

# **User Manual for “Data-View”**

**For**

**SPF-56**

**Automatic Power Factor Controller (APFC) Units.**

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**By**



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## 1. Introduction

The “Data-View” Application Software is a Human-Machine Interface (HMI) for Automatic Power Factor Controller.

It is for not only data downloading from the SPF-56, but also for presenting the captured information in a User-Friendly manner.

Thus, the logged records in the APFC Unit are first downloaded by “Data-View” into PC memory, and then analyzed and presented to the User in various ways.

“Data-View” is capable of generating the reports in visual forms as well as in print form for hard-copy storage.

The Non-Volatile Memory of the SPF-56 Unit is capable of logging the Data for a maximum duration of 20 days for 10 Min, 31 days for 15 Min, 62 days for 30 Min, 124 days for 60 Min log time.

Further facilities provided by the “Data-View” to create Excel file of Interval Records, Event Records, Bank Status and Parameter Settings.

“Data-View” also generates Data Report of Interval Records, Event Records, Maintenance Reports, Performance Report and Abbreviations used for faults.

## 2.Login Details

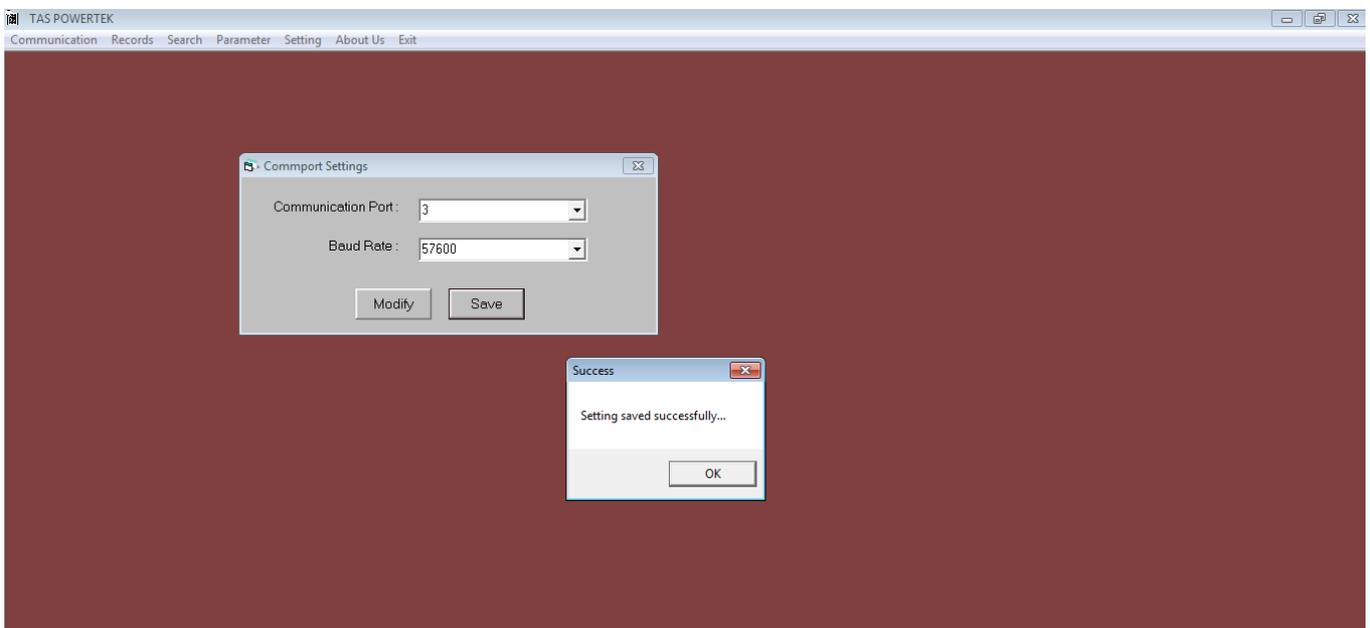
- 1) This screen appears after splash screen.
- 2) Enter provided user name and password and click on “Login” button.
- 3) If entered username and password is correct, it will show new screen for next operation.
- 4) One can change Login details from setting option.



Picture: Login form

### 3.Data Downloading

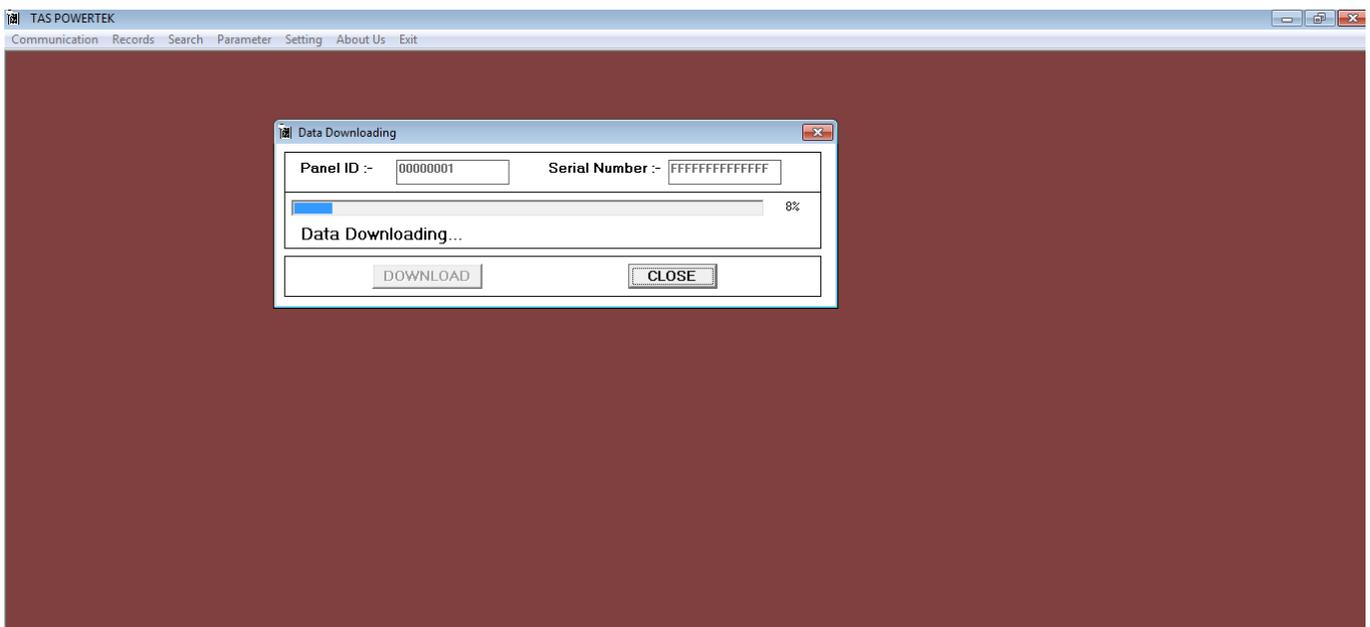
- 1) Set your computer's "date format" to "dd-mm-yy", as explained before.
- 2) Com-Port and Baud rate are default set in the Comport Setting Menu.
- 3) Click on "Modify" button to modify comport and baud rate setting if default setting of baud rate and comport is wrong.
- 4) Check supporting com-port of the PC and select same com-port from options, as explained before.
- 5) Select baud rate matching with the APFC Controller's baud rate.
- 6) Click on "Save" button to save com-port and baud rate settings.
- 7) Once saves this setting, need not to do it again. One needs to changes setting only when computer system is changed.



Picture: Save Setting of Com Port and Baud Rate

## Data View User Manual

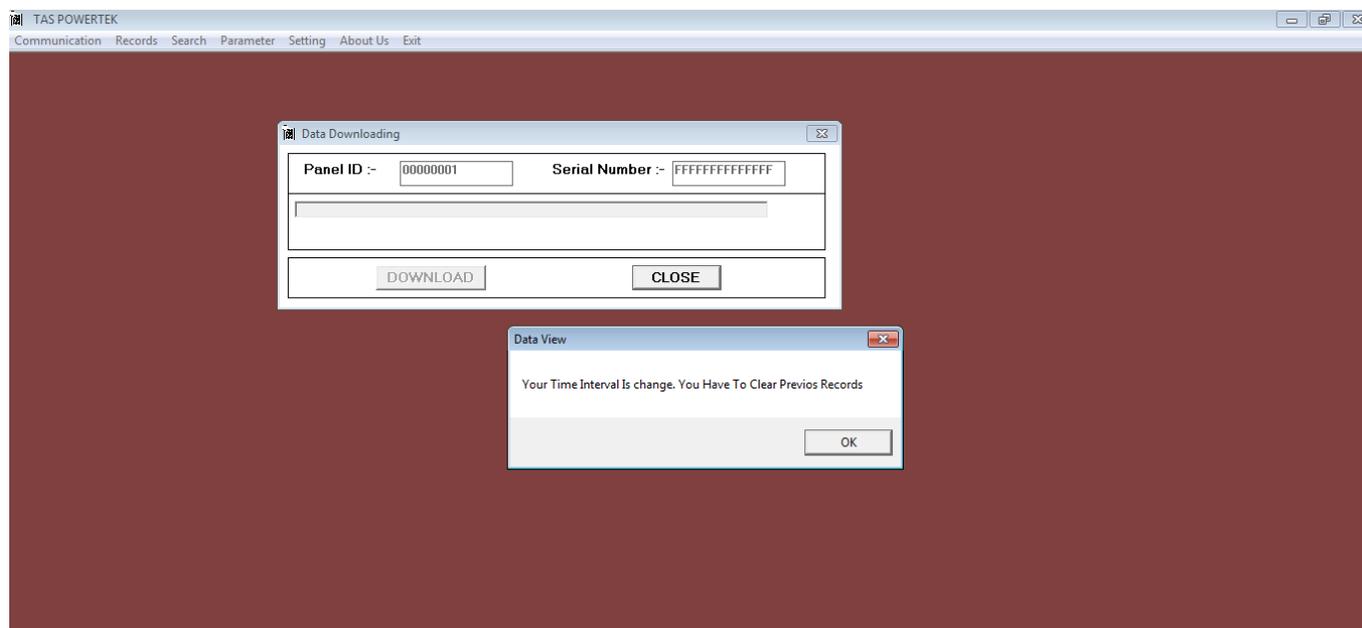
- 8) If APFC's baud rate and PC's baud rate does not match it shows communication failure error.
- 9) If user selects wrong com port then software shows you communication failure error.
- 10) After save Settings, Progress bar shows the downloading status.
- 11) Panel ID and APFC Unit Serial Number fields on the "Downloading form" denote the Panel ID and Serial Number of APFC Unit, whose data is currently being downloaded.
- 12) During data-downloading process, we cannot change com-port and baud rate setting.
- 13) Do not disconnect the RS-232 Data Communication Cable during downloading process.
- 14) After data-download from APFC Unit, "Data-View" will take some time to create database.



Picture: Data Downloading

## Data View User Manual

- 15) If you want to download data again from same controller (Same Panel Id) having different Log Time, it will ask to Clear Previous Records. Because one database cannot save the data with different Log Time. If you want to continue with new LOG Time, clear the previous database first.



Picture: Clear Records For Same Panel Id For Different Log Time

**a. Save Zone Detail After Downloading**

- If you are fetching data for first time, software will show Zone Detail form.
- SPF-56/16 Unit Serial Number and Panel ID are fetched by software. User need to fill panel details.
- It is necessary for user to fill all the fields and save that record. It helps to create database for that panel. Click on “SAVE” button to save record.
- Here, user can only save record for new panel. Remaining buttons are disabled during this operation.

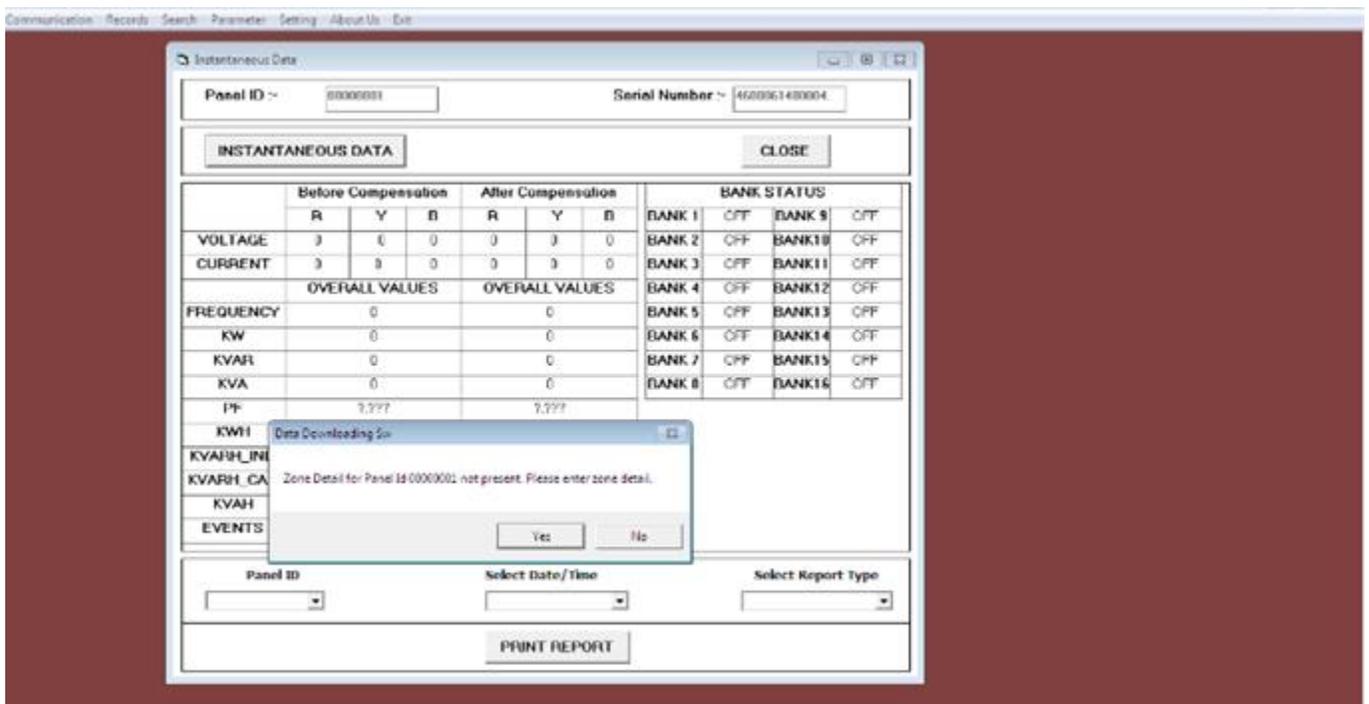


Picture: Save Zone Detail after Downloading

## 4. Instantaneous Data

- 1) Click on “Instantaneous Data” sub-menu in communication menu to get “Instantaneous Data”
- 2) Click on “INSTANTANEOUS DATA” button to get instant record.
- 3) Once user click on this button, the form will show the current reading of all the parameter is also shows you Panel Id and Serial Number of that Panel.
- 4) If “Zone Detail” of panel is not present it will ask user to enter after showing you instant data.
- 5) One can get report of Instant data from the same form. User need to select Panel Id and its related Date, Time.
- 6) There are two options are present for report
  - a. Data Report
  - b. Excel report

User can choose any option as per their need.



Picture: Instantaneous Data

## 5. Records

There are 2 options in “Records” menu:

### a. Interval Log Records

### b. View Fault Records

#### a. Interval Log records

- To view “Interval Records” of any APFC, Click “Records” Tab then click “Interval Records”.
- In Record Viewer Window, select Panel ID of that APFC Unit.
- Select “From date” and “To date” and click on “INTERVAL RECORDS” to view data.
- Date Selection is depends on Log time, i.e log time is 10 Min.,15 Min.,30 Min.,60 Min., then date selection must between 15,22,45,90 days respectively.
- If data is not present in database for selected dates, it gives message “No Records Present”.
- If data is present, it will display available data between “From date” and “To date”.
- Click on particular grid row to view all records of selected row.
- It also shows Capacitor Banks Status of selected row.
- “SHOW REPORT” button shows report of Interval Report except “STEP KVAR BANK” and Fault Abbreviation.
- “CREATE EXCEL FILE” button create excel file of available data for the selected Panel ID, for the Interval, “From Date and To Date”.
- Excel File shows all parameters, except “STEP KVAR BANK” value.

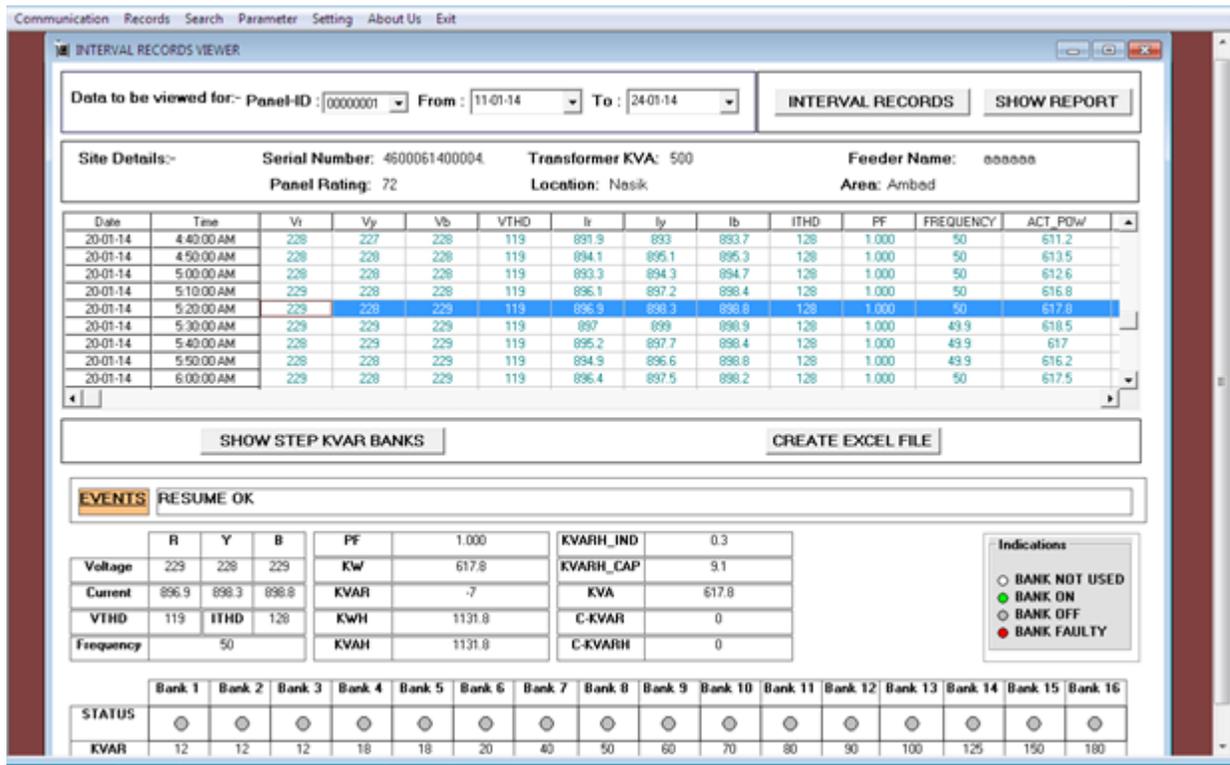
### Interval Log Records:

Picture: Interval Log Records

#### ➤ STEP KVAR BANK

- This grid or any other report does not show STEP KVAR BANK parameter. If one want to view STEP KVAR parameter, click on button “SHOW STEP KVAR BANKS”, and enter password. It will shows parameter for STEP KVAR BANKS.
- If one wants STEP KVAR BANK parameter in excel file, click on button “SHOW STEP KVAR BANKS” and enter password and then, click on “CREATE EXCEL FILE” button.
- For Maintenance report, enter password for STEP KVAR and click on “SHOW REPORT” button.

### Maintenance records for Interval:



The screenshot shows the 'INTERVAL RECORDS VIEWER' window. At the top, there are menu options: Communication, Records, Search, Parameter, Setting, About Us, Exit. Below the menu is a header bar with the title 'INTERVAL RECORDS VIEWER'. The main area contains a search filter for 'Data to be viewed for:- Panel-ID: 00000001 From: 11-01-14 To: 24-01-14'. There are buttons for 'INTERVAL RECORDS' and 'SHOW REPORT'. Below this is a 'Site Details' section with fields for Serial Number (4600061400004), Transformer KVA (500), Feeder Name (000000), Panel Rating (72), Location (Nasik), and Area (Ambed). The central part of the window is a table with columns: Date, Time, Vi, Vy, Vb, VTHD, Ir, Iy, Ib, ITHD, PF, FREQUENCY, and ACT\_PDW. Below the table are buttons for 'SHOW STEP KVAR BANKS' and 'CREATE EXCEL FILE'. At the bottom, there is an 'EVENTS' section with a 'RESUME OK' button, a table of parameters (R, Y, B, PF, KW, KVARH\_IND, KVARH\_CAP, KVA, C-KVAR, C-KVARH), and an 'Indications' legend (BANK NOT USED, BANK ON, BANK OFF, BANK FAULTY). At the very bottom, there is a 'STATUS' table for 16 banks, each with a status indicator and a numerical value.

Picture: Interval Log Records with Step KVAR Parameter.

#### ➤ Show Report:

- 1) “Data-View” software is tested with HP Laser Jet 1010 with 4si driver for report printing.
- 2) If operating system of working computer is Windows XP (Service Pack 3) or Windows 7 or Windows 8 user can make report visible by using “Microsoft XPS document writer” and then can take print out using working computer.
- 3) In “Interval Records Form” selects Panel Id, From Date, and To Date to view records. Click on ”Show Report” button and select “Microsoft XPS document writer” and click on print button.
- 4) Once report is visible then click print button in the form select working printer and click on print button to take print out.

**b. View Fault Record**

- To view “View Fault Record”, of any APFC Unit, select Panel ID of that APFC Unit.
- Select “From Date” and “To Date” and click on “SHOW FAULT”, to view data.
- Date Selection is depends on Log time ,i.e log time is 10 Min.,15 Min.,30 Min.,60 Min., then date selection must between 15,22,45,90 days respectively.
- If data is not present in the database for selected dates, it gives message “Records not present”.
- If data is present, it will display data between “From Date” and “To Date”.
- Click on grid row to view faults of selected row.
- “CREATE EXCEL FILE” button create excel file for selected Panel ID, for the Interval of “From Date and To Date”.

The screenshot shows the 'EVENT FAULT VIEWER' window. At the top, there are menu options: Communication, Records, Search, Parameter, Setting, About Us, Exit. Below the title bar, there are input fields for 'Data to be viewed for:- Panel-ID' (00000001), 'From' (11-01-14), and 'To' (17-02-14). There are 'SHOW FAULT' and 'SHOW REPORT' buttons. Below this, there is a summary section with fields for Description, Serial Number (4600061400004), Traffic KVA (500 KVA), Feeder Name (aaaaaa), Panel Rating (72 KVAR), Location (Nasik), and Area (Ambad). The main part of the window is a table with columns: Date, Time, Vt, Vy, Vb, Ir, Iy, Ib, PF, FREQUENCY, ACTIVE POWER, and REACTIVE POW. The table contains 10 rows of data. Below the table, there are 'SHOW STEP KVAR BANKS' and 'CREATE EXCEL FILE' buttons. A 'FAULTS' section contains the text 'Control Fault 1,Control Fault 2,Voltage Harmonics,'. At the bottom, there are several summary tables for Voltage, Current, Frequency, PF, KW, KVAR, KWH, KVAH, KVARH\_IND, KVARH\_CAP, and KVA. A 'STATUS' row at the very bottom shows indicators for Bank 1 through Bank 16, with a legend for 'Indications' including BANK NOT USED, BANK ON, BANK OFF, and BANK FAULTY.

Picture: Event Fault Records

## Data View User Manual

### ➤ STEP KVAR BANK

- This grid does not show STEP KVAR BANK parameter. If one wants to view step KVAR parameter click on button “SHOW STEP KVAR BANKS” and enter password and click on “OK” button, it will show parameter for STEP KVAR BANKS.
- If one wants STEP KVAR BANK in excel file click on “SHOW STEP KVAR BANKS” button and enter password and then click on “CREATE EXCEL FILE” button to create excel file.

### Maintenance records for Event Fault:

The screenshot displays the 'EVENT FAULT VIEWER' window. At the top, there are navigation menus: 'Communication', 'Records', 'Search', 'Parameter', 'Setting', 'About Us', and 'Exit'. Below the menu is a toolbar with 'SHOW FAULT' and 'SHOW REPORT' buttons. The main area shows event details for Panel-ID 00000001, From: 11-01-14, To: 01-07-14. Key parameters include: Description, Serial Number: 4600061400004, Traffic KVA: 500 KVA, Feeder Name: 000000, Panel Rating: 72 KVAR, Location: Nasik, and Area: Ambed.

Date	Time	V <sub>a</sub>	V <sub>y</sub>	V <sub>b</sub>	I <sub>r</sub>	I <sub>y</sub>	I <sub>b</sub>	PF	FREQUENCY	ACT POW	REACT POW	API
22-01-14	2:09:50 AM	199	198	199	779.9	782.2	783.2	0.999	49.9	467.6	-21.1	
22-01-14	8:09:58 AM	194	193	193	759.7	761.1	763.1	0.999	50	443.3	-21.3	
22-01-14	2:09:57 PM	219	219	218	856.4	858.1	858.9	1.000	49.9	564.1	-12.2	
22-01-14	8:09:57 PM	180	180	180	707.6	709.1	710.3	0.997	50	384	-27.2	
23-01-14	2:10:00 AM	187	186	186	733.2	733.7	732.6	0.998	50	411	-25	
23-01-14	8:10:00 AM	186	185	185	729.9	731.3	732.4	0.998	50	408.6	-25.3	
23-01-14	2:10:00 PM	202	202	202	791.8	794.3	794.3	0.999	49.9	482.4	-19.6	
23-01-14	8:10:00 PM	179	178	178	701.9	702.3	705.8	0.997	50	377.7	-26.9	
24-01-14	2:19:40 AM	221	221	221	867.6	867.7	869.1	1.000	50	477.1	-4.8	

Below the table are buttons for 'SHOW STEP KVAR BANKS' and 'CREATE EXCEL FILE'. The 'FAULTS' section lists: Control Fault 1, Control Fault 2, Voltage Harmonics.

	R	Y	B	KW	KVARH_IND
Voltage	202	202	202	482.4	0.3
Current	791.8	794.3	794.3	KVAR	KVARH_CAP
PF				1477	19.6
				KVAH	KVA
				1477	482.8
				C-KVAR	C-KVARH
				0	0

The 'Indications' section shows: BANK NOT USED (○), BANK ON (●), BANK OFF (○), and BANK FAULTY (●).

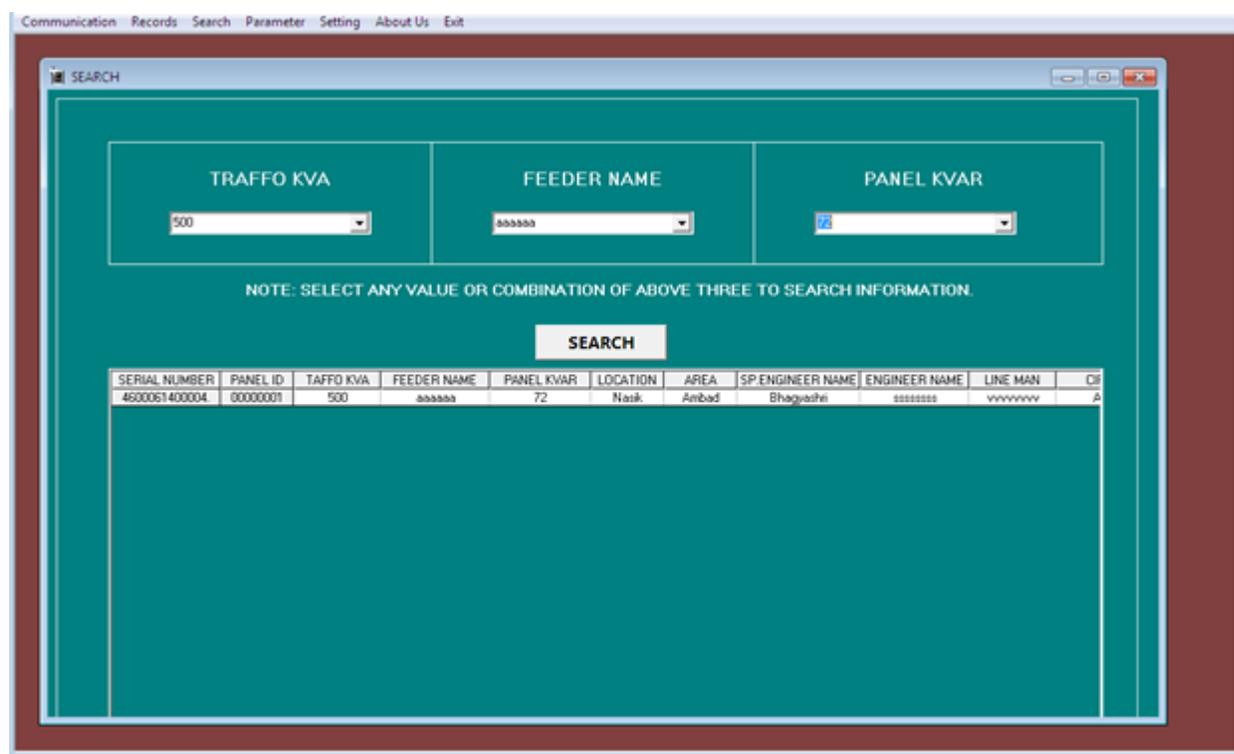
At the bottom, there is a 'STATUS' row for 16 banks (Bank 1 to Bank 16), each with a status indicator (○).

Picture: Event Fault Records with Step KVAR Parameter

## Data View User Manual

### 6. SEARCH

- 1) It gives information of panel whose data is downloaded in the database.
- 2) One can search panel by selecting its Traffo (Transformer) KVA, Panel KVAR, and Feeder Number.
- 3) One can select any of these parameter or combination of Parameters to search panel information.
- 4) By default none is selected.



SERIAL NUMBER	PANEL ID	TAFFO KVA	FEEDER NAME	PANEL KVAR	LOCATION	AREA	SP ENGINEER NAME	ENGINEER NAME	LINE MAN	Ch
4600061400004	00000001	500	aaaaaa	72	Nasik	Ambad	Bhagwathi	sssssss	vvvvvvv	A

Picture: SEARCH

## 7. Edit Parameter

- 1) Click On Parameter Tab. It shows Parameter read-write Window.
- 2) Click on “READ APFC VALUES” button to read the “Edit Parameter” of APFC.
- 3) Parameters are displayed in the form according to the menu structure of the APFC.
- 4) “DEFAULT” button is used to set default Parameters of APFC on form field.
- 5) “EDIT” button allows you to enable all the fields for user to make necessary changes in Parameter values.
- 6) “WRITE VALUES TO APFC” button is be used to write edited parameter into the APFC.



Picture: Edit Parameter

- 7) User can take print out of these Edit Parameters.
- 8) User need to select Panel Id and Date, Time of that Panel and then click on “SHOW REPORT” button to get print of “Edit Parameter”.

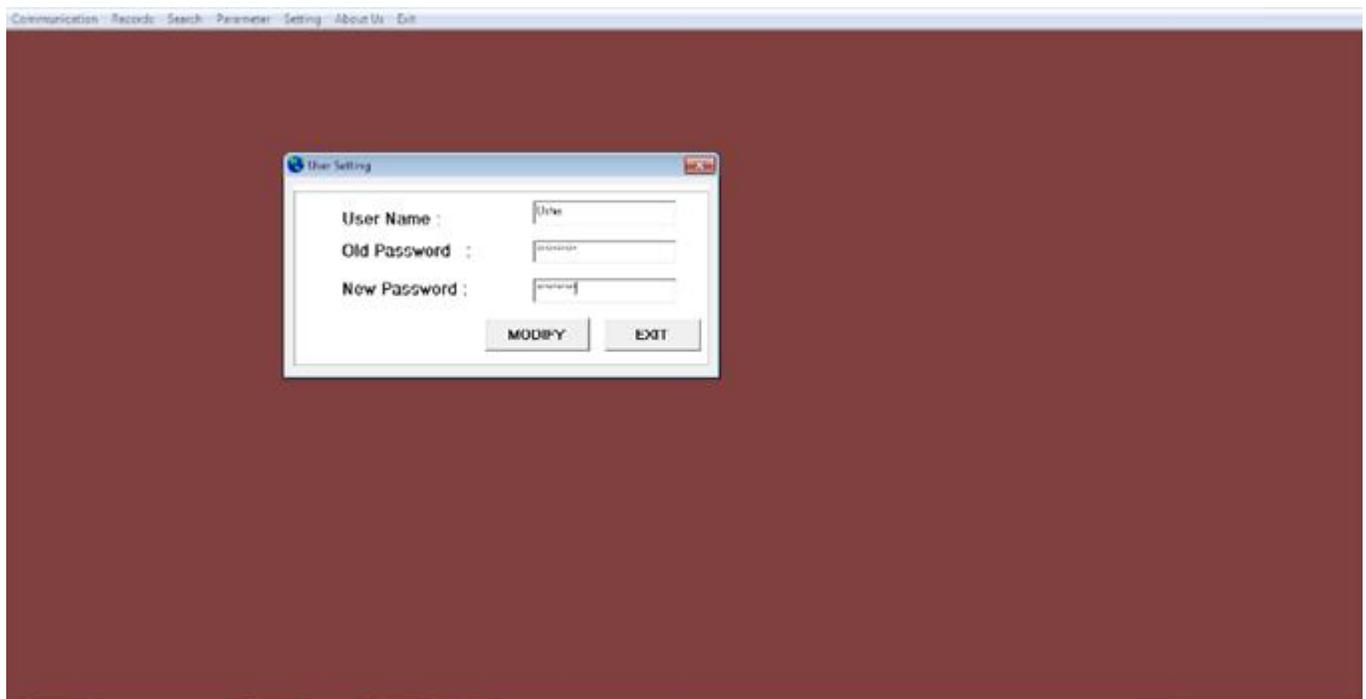
## 8. Setting

There are 3 options in Setting:

- a. Modify Login Password      b. Modify STEP KVAR      c. Edit Zone Details**

### a. Modify Login Password

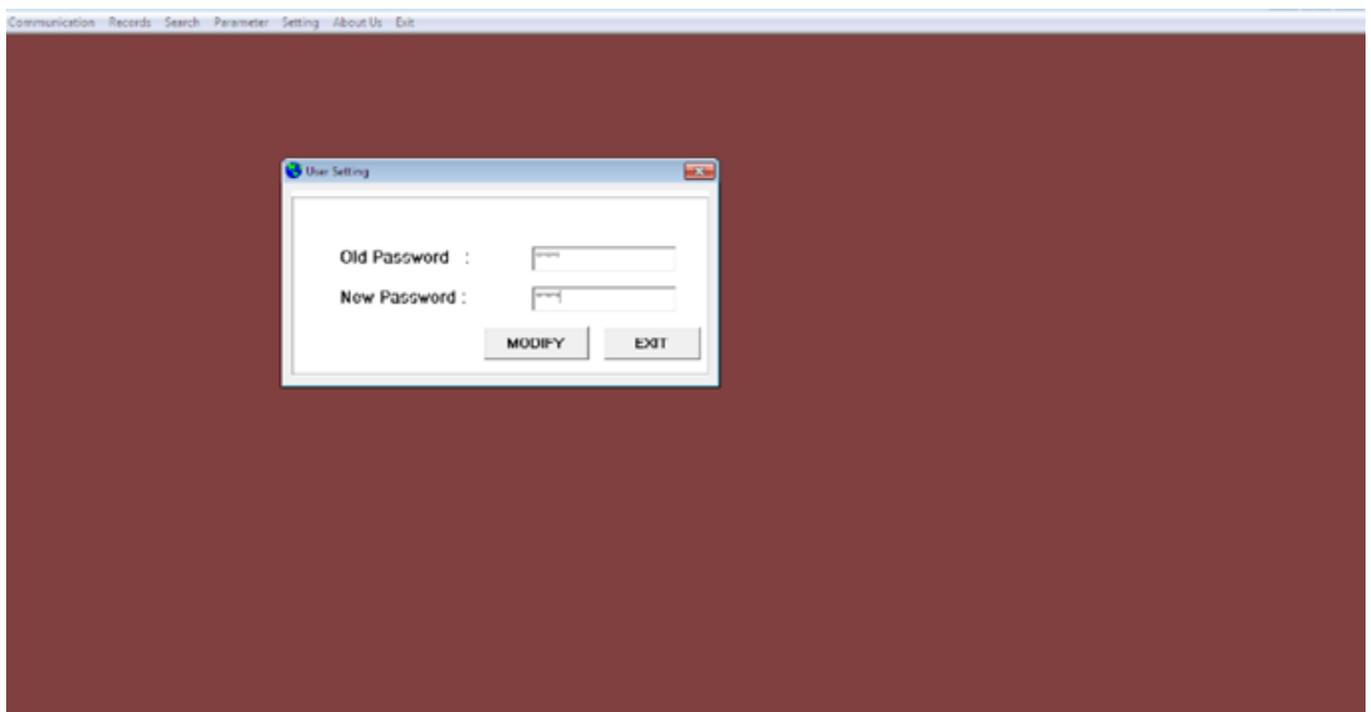
- To change login password, click on Setting menu and open “Modify Login Password” form.
- User name is automatically selected in username field.
- Enter old password and enter new password.
- If old password entered is correct, then only software accept the new password.



Picture: Modify Login Password

## b. Modify STEP KVAR Password

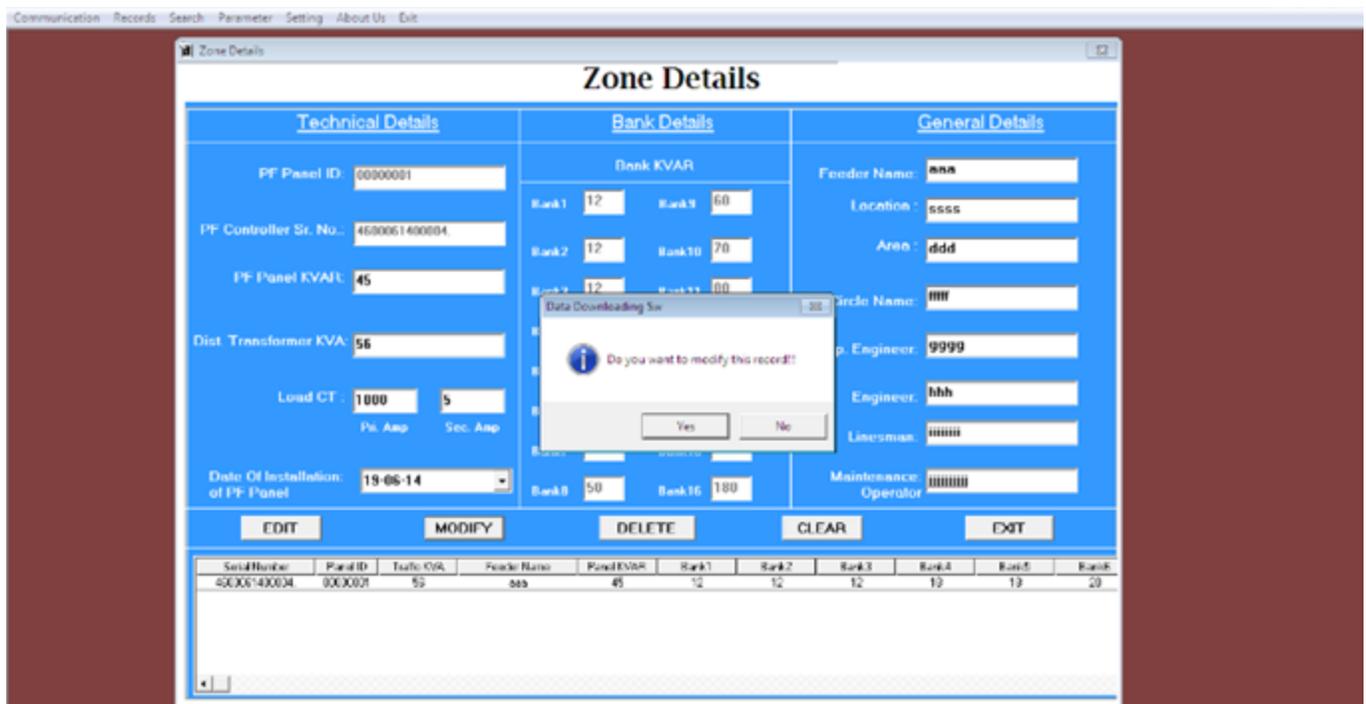
- To change STEP KVAR password, click on Setting menu and open “Modify Login Password” form.
- Enter old password and new password. If entered old password is correct it will set & save new password as STEP KVAR password.



Picture: Modify STEP KVAR

### c. Edit Zone Details

- To edit zone details, click on “Setting” and open “Edit Zone Details” form.
- Grid shows details of downloaded panel.
- To edit any record, click on grid and then click “Edit” button that enables the entire field (Except Serial Number and Panel Id ) to edit information.
- One cannot edit Serial Number and Panel ID.
- Once user edits all fields, click on “Modify” to save record. By default “MODIFY” button is disable .To make use of this button user need select record from grid and click on “EDIT” button.
- To delete any record, select record from grid and click on “DELETE” button. It will delete that record and also database created for that panel.
- “CLEAR” button allows clearing of all the fields except Serial Number, Panel ID. By default “CLEAR” button is disabled. When user on click “EDIT” button then “CLEAR” button get enable to use.



Picture: Edit Zone Detail

## 9. Sample Data Report

*Note: (Reports are NOT with actual data)*

### 1) Performance Report

<b>APFC INSTANTANEOUS REPORT</b>										
<b>PERFORMANCE REPORT</b>										
PF Panel ID: 00000001					Panel KVAR: 72 KVAR					
DATE: 20-03-14					TIME: 9:09:38 PM					
<b>INSTANTANEOUS DATA LOG</b>										
	Before Compensation			After Compensation			BANK STATUS			
	R	Y	B	R	Y	B	BANK 1	OFF	BANK 9	OFF
VOLTAGE	0	0	0	0	0	0	BANK 2	OFF	BANK 10	OFF
CURRENT	0	0	0	0	0	0	BANK 3	OFF	BANK 11	OFF
	OVERALL VALUES			OVERALL VALUES			BANK 4	OFF	BANK 12	OFF
FREQUENCY	0			0			BANK 5	OFF	BANK 13	OFF
KW	0			0			BANK 6	OFF	BANK 14	OFF
KVAR	0			0			BANK 7	OFF	BANK 15	OFF
KVA	0			0			BANK 8	OFF	BANK 16	OFF
PF	?.???			?.???						
KVIH	0									
KVARH_IND	0									
KVARH_CAP	0									
KVAH	0									
EVENTS	RESUME OK									
Instantaneous Report							Page No. : 1			

Picture: Performance Report

## 2) Interval Record Report

DT APFC PANEL INTERVAL REPORT																							
From Date :		11-01-14		To Date :		25-01-14		Panel ID : 00000001				Panel KVAR : 72		KVAR		Transformer KVA : 500							
Feeder Name :				333333				Location :				Nask				Area :				Amoad			
DATE	TIME	VRN	VYN	VBN	VTHD	IR	IY	IB	ITHD	FREQ	KV%	KVAR	KVA	PF	KVH	KVARH (IND)	KVARH (CAP)	KVAH	EVENTS				
11-01-14	18:30	248	248	248	68.0	778.5	779.6	779.3	76.0	50.0	581.0	-1.8	581.0	1.000	42.5	0.1	0.2	42.5	C1,C2,VH				
11-01-14	18:40	248	248	248	68.0	778.3	779.9	779.5	76.0	50.0	580.7	-1.8	580.7	1.000	43.3	0.1	0.2	43.3	C1,C2,VH				
11-01-14	18:50	248	248	248	68.0	778.1	779.5	779.5	76.0	50.0	580.9	-1.6	580.9	1.000	44.3	0.1	0.2	44.3	C1,C2,VH				
11-01-14	19:00	248	248	248	68.0	778.3	780.0	779.1	76.0	50.0	580.8	-1.6	580.8	1.000	45.1	0.1	0.2	45.1	C1,C2,VH				
11-01-14	19:10	248	248	248	68.0	778.8	780.1	779.8	76.0	50.0	581.4	-1.8	581.4	1.000	45.9	0.1	0.2	45.9	C1,C2,VH				
11-01-14	19:20	248	248	248	68.0	780.4	781.7	781.5	76.0	50.0	583.8	-1.9	583.8	1.000	46.7	0.1	0.2	46.7	C1,C2,VH				
11-01-14	19:30	249	249	249	68.0	978.2	980.3	980.0	76.0	50.0	730.9	7626.1	7660.0	0.096	49.5	0.2	0.2	49.5	OK				
11-01-14	19:40	249	249	249	68.0	979.6	980.7	980.3	76.0	50.0	734.6	-2.4	734.6	1.000	50.5	0.2	0.2	50.5	C1,C2				
11-01-14	19:50	250	249	249	68.0	979.5	981.3	980.5	76.0	50.0	735.5	-2.1	735.5	1.000	51.5	0.2	0.2	51.5	C1,C2				
11-01-14	20:00	249	249	249	68.0	979.6	981.2	980.8	76.0	50.0	735.4	-2.5	735.4	1.000	52.5	0.2	0.2	52.5	C1,C2				
11-01-14	20:10	250	249	250	68.0	979.7	981.6	981.8	76.0	50.0	736.2	-1.7	736.2	1.000	53.5	0.2	0.2	53.5	C1,C2				
11-01-14	20:20	250	249	250	68.0	980.9	982.5	982.2	76.0	50.0	737.3	-2.4	737.3	1.000	54.5	0.2	0.2	54.5	C1,C2				
11-01-14	20:30	250	250	250	68.0	981.5	983.2	982.4	76.0	50.0	738.2	-2.2	738.2	1.000	55.5	0.2	0.2	55.5	C1,C2				
11-01-14	20:40	250	250	250	68.0	981.5	983.6	982.9	76.0	50.0	738.4	-2.2	738.4	1.000	56.5	0.2	0.2	56.5	C1,C2				
11-01-14	20:50	253	253	253	68.0	998.3	1002.7	1001.0	76.0	50.0	761.7	-1.8	761.7	1.000	57.5	0.2	0.2	57.5	OK				
11-01-14	21:00	253	253	253	68.0	998.4	1002.8	1000.3	76.0	50.0	761.5	-2.1	761.5	1.000	58.5	0.2	0.3	58.5	OK				
11-01-14	21:10	253	253	253	68.0	998.2	1003.0	1000.9	76.0	50.0	761.5	-2.1	761.5	1.000	59.5	0.2	0.3	59.5	OK				
11-01-14	21:20	253	253	253	68.0	998.7	1002.5	1001.0	76.0	50.0	761.5	-2.2	761.5	1.000	60.7	0.2	0.3	60.7	OK				
11-01-14	21:30	253	253	253	68.0	998.8	1002.8	1000.9	76.0	50.0	761.7	-1.8	761.7	1.000	61.7	0.2	0.3	61.7	OK				
11-01-14	21:40	253	253	253	68.0	998.3	1002.8	1001.1	76.0	50.0	761.7	-2.4	761.7	1.000	62.8	0.2	0.3	62.8	OK				
11-01-14	21:50	253	253	253	68.0	997.3	1003.4	1001.4	76.0	49.9	761.6	-3.5	761.6	1.000	63.8	0.2	0.3	63.8	OK				
11-01-14	22:00	253	253	253	68.0	998.5	1002.8	1000.9	76.0	50.0	761.4	-1.3	761.4	1.000	64.9	0.2	0.3	64.9	C1,C2				
11-01-14	22:10	253	253	253	68.0	997.4	1002.4	1001.7	76.0	50.0	761.4	-2.3	761.4	1.000	65.9	0.2	0.3	65.9	OK				
11-01-14	22:20	253	253	253	68.0	997.3	1001.0	1001.0	76.0	49.9	761.1	-2.9	761.1	1.000	67.0	0.2	0.3	67.0	OK				
11-01-14	22:30	253	253	254	68.0	996.5	1003.8	1002.3	76.0	49.9	761.5	-4.1	761.5	1.000	68.0	0.2	0.3	68.0	OK				

Picture: Interval Record Report



### 3) Interval Maintenance Report:

The Maintenance Report is for the use of the Maintenance Team where more in-depth information is presented to them.

<b>DT APFC LOG INTERVAL REPORT FOR MAINTENANCE (BANK STATUS)</b>																			
From Date : 11-01-14		To Date : 25-01-14		Panel ID : 00000001				Panel KVAR : 72 KVAR				Transformer KVA : 500							
Feeder Name : 000000				Location : Nask				Area : Amrod											
DATE	TIME	Bank1 Status	Bank2 Status	Bank3 Status	Bank4 Status	Bank5 Status	Bank6 Status	Bank7 Status	Bank8 Status	Bank9 Status	Bank10 Status	Bank11 Status	Bank12 Status	Bank13 Status	Bank14 Status	Bank15 Status	Bank16 Status	TEMP DegC	Bl
13-01-14	13:50	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	14:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	14:10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	14:20	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	14:30	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	14:40	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	14:50	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	15:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	15:10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	15:20	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	15:30	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	15:40	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	15:50	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	16:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	16:10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	16:20	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	16:30	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	16:40	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	16:50	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	17:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	17:10	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	17:20	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	17:30	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3
13-01-14	17:40	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	30	3

Picture: Maintenance Report for Interval

#### 4) Event Fault

<b>DT APFC EVENT FAULT REPORT</b>																							
From Date :		22-01-14		To Date :		31-01-14		Panel ID :		00000001		Transformer KVA :		56		Panel KVAR :		12 KVAR					
Feeder Name :				3333				Location :				0000				Area :				0000			
DATE	TIME	V/RN	VYN	VBN	IR	IY	IB	FREQ	KVY	KVAR	KVA	PF	KVWH	KVARH (IND)	KVARH (CAP)	KVAH	EVENTS						
22-01-14	02:09:58	199	199	199	779.9	782.2	783.2	49.9	487.6	-21.1	488.1	0.999	1338.8	0.3	13.5	1338.8	C1,C2,VH,VH						
22-01-14	08:09:58	194	193	193	789.7	781.1	783.1	50	443.3	-21.3	443.8	0.999	1362	0.3	14.8	1362	C1,C2						
22-01-14	14:09:57	219	219	219	888.4	888.1	888.9	49.9	584.1	-12.2	584.2	1.000	1387.2	0.3	15.3	1387.2	C1,C2,VH,VH						
22-01-14	20:09:57	180	180	180	707.6	709.1	710.3	50	384	-27.2	388	0.997	1409.8	0.3	16.3	1409.8	C1,C2						
23-01-14	02:10:00	187	186	186	733.2	733.7	732.6	50	411	-25	411.8	0.998	1430.1	0.3	17.7	1430.1	C1,C2,VH,VH,H						
23-01-14	08:10:00	186	186	186	729.9	731.3	732.4	50	408.6	-25.3	409.4	0.998	1450.4	0.3	18.9	1450.4	C1,C2						
23-01-14	14:10:00	202	202	202	791.8	794.3	794.3	49.9	482.4	-19.6	482.8	0.999	1477	0.3	19.6	1477	C1,C2,VH,VH						
23-01-14	20:10:00	179	178	178	701.9	702.3	708.8	50	377.7	-26.9	378.7	0.997	1499.8	0.3	20.7	1499.8	C1,C2						
24-01-14	02:19:58	221	221	221	887.6	887.7	888.3	50	577.1	-9.8	577.2	1.000	1524.2	0.3	21.6	1524.2	C1,C2,VH,VH						
24-01-14	08:19:57	180	180	180	706.8	709.1	710.6	50	383.6	-27.1	384.6	0.997	1549.9	0.3	22.4	1549.9	C1,C2						
24-01-14	14:19:58	226	226	226	884.3	885.6	887.8	49.9	601.9	-7.7	601.9	1.000	1570.9	0.3	23.6	1570.9	C1,C2,VH,VH						
24-01-14	20:19:57	184	184	184	724.6	726.6	727.9	50	402.8	-26.6	403.6	0.998	1598	0.3	24.2	1598	C1,C2						
25-01-14	02:19:58	218	218	218	883.6	885.9	886.8	50	580.6	-11	580.6	1.000	1619.4	0.3	25.4	1619.4	C1,C2,VH,VH						
25-01-14	08:19:57	207	206	206	812.2	812.2	812.7	50	508.1	-16.3	508.3	1.000	1648.3	0.3	26.1	1648.3	C1,C2						
25-01-14	14:20:00	180	180	180	709.6	711.2	712.6	50	388.2	-27.1	387.1	0.998	1667.3	0.3	27.3	1667.3	C1,C2,VH,VH						
25-01-14	20:20:00	182	181	181	713.9	716.3	717.6	50	391.2	-26.6	392.1	0.998	1686.7	0.3	28.6	1686.7	C1,C2						
26-01-14	02:20:00	207	206	207	812	812.6	814.4	50	506	-16.1	506.2	1.000	1710.8	0.3	29.5	1710.8	C1,C2,VH,VH,H						
26-01-14	08:20:00	176	176	176	693.6	695.6	696.6	50	388.9	-26.2	370	0.997	1733.8	0.3	30.6	1733.8	C1,C2						
26-01-14	14:29:58	178	178	178	700.8	703.1	706.1	50	377.1	-27.6	378.1	0.997	1756	0.3	31.7	1756	C1,C2,VH,VH						
26-01-14	20:29:58	206	206	206	808.4	809.6	809.7	49.9	500.3	-17.8	500.6	0.999	1780.7	0.3	32.6	1780.7	C1,C2						
27-01-14	02:29:58	208	204	204	801.9	802.6	803.4	50	493.1	-17.6	493.4	0.999	1808	0.3	33.4	1808	C1,C2,VH,VH						
27-01-14	08:29:57	202	202	202	792.8	796.1	796.7	50	484.1	-16.3	484.4	0.999	1829	0.3	34.4	1829	C1,C2						
27-01-14	14:29:58	201	201	201	789.1	790.6	791	50	476.1	-16.6	476.6	0.999	1852.9	0.3	35.3	1852.9	C1,C2,VH,VH						
27-01-14	20:29:58	200	200	200	788.8	788.3	788.6	50	473.9	-16.7	474.3	0.999	1876.6	0.3	36.3	1876.6	C1,C2						
28-01-14	00:09:58	164	164	164	648.7	648.4	649.7	50	319.9	-31.3	321.4	0.996	1890.3	0.3	36.9	1890.3	UV,C1,C2						

Picture: Event Fault Report

### 5) Event Fault for Maintenance

The Maintenance Report is for the use of the Maintenance Team where more in-depth information is presented to them.

<b>DT APFC EVENT REPORT FOR MAINTENANCE (STEP KVAR)</b>																			
From Date : 10-06-14		To Date : 10-06-14		Panel ID : 00000001				Panel KVAR : 12 KVAR				Transformer KVA : 56							
Feeder Name : 3333				Location : 0000				Area : 00000											
DATE	TIME	C-KVAR	C-KVARH	BANK 1 KVAR	BANK 2 KVAR	BANK 3 KVAR	BANK 4 KVAR	BANK 5 KVAR	BANK 6 KVAR	BANK 7 KVAR	BANK 8 KVAR	BANK 9 KVAR	BANK 10 KVAR	BANK 11 KVAR	BANK 12 KVAR	BANK 13 KVAR	BANK 14 KVAR	BANK 15 KVAR	BANK 16 KVAR
22-01-14	02:09	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
22-01-14	08:09	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
22-01-14	14:09	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
22-01-14	20:09	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
23-01-14	02:10	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
23-01-14	08:10	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
23-01-14	14:10	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
23-01-14	20:10	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
24-01-14	02:19	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
24-01-14	08:19	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
24-01-14	14:19	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
24-01-14	20:19	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
25-01-14	02:19	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
25-01-14	08:19	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
25-01-14	14:20	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
25-01-14	20:20	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
26-01-14	02:20	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
26-01-14	08:20	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
26-01-14	14:29	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
26-01-14	20:29	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
27-01-14	02:29	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
27-01-14	08:29	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
27-01-14	14:39	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180
27-01-14	20:39	0.0	0.0	12	12	12	18	18	20	40	50	60	70	80	90	100	125	150	180

Picture: Maintenance Report for Event Fault

### 6) Read Parameter

<b>DT APFC REPORT FOR MAINTAINANCE (PARAMETER)</b>											
To Date : 08-06-14 11:33:53		Panel ID : 00000001	Panel KVAR : 12 KVAR	Transformer KVA : 56							
Feeder Name : 2222		Location : 0000		Area : 00000							
<b>General I/O Parameters</b>		<b>Fault Parameters</b>		<b>Step Parameters</b>							
Change Password:	0000	Under Load Res(%)	3	Steps Connected :	16						
Password (	Disable	Over Current Limit (%)	100	Capacitive Bank Voltage:	440						
THD (%) to display (F - THD:1 / : R-THD = 0 )	Enable	Over Current Resume (%)	95	Correction Time (Sec.):	120						
Reset Energy Counter:	Disable	Temperature Fault (Fast Off:1 / Disable:0):	Fast Off	Discharge Time (Sec.):	60						
<b>System Parameters</b>		Temp. Upper Limit:	60	<b>Unequal Bank KVAR</b>							
Current CT Pri Mains:	1000	Temp. Lower Limit :	70	B1	12	B5	18	B9	60	B13	100
PF Upper Limit :	0.999	Out of Bank Fault ( Enable:1 / Disable:0 )	Enable	B2	12	B6	20	B10	70	B14	125
PF Lower Limit :	0.990	Harmonic Over Load ( Enable:1/Disable:0 )	Enable	B3	12	B7	40	B11	80	B15	150
Phase Auto Sync :	Disable	V-THD Threshold Limit(%)	5	B4	15	B8	50	B12	90	B16	180
Modal KVAR :	17	I-THD Threshold Limit(%)	25	<b>Utilization Counter</b>							
<b>Fault Parameters</b>		Harmonic Fault Auto Reset (Enable:1 / Disable:0)	Enable	UC1	296640	UC5	574211	UC9	686016	UC13	116237
Over Voltage Lim(%):	113	Harmonic Fault Reset (Sec):	180	UC2	312000	UC6	101315	UC10	686016	UC14	444224
Over Voltage Res(%):	110	Control Fault (	Enable	UC3	017215	UC7	333179	UC11	296640	UC15	762048
Under Voltage Lim(%):	65	Step Health Check (Enable:1 / Disable: 0 )	Enable	UC4	920190	UC8	518974	UC12	686016	UC16	000000
Under Voltage Res(%):	71	Bank Health Tolerance(%)	20								
Under Load KV Fault (Enable:1 / Disable:0):	Enable										
Under Load Lim (%)	2										
Edit Parameter for Maintenance											Page 1 Of 1

Picture: Edit Parameter Report

### 7) Fault Abbreviation

Since all the possible print-outs are defined with Standard Paper Size of “A4”, and in the “Landscape” mode (Horizontal), it is not possible to print the Fault Name in full.

Therefore, the print-outs show the abbreviated (short-form) name for the faults.

The respective full form names are as given below:

<b>EVENT'S ABBREVIATION LISTING</b>			
PD	Power Down	NC	Non-Compensation Mode / Manual /Edit/Auto Mode
PU	Power Up	BF	Battery Fail
OF	Over Frequency	CF	Control Fault
UF	Under Frequency	OT	Over Tempreture
VH	Voltage Harmonics	ZV	Zero Voltage
IH	Current Harmonics	CB	Capacitor Bank/s Faulty
NF	Neutral Fault	NV	NV Fault
OV	Over Voltage	AS	Auto Sync Pending
UV	Under Voltage	C1	Control Fault1
OC	Over Current	C2	Control Fault2
UL	Under Load	C3	C1 And C2
ZC	Zero Current		
OB	Insufficient KVAR Capacity	BL	Battery Low (Needs Replacement)
<input type="button" value="OK"/> <input type="button" value="No Fault Situation- Functioning OK"/>			
Page No. 1			

Picture: Fault Abbreviation

## 10. Sample Excel Report

**Note: (Reports are NOT with actual data)**

MS-Office Excel-Sheet format is one of the most popular formats for presenting information in the Tabular Form, not only for easy viewing, but also for further data analysis, Graphs, Plots, and Trending etc.

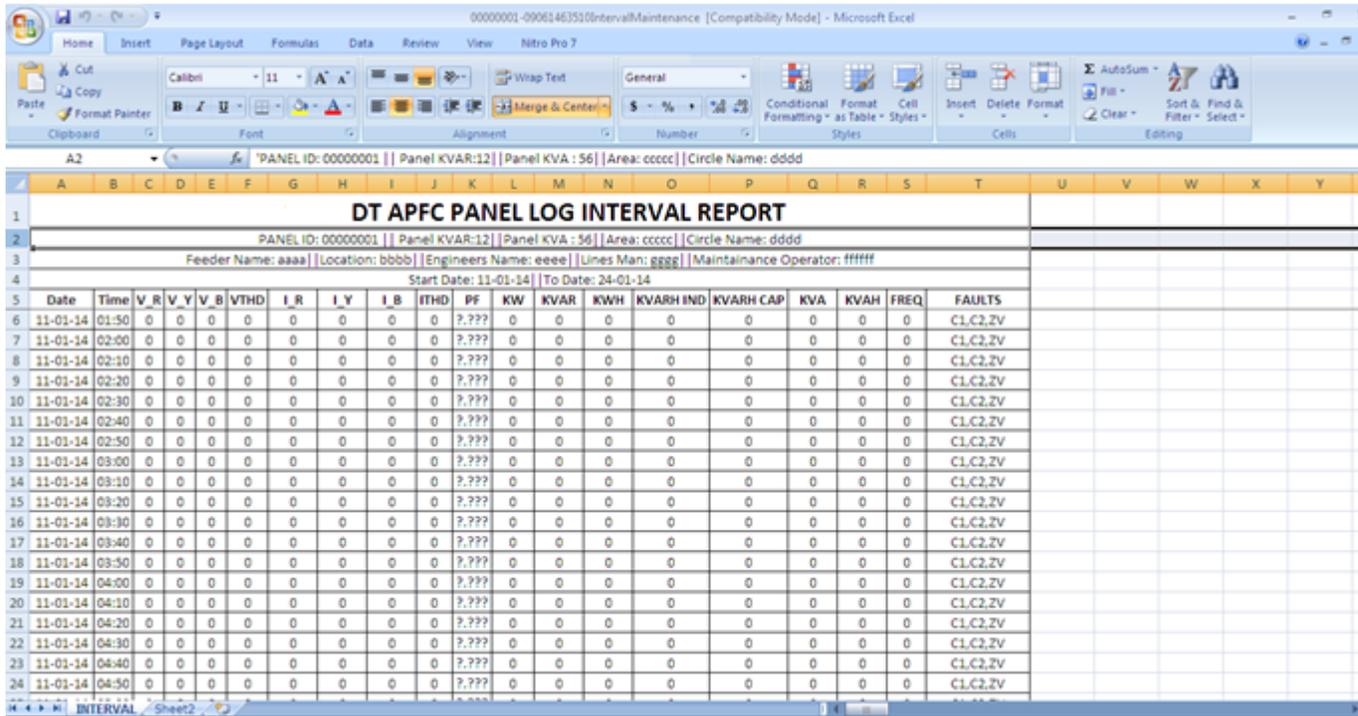
Therefore, one can use the Excel File generated by “Data-View” Software for analysis, for example, searching, sorting, additional calculations etc., as needed by the user.

### 1) Performance Report

TAS: APFC Instantaneous Report																						
Panel ID : 00000001						Panel Rating : 12 KVAR																
Date : 28-11-2016						Time : 11:01:40																
Before Compensation			After Compensation			Bank Status																
	R	Y	B	R	Y	B	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7	Bank 8	Bank 9	Bank 10	Bank 11	Bank 12	Bank 13	Bank 14	Bank 15	Bank 16
Voltage	0	0	0	0	0	0	OFF	NotUsed														
Current	0	0	0	0	0	0	OFF	NotUsed														
Over All Values			Over All Values																			
Frequency	0			0																		
KW	0			0																		
KVAR	0			0																		
KVA	0			0																		
PF	?.???			?.???																		
KWH	0			0																		
KVARH_IND	0			0																		
KVARH_CAP	0			0																		
KVAH	0			0																		
Events	C2,ZV,			C2,ZV,																		

Picture: performance Report (Excel)

## 2) Interval Report



00000001-09061463510IntervalMaintenance [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Nitro Pro 7

Calibri 11

Wrap Text

General

Clipboard Paste Copy Format Painter

Font

Alignment

Number

Conditional Formatting

Format as Table

Cell Styles

Insert Delete Format

Cells

AutoSum Fill Clear

Sort & Filter

Editing

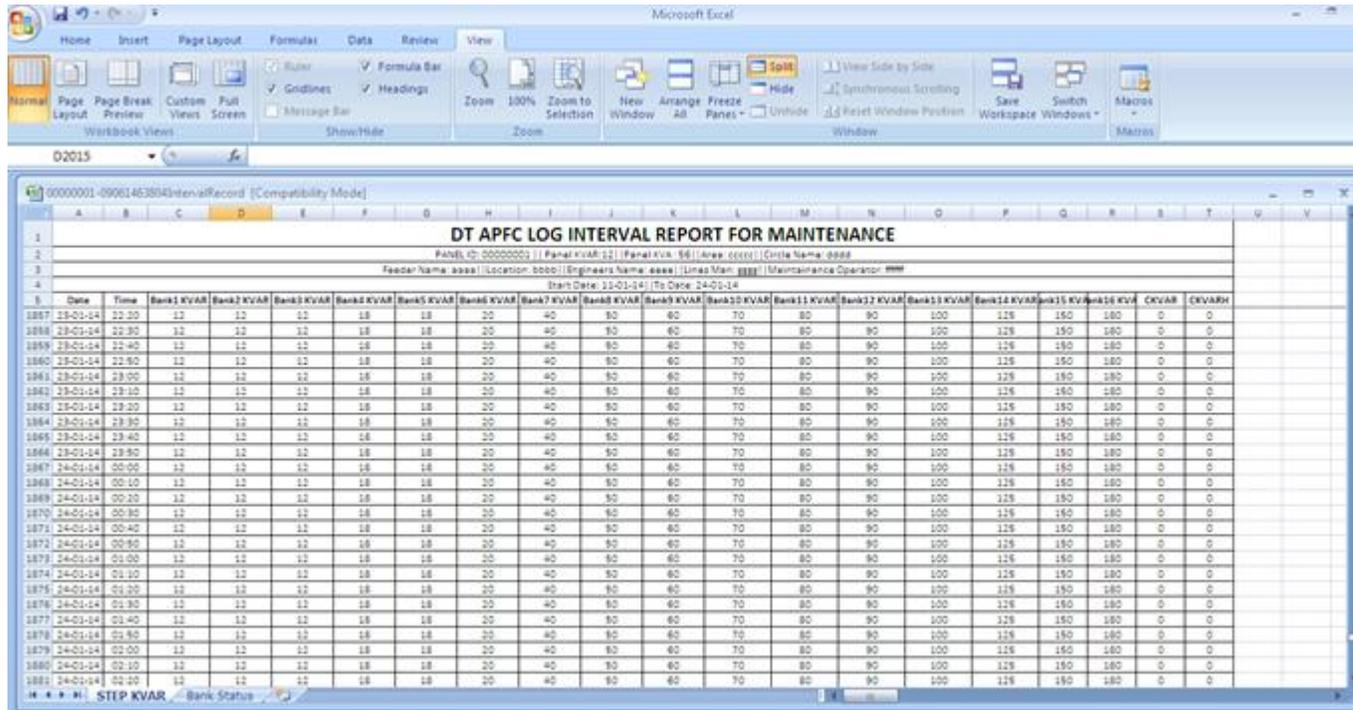
A2

PANEL ID: 00000001 | Panel KVAR:12 | Panel KVA : 56 | Area: ccccc | Circle Name: dddd

DT APFC PANEL LOG INTERVAL REPORT																			
PANEL ID: 00000001   Panel KVAR:12   Panel KVA : 56   Area: ccccc   Circle Name: dddd																			
Feeder Name: aaaa   Location: bbbb   Engineers Name: eeee   Lines Man: gggg   Maintenance Operator: fffff																			
Start Date: 11-01-14   To Date: 24-01-14																			
Date	Time	V R	V Y	V B	VTHD	I R	I Y	I B	ITHD	PF	KW	KVAR	KWH	KVARH IND	KVARH CAP	KVA	KVAH	FREQ	FAULTS
11-01-14	01:50	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	02:00	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	02:10	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	02:20	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	02:30	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	02:40	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	02:50	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	03:00	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	03:10	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	03:20	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	03:30	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	03:40	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	03:50	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	04:00	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	04:10	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	04:20	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	04:30	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	04:40	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV
11-01-14	04:50	0	0	0	0	0	0	0	0	?	0	0	0	0	0	0	0	0	C1,C2,ZV

Picture: Interval Report (Excel)

### 3) Interval Report for Maintenance



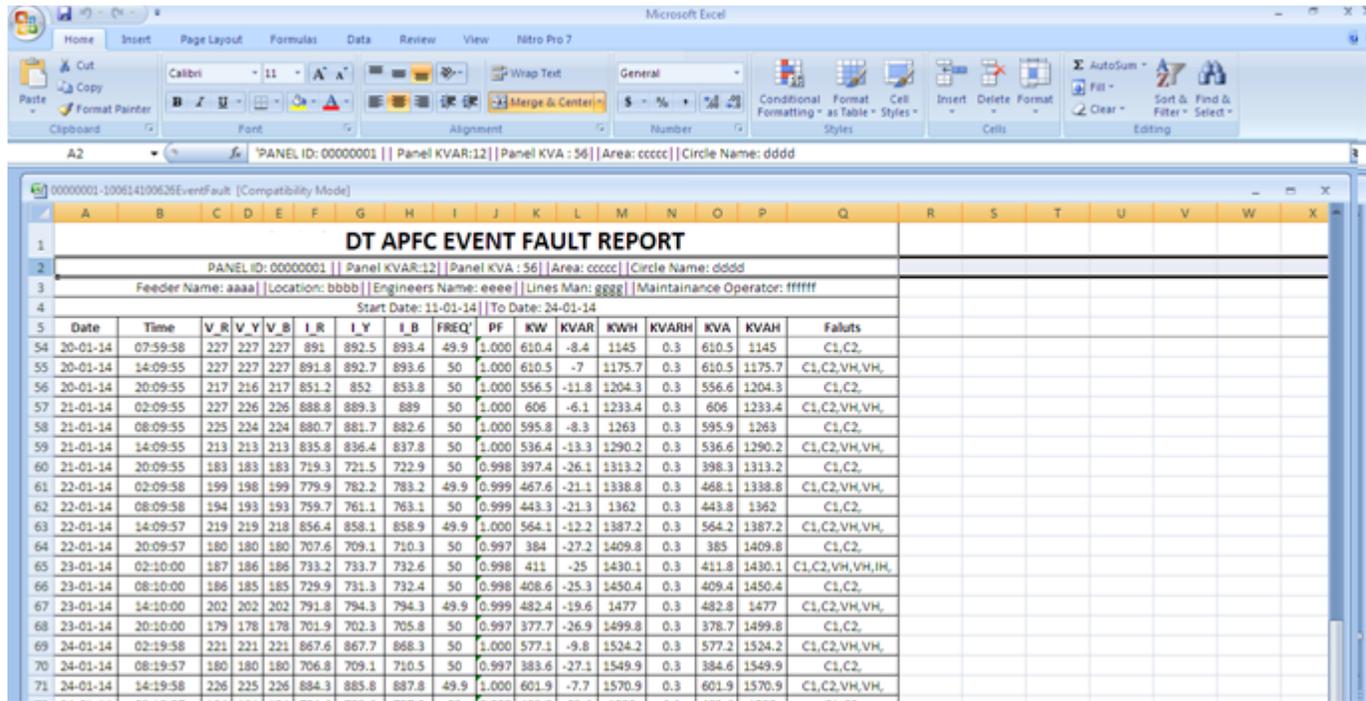
**DT APFC LOG INTERVAL REPORT FOR MAINTENANCE**

Panel ID: 00000001 | Panel KV: 11 | Panel KV: 16 | Area: 0000 | Grid Name: 0000  
 Reader Name: 0000 | Location: 0000 | Engineer Name: 0000 | Line No: 0000 | Maintenance Operator: 0000  
 Start Date: 13-01-14 | To Date: 14-01-14

Date	Time	Bank1 KV	Bank2 KV	Bank3 KV	Bank4 KV	Bank5 KV	Bank6 KV	Bank7 KV	Bank8 KV	Bank9 KV	Bank10 KV	Bank11 KV	Bank12 KV	Bank13 KV	Bank14 KV	Bank15 KV	Bank16 KV	CKVAR	CVAR	
1887	23-01-14	22:20	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1888	23-01-14	22:30	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1889	23-01-14	22:40	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1890	23-01-14	22:50	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1891	23-01-14	23:00	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1892	23-01-14	23:10	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1893	23-01-14	23:20	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1894	23-01-14	23:30	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1895	23-01-14	23:40	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1896	23-01-14	23:50	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1897	24-01-14	00:00	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1898	24-01-14	00:10	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1899	24-01-14	00:20	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1890	24-01-14	00:30	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1891	24-01-14	00:40	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1892	24-01-14	00:50	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1893	24-01-14	01:00	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1894	24-01-14	01:10	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1895	24-01-14	01:20	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1896	24-01-14	01:30	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1897	24-01-14	01:40	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1898	24-01-14	01:50	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1899	24-01-14	02:00	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1900	24-01-14	02:10	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0
1901	24-01-14	02:20	12	12	12	18	18	20	40	80	80	70	80	90	100	128	160	180	0	0

Picture: Maintenance report for Interval records (Excel)

### 4) Event Fault



DT APFC EVENT FAULT REPORT																
PANEL ID: 00000001   Panel KVAR:12   Panel KVA : 56   Area: ccccc   Circle Name: dddd																
Feeder Name: aaaa   Location: bbbb   Engineers Name: eeee   Lines Man: gggg   Maintenance Operator: fffff																
Start Date: 11-01-14   To Date: 24-01-14																
Date	Time	V <sub>R</sub>	V <sub>Y</sub>	V <sub>B</sub>	I <sub>R</sub>	I <sub>Y</sub>	I <sub>B</sub>	FREQ	PF	KW	KVAR	KWH	KVARH	KVA	KVAH	Faluts
20-01-14	07:59:58	227	227	227	891	892.5	893.4	49.9	1.000	610.4	-8.4	1145	0.3	610.5	1145	C1,C2
20-01-14	14:09:55	227	227	227	891.8	892.7	893.6	50	1.000	610.5	-7	1175.7	0.3	610.5	1175.7	C1,C2,VH,VH
20-01-14	20:09:55	217	216	217	851.2	852	853.8	50	1.000	556.5	-11.8	1204.3	0.3	556.6	1204.3	C1,C2
21-01-14	02:09:55	227	226	226	888.8	889.3	889	50	1.000	606	-6.1	1233.4	0.3	606	1233.4	C1,C2,VH,VH
21-01-14	08:09:55	225	224	224	880.7	881.7	882.6	50	1.000	595.8	-8.3	1263	0.3	595.9	1263	C1,C2
21-01-14	14:09:55	213	213	213	835.8	836.4	837.8	50	1.000	536.4	-13.3	1290.2	0.3	536.6	1290.2	C1,C2,VH,VH
21-01-14	20:09:55	183	183	183	719.3	721.5	722.9	50	0.998	397.4	-26.1	1313.2	0.3	398.3	1313.2	C1,C2
22-01-14	02:09:58	199	198	199	779.9	782.2	783.2	49.9	0.999	467.6	-21.1	1338.8	0.3	468.1	1338.8	C1,C2,VH,VH
22-01-14	08:09:58	194	193	193	759.7	761.1	763.1	50	0.999	443.3	-21.3	1362	0.3	443.8	1362	C1,C2
22-01-14	14:09:57	219	219	218	856.4	858.1	858.9	49.9	1.000	564.1	-12.2	1387.2	0.3	564.2	1387.2	C1,C2,VH,VH
22-01-14	20:09:57	180	180	180	707.6	709.1	710.3	50	0.997	384	-27.2	1409.8	0.3	385	1409.8	C1,C2
23-01-14	02:10:00	187	186	186	733.2	733.7	732.6	50	0.998	411	-25	1430.1	0.3	411.8	1430.1	C1,C2,VH,VH,IH
23-01-14	08:10:00	186	185	185	729.9	731.3	732.4	50	0.998	408.6	-25.3	1450.4	0.3	409.4	1450.4	C1,C2
23-01-14	14:10:00	202	202	202	791.8	794.3	794.3	49.9	0.999	482.4	-19.6	1477	0.3	482.8	1477	C1,C2,VH,VH
23-01-14	20:10:00	179	178	178	701.9	702.3	705.8	50	0.997	377.7	-26.9	1499.8	0.3	378.7	1499.8	C1,C2
24-01-14	02:19:58	221	221	221	867.6	867.7	868.3	50	1.000	577.1	-9.8	1524.2	0.3	577.2	1524.2	C1,C2,VH,VH
24-01-14	08:19:57	180	180	180	706.8	709.1	710.5	50	0.997	383.6	-27.1	1549.9	0.3	384.6	1549.9	C1,C2
24-01-14	14:19:58	226	225	226	884.3	885.8	887.8	49.9	1.000	601.9	-7.7	1570.9	0.3	601.9	1570.9	C1,C2,VH,VH

Picture: Event Fault report (Excel)

### 5) Event Fault for Maintenance

DT APFC EVENT LOG REPORT FOR MAINTENANCE(BANK STATUS)																					
PANEL ID: 00000001   Panel KVAR:12   Panel KVA : 56   Area: ccccc   Circle Name: dddd																					
Feeder Name: aaaa   Location: bbbb   Engineers Name: eeee   Lines Man: gggg   Maintenance Operator: fffff																					
Start Date: 11-01-14   To Date: 24-01-14																					
Date	Time	Bank1	Bank2	Bank3	Bank4	Bank5	Bank6	Bank7	Bank8	Bank9	Bank10	Bank11	Bank12	Bank13	Bank14	Bank15	Bank16	CKVAR	CKVARH	BV	Temp.
11-01-14	01:53:12	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	09:29:58	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	09:39:55	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	10:39:55	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	15:39:55	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	16:10:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	16:29:55	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	19:29:57	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	19:30:12	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	20:49:55	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	21:59:56	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
11-01-14	22:00:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
12-01-14	10:59:56	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
12-01-14	12:39:58	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
12-01-14	12:49:55	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
12-01-14	13:09:58	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
12-01-14	22:59:57	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
13-01-14	01:30:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									
13-01-14	07:30:00	OFF	OFF	OFF	OFF	OFF	OFF	OFF	0	0	3	30									

Picture: Maintenance report for Event fault (Excel)

## References



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