
R-N   Y-N   B-N
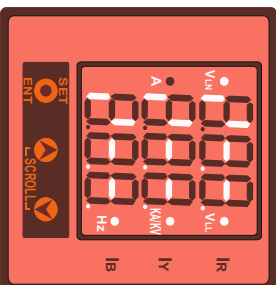
Page 3 (Line Current)
Ir   Iy   Ib
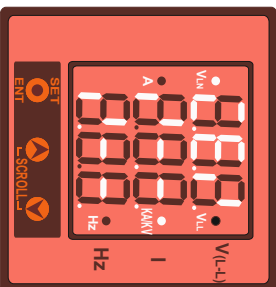
Page 4 (Avg. Line-Line)
V(L-L)   I   Hz
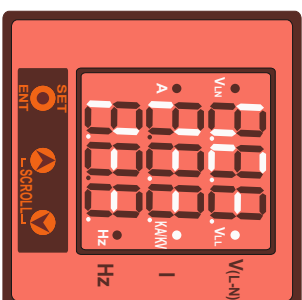
Page 5 (Avg. Line-Neutral)
V(L-N)   I   Hz
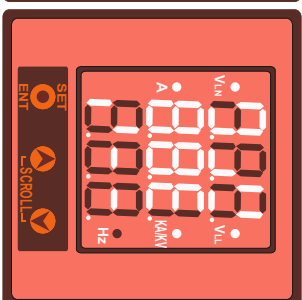
Page 6 (RPM)
V(L-N)   I   Hz
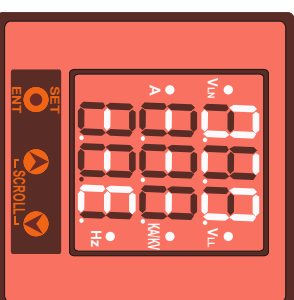
Page 7 (Run Hour)
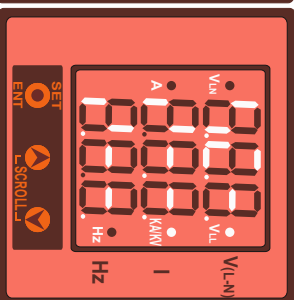
Page 8 (For 1Ø 2Wire System)
V(L-N)   I   Hz

Note : For 3Ø 4Wire System : Page **1 to 7** get displayed in Scroll
Enable(Auto) or Scroll Disable (Manual) Mode.

For 1Ø 2Wire System : Page **6 to 8** get displayed in Scroll
Enable(Auto) or Scroll Disable (Manual) Mode.

Further, for any queries contact :

Helpline No : 09873136248
Email : ce.sanjeev@yahoo.in