# HT SYSTEM CONFIG PAGE (RMU, HT)

## SECTION 1 - Static & Default Acknowledged System Configuration Panel

*NOTE: GET DETAILS FROM DEVICE INSTALLATION FORM*

1. PANEL INFO
   1. ESAI DEVICE ID\*: \_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Name of HT Panel: \* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Panel ID: \*\_\_\_\_\_\_\_\_\_\_\_\_
   4. Panel Rating Details: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (10-25 words)
   5. ESAI Installation Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Date Selection Package)
   6. Panel Owner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   7. Total Rated Capacity: \_\_\_\_\_\_\_\_\_\_ kVA
   8. Option to Upload Image of Panel (JPEG/PNG)
   9. Optional: Upload Panel Specifications PDF
2. 3PH L-L VOLTAGES
   1. Nominal HT voltage: \*  
      Button 1: 11 kV; Button 2: 22kV; Button 3: 33kV.
   2. Acceptable Range (Text or Button Selection) \* -
      1. Button: “Up to ±5%”*or //* priority -1 *if text empty-use this*
      2. Text: **±***\_\_\_\_\_\_\_* %**;** (allow ±25% of button value) //priority -2 (mutually exclusive)
      3. Backend: apply for 11kV/22kV/33kV and save in DB
   3. Warning thresholds (Text or Button Selection) \* -
      1. Button: Warning thresholds: “**±** (5 to 10) %” *or*
      2. Text: **±***\_\_\_\_\_\_\_*%**;**  (allow ±25% of button value)
      3. Backend: apply for 11kV/22kV/33kV and save in DB
   4. Critical thresholds (Text or Button Selection) \* -
      1. Button: Critical thresholds: “**±** (> 10) %” *or*
      2. Text: **±***\_\_\_\_\_\_\_*%**;**  (allow ±25% of button value)
      3. Backend: apply for 11kV/22kV/33kV & save in DB
   5. Auxiliary DC Power Supply Voltage: \*\_\_\_\_\_\_ Volts (DC).
   6. Rated Ampera-Hour Combined Battery Capacity: \_\_\_\_\_\_\_ Ah

PHASE IMBALANCE

* 1. Acceptable Range\* (Text or Button Selection)
     1. Button Selection: Voltage imbalance ≤ 2% or
     2. Voltage imbalance: ≤­­\_\_\_\_\_\_\_% (User Text Input)
  2. Warning threshold\* (Text or Button Selection)
     1. Button Selection: Voltage imbalance > 2% or User Text Input
  3. Critical threshold\* (Text or Button Selection)
     1. Button Selection: Voltage imbalance > 3% or User Text Input

1. FREQUENCY
   1. Nominal Frequency\*: Button Selection: 50.0 Hz or 60 Hz
   2. Text or Button:
      1. Warning Thresholds\*: 49.5 Hz (low), 50.5 Hz (high)
      2. Critical Thresholds\*: 48.5 Hz (low), 51.5 Hz (high)
      3. Warning Max Deviation\*: ±1.0 Hz
      4. Critical Max Deviation\*: ±1.5 Hz

## DYNAMIC & USER TEXT INPUT

SECTION 2

user text input fields; apply unit normalization

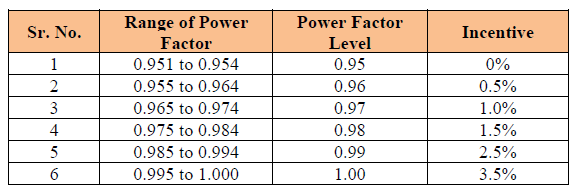
* 1. PT Primary\*: \_\_\_\_\_\_\_\_\_KV
  2. PT Secondary\*: \_\_\_\_\_\_\_\_\_V
  3. 3PH HT LOAD CURRENT
     1. \*R\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     2. \*Y\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     3. \*B\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     4. \*TOTAL PANEL RATED CURRENT: \_\_\_\_\_\_A
     5. Option to Upload Image of Circuit Breaker (JPEG/PNG)
     6. Type of LT CB: \_\_\_\_\_\_ (E.g., MCCB, ACB)
     7. CB Make & Model No:\_\_\_\_\_\_\_\_
     8. \*Circuit Breaker - In (Rated Current): \_\_\_\_\_\_\_A
     9. \*Circuit Breaker – Ir Setting @ \_\_\_\_\_\_ x In (E.g., 0.4, 0.6. 0.8, 1.0)
     10. Circuit Breaker - Ir (Long-Time/Continuous Setting Current): \_\_\_\_\_\_A
         1. Auto fill logic – (Ir Setting \* In)
     11. \*Default Warning Threshold:
         1. Option 1:(80 – 85) % of Ir
         2. Option 2: (86 – 90) % of Ir
     12. \*Default Critical Threshold:
         1. Option 1:(91 – 94) % of Ir
         2. Option 2: (95 – 98) % of Ir
  4. HT Current Imbalance%:
     1. Apply same logic as Voltage Imbalance
     2. \*Default Warning Threshold: 10%
     3. \*Default Critical Threshold: 20%

SECTION 3

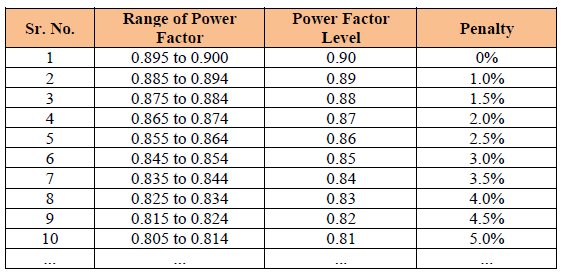
* 1. RATED HT POWER:
     1. \*R\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     2. \*Y\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     3. \*B\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     4. \*TOTAL RATED POWER: \_\_\_\_\_\_\_\_\_KVA
     5. \*Acceptable Range: Power values per phase ≤100% of calculated rated capacity
     6. \*Warning Range: Per-phase power between 100% and 110% of rated values
     7. \*Critical Range: Power per phase >110% of rated values

SECTION 4

* 1. BASELINE ENERGY CONSUMPTION
     1. \*Plant Total Energy Consumption/Hour: \_\_\_\_kVAh
     2. Average monthly energy budget or baseline (optional): \_\_\_\_\_ kVAh
     3. \*Energy charges per unit: ₹\_\_\_\_\_ (Rs. /kVAh).
     4. \*Demand Charge = ₹\_\_\_\_\_ per kVA / month   
        (Tariff FY 2023-24 for HT I(A) Industry (General) (all supply levels): Demand Charge = ₹499 per kVA / month)
     5. \*Fuel Adjustment Charge (FAC) = ₹\_\_\_\_\_ (Rs. /kWh).  
        (FAC varies monthly; Example for July 2025, FAC = ₹0.30 / kWh applied to kWh)
  2. POWER FACTOR – S5
     1. \*PF Target: \_\_\_\_\_\_\_ (e.g. 0.99 (lag))
     2. \*Warning Threshold: < \_\_\_\_\_\_\_ (e.g. <0.95)
     3. \*Critical Threshold: < \_\_\_\_\_\_\_ (e.g. <0.90)
     4. \*PF Penalty & Incentive Table
* Whenever the average Power Factor is more than 0.95 (lag or lead) and up to 1, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:



* Whenever the average PF is less than 0.9 (lag or lead), penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:



***Note:*** *Power Factor shall be measured/computed up to 3 decimals, after universal rounding off.*

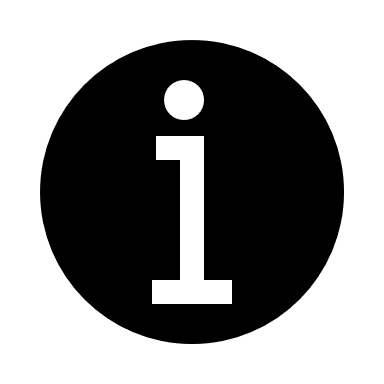
\*Table 1: Incentive PF Ranges

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No | Range of PF | PF Level | Incentive |
| 1 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 2 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 3 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 4 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| + to add |  |  |  |

\*Table 2: Penalty PF Ranges

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No | Range of PF | PF Level | Penalty |
| 1 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 2 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 3 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 4 | \_\_\_\_ to \_\_\_\_ | \_\_\_\_\_ | \_\_\_\_\_% |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| + to add |  |  |  |

## GENERAL FIELDS

1. Location (Building / Zone): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Exact site location (e.g., Substation-A, Utility Yard)
2. Department / Process Served: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Department or process the panel supplies (e.g., Admin, Production)
3. INSTALLATION RESPONSIBLE PERSONNEL
   1. Planned Installation Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Technician Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Technician Mobile Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Supervisor Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. EXISTING MFM SETTINGS (ESAI GATEWAY DEVICE)
   1. MFM Brand Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. MFM Model No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Modbus Address (Slave ID): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Baud Rate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. Parity / Stop Bits: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   6. MFM Wiring System: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   7. PT Primary (V): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   8. PT Secondary (V): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   9. CT Primary (A): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   10. CT Secondary (A): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. On filling of each section user must have a Help () icon to support & guide on input text (Front End)
6. At the end of each section, must have Acknowledge & Submit button, when clicked, a Pop-up message with Supporting Standards
7. Check and add all the IEC / Utility Board standards & Regulations
8. \*Toggle for Alert Behaviour: Acknowledge Below Points
   1. Trigger Warning alerts if any parameter exceeds Warning range in latest payload.
   2. Trigger Critical alerts if any parameter exceeds Critical range for 2 consecutive payloads.
   3. Auto-reset once parameter falls back within acceptable range in latest payload.

# LT SYSTEM CONFIG PAGE (LT INCOMMERS, PCC, FEEDERS, MCC)

## SECTION 1 – Static & Default Acknowledged System Configuration Panel

1. ESAI DEVICE ID\*: \_\_\_\_\_\_\_\_\_\_\_\_\_ (get from device installation form)
2. Name of LT Panel: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Panel ID: \_\_\_\_\_\_\_\_\_\_\_\_
4. Panel Rating Details: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (10-25 words)
5. Option to Upload Image of Panel (JPEG/PNG)
6. Optional: Upload Panel Specifications PDF
7. 3PH L-L VOLTAGES
   1. Text or Button Selection – Nominal LT voltage:   
      Button 1: 400V or Nominal L-L Voltage: \_\_\_\_\_\_\_V (User Text Input)
   2. Acceptable Range (Text or Button Selection) –
      1. Button: Up to ±10%*or*
      2. Text: **±** \_\_\_ %
   3. Warning thresholds (Text or Button Selection) \* -
      1. Button: Warning thresholds: (> +10%) or (< −10%) *or*
      2. Text:(> +\_\_%) or (< −\_\_%)
   4. Critical thresholds (Text or Button Selection) \* -
      1. Button: (> +15%) or (< −15%) *or*
      2. Text:(> +\_\_%) or (< −\_\_%)
8. 3PH L-N VOLTAGES
   1. Text or Button Selection – Nominal LT voltage: \*  
      Button 1: 230V or Nominal L-N Voltage: \_\_\_\_\_\_\_V (User Text Input)
   2. Acceptable Range (Text or Button Selection) \* -
9. Button: Up to ±10%*or*
10. Text: **±** \_\_\_ %
    1. Warning thresholds (Text or Button Selection) \* -
11. Button: Warning thresholds: (> +10%) or (< −10%) *or*
12. Text:(> +\_\_%) or (< −\_\_%)
    1. Critical thresholds (Text or Button Selection) \* -
13. Button: (> +15%) or (< −15%) *or*
14. Text:(> +\_\_%) or (< −\_\_%)
15. PHASE IMBALANCE: Applicable for L-L & L-N 3PH Voltages
    1. Acceptable Range (Text or Button Selection)
16. Button Selection: Voltage imbalance up to ≤ 2% or
17. Voltage imbalance: ≤­­\_\_\_\_\_\_\_% (User Text Input)
    1. Warning threshold (Text or Button Selection)
18. Button Selection: Voltage imbalance 2 – 4% or User Text Input
    1. Critical threshold (Text or Button Selection)
19. Button Selection: Voltage imbalance > 4% or User Text Input
20. FREQUENCY
    1. Nominal Frequency: Button Selection: 50.0 Hz or 60 Hz
    2. Text or Button:
       1. Warning Thresholds: 49.5 Hz (low), 50.5 Hz (high)
       2. Critical Thresholds: 48.5 Hz (low), 51.5 Hz (high)
       3. Warning Max Deviation: ±1.0 Hz
       4. Critical Max Deviation: ±1.5 Hz

## DYNAMIC & USER TEXT INPUT

SECTION 2

user text input fields; apply unit normalization

* 1. PT Primary: \_\_\_\_\_\_\_\_\_V
  2. PT Secondary: \_\_\_\_\_\_\_\_\_V
  3. 3PH HT LOAD CURRENT
     1. R\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     2. Y\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     3. B\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     4. TOTAL PANEL RATED CURRENT: \_\_\_\_\_\_A
     5. Option to Upload live Image of Circuit Breaker (JPEG/PNG)
     6. Type of LT CB: \_\_\_\_\_\_ (E.g., MCCB, ACB)
     7. CB Make & Model No: \_\_\_\_\_\_\_\_
     8. Circuit Breaker – In (Rated Current): \_\_\_\_\_\_\_A
     9. Circuit Breaker – Ir Setting @ \_\_\_\_\_\_ x In (E.g., 0.4, 0.6. 0.8, 1.0)
     10. Circuit Breaker – Ir (Long-Time/Continuous Setting Current): \_\_\_\_\_\_A
         1. Auto fill logic – (Ir Setting \* In)
     11. Default Warning Threshold:
         1. Option 1☹80 – 85) % of Ir
         2. Option 2: (86 – 90) % of Ir
     12. Default Critical Threshold:
         1. Option 1☹91 – 94) % of Ir
         2. Option 2: (95 – 98) % of Ir
  4. HT Current Imbalance%:
     1. Apply same logic as Voltage Imbalance
     2. Default Warning Threshold: 10%
     3. Default Critical Threshold: 20%

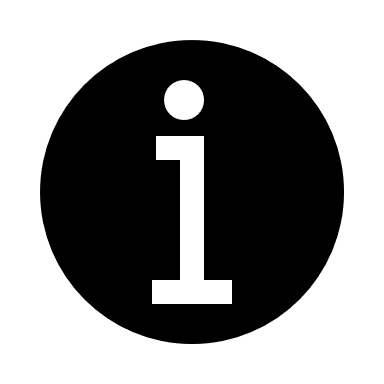
SECTION 3

* 1. RATED HT POWER:
     1. R\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     2. Y\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     3. B\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     4. TOTAL RATED POWER: \_\_\_\_\_\_\_\_\_KVA
     5. Acceptable Range: Power values per phase ≤100% of calculated rated capacity
     6. Warning Range: Per-phase power between 100% and 110% of rated values
     7. Critical Range: Power per phase >110% of rated values

SECTION 4

* 1. BASELINE ENERGY CONSUMPTION
     1. LT Incomer/Feeder Total Energy Consumption/Hour: Option 1: \_\_\_\_kVAh
     2. Rated monthly energy budget or baseline (optional): \_\_\_\_\_ kWh
     3. Energy charge per unit: \_\_\_\_\_\_\_\_\_\_\_ (Rs. /kWh).
  2. POWER FACTOR – S5
     1. Option to Apply the same logic as per HT PF Monitoring settings
     2. If the above option selected – display the pre filled fields to acknowledge
     3. PF Target: \_\_\_\_\_\_\_ (e.g. 0.99 (lag))
     4. Warning Threshold: < \_\_\_\_\_\_\_ (e.g. <0.95)
     5. Critical Threshold: < \_\_\_\_\_\_\_ (e.g. <0.90)
     6. PF Penalty & Incentive Table

## GENERAL FIELDS

1. Location (Building / Zone): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Exact site location (e.g., Substation-A, Utility Yard)
2. Department / Process Served: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Department or process the panel supplies (e.g., Admin, Production)
3. INSTALLATION RESPONSIBLE PERSONNEL
   1. Planned Installation Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Technician Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Technician Mobile Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Supervisor Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. EXISTING MFM SETTINGS (ESAI GATEWAY DEVICE)
   1. MFM Brand Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. MFM Model No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Modbus Address (Slave ID): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Baud Rate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. Parity / Stop Bits: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   6. MFM Wiring System: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   7. PT Primary (V): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   8. PT Secondary (V): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   9. CT Primary (A): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   10. CT Secondary (A): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. On filling of each section user must have a Help () icon to support & guide on input text (Front End)
6. At the end of each section, must have Acknowledge & Submit button, when clicked, a Pop-up message with Supporting Standards
7. Check and add all the IEC / Utility Board standards & Regulations
8. Toggle for Alert Behaviour: Acknowledge Below Points
   1. Trigger Warning alerts if any parameter exceeds Warning range in latest payload.
   2. Trigger Critical alerts if any parameter exceeds Critical range for 2 consecutive payloads.
   3. Auto-reset once parameter falls back within acceptable range in latest payload.

# MACHINE - SYSTEM CONFIG PAGE (INDIVIDUAL MACHINES)

## SECTION 1 - Static & Default Acknowledged System Configuration Panel

1. Machine Info Card
   1. ESAI DEVICE ID\*: \_\_\_\_\_\_\_\_\_\_\_\_\_ *(get from device installation form)*
   2. Name of Machine: \* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Machine ID: \*\_\_\_\_\_\_\_\_\_\_\_\_
   4. Machine Name Plate Details: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (10-25 words)
   5. ESAI Installation Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Date Selection Package)
   6. Machine Owner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   7. Machine Rated Power: \_\_\_\_\_\_\_\_\_\_ (KW/HP Button Selection)
   8. Option to Upload Image of MCC Panel (JPEG/PNG)
   9. Optional: Upload Panel Details & Specifications PDF
2. 3PH L-L VOLTAGES
   1. Nominal LT voltage\*: (Text or Button Selection)  
      Button: 400V or Nominal L-L Voltage: \_\_\_\_\_\_\_V (User Text Input)
   2. Acceptable Range (Text or Button Selection) \* -
      1. Button: Up to ±10%*or*
      2. Text: **±** \_\_\_ %
   3. Warning thresholds (Text or Button Selection) \* -
      1. Button: Warning thresholds: (> +10%) or (< −10%) *or*
      2. Text:(> +\_\_%) or (< −\_\_%)
   4. Critical thresholds (Text or Button Selection) \* -
      1. Button: (> +15%) or (< −15%) *or*
      2. Text:(> +\_\_%) or (< −\_\_%)
3. 3PH L-N VOLTAGES
   1. Text or Button Selection - Nominal LT voltage: \*  
      Button 1: 230V or Nominal L-N Voltage: \_\_\_\_\_\_\_V (User Text Input)
   2. Acceptable Range (Text or Button Selection) \* -
4. Button: Up to ±10%*or*
5. Text: **±** \_\_\_ %
   1. Warning thresholds (Text or Button Selection) \* -
6. Button: Warning thresholds: (> +10%) or (< −10%) *or*
7. Text:(> +\_\_%) or (< −\_\_%)
   1. Critical thresholds (Text or Button Selection) \* -
8. Button: (> +15%) or (< −15%) *or*
9. Text:(> +\_\_%) or (< −\_\_%)
10. PHASE IMBALANCE: Applicable for L-L & L-N 3PH Voltages
    1. Acceptable Range (Text or Button Selection)
11. Button Selection: Voltage imbalance up to ≤ 2% or
12. Voltage imbalance: ≤­­\_\_\_\_\_\_\_% (User Text Input)
    1. Warning threshold (Text or Button Selection)
13. Button Selection: Voltage imbalance 2 - 4% or User Text Input
    1. Critical threshold (Text or Button Selection)
14. Button Selection: Voltage imbalance > 4% or User Text Input
15. FREQUENCY
    1. Nominal Frequency: Button Selection: 50.0 Hz or 60 Hz
    2. Text or Button:
       1. Warning Thresholds: 49.5 Hz (low), 50.5 Hz (high)
       2. Critical Thresholds: 48.5 Hz (low), 51.5 Hz (high)
       3. Warning Max Deviation: ±1.0 Hz
       4. Critical Max Deviation: ±1.5 Hz

## DYNAMIC & USER TEXT INPUT

SECTION 2

user text input fields; apply unit normalization

* 1. PT Primary: \_\_\_\_\_\_\_\_\_V
  2. PT Secondary: \_\_\_\_\_\_\_\_\_V
  3. 3PH LOAD CURRENT
     1. R\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     2. Y\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     3. B\_PHASE CT PRIMARY CURRENT: *\_\_*A; CT SECONDARY CURRENT: \_\_A
     4. TOTAL PANEL RATED CURRENT: \_\_\_\_\_\_A
     5. Type of MPCB: \_\_\_\_\_\_
     6. MPCB - In (Rated Current): \_\_\_\_\_\_\_A
     7. MPCB – Ir Setting @ \_\_\_\_\_\_ x In (E.g., 0.4, 0.6. 0.8, 1.0)
     8. MPCB - Ir (Long-Time/Continuous Setting Current): \_\_\_\_\_\_A
        1. Auto fill logic – (Ir Setting \* In)
     9. Default Warning Threshold:
        1. Option 1:(80 – 85) % of Ir
        2. Option 2: (86 – 90) % of Ir
     10. Default Critical Threshold:
         1. Option 1:(91 – 94) % of Ir
         2. Option 2: (95 – 98) % of Ir
  4. HT Current Imbalance%:
     1. Apply same logic as Voltage Imbalance
     2. Default Warning Threshold: 10%
     3. Default Critical Threshold: 20%

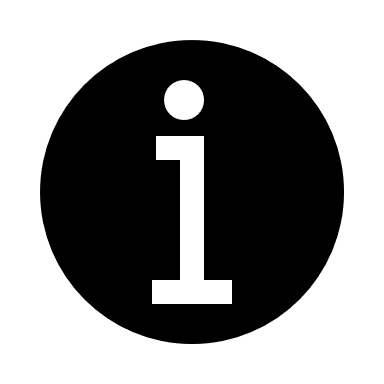
SECTION 3

* 1. RATED HT POWER:
     1. R\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     2. Y\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     3. B\_PHASE RATED POWER: \_\_\_\_\_\_\_KVA
     4. TOTAL RATED POWER: \_\_\_\_\_\_\_\_\_KVA
     5. Acceptable Range: Power values per phase ≤100% of calculated rated capacity
     6. Warning Range: Per-phase power between 100% and 110% of rated values
     7. Critical Range: Power per phase >110% of rated values

SECTION 4

* 1. BASELINE ENERGY CONSUMPTION
     1. LT Incomer/Feeder Total Energy Consumption/Hour: Option 1: \_\_\_\_kVAh
     2. Rated monthly energy budget or baseline (optional): \_\_\_\_\_ kWh
     3. Energy charge per unit: \_\_\_\_\_\_\_\_\_\_\_ (Rs. /kWh).
  2. POWER FACTOR – S5
     1. Option to Apply the same logic as per HT PF Monitoring settings
     2. If the above option selected – display the pre filled fields to acknowledge
     3. PF Target: \_\_\_\_\_\_\_ (e.g. 0.99 (lag))
     4. Warning Threshold: < \_\_\_\_\_\_\_ (e.g. <0.95)
     5. Critical Threshold: < \_\_\_\_\_\_\_ (e.g. <0.90)
     6. PF Penalty & Incentive Table

## GENERAL FIELDS – Section 5

1. Location (Building / Zone): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Exact site location (e.g., Substation-A, Utility Yard)
2. Department / Process Served: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Department or process the panel supplies (e.g., Admin, Production)
3. INSTALLATION RESPONSIBLE PERSONNEL
   1. Planned Installation Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Technician Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Technician Mobile Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Supervisor Name & Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. EXISTING MFM SETTINGS (ESAI GATEWAY DEVICE)
   1. MFM Brand Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. MFM Model No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Modbus Address (Slave ID): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Baud Rate: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. Parity / Stop Bits: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   6. MFM Wiring System: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   7. PT Primary (V): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   8. PT Secondary (V): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   9. CT Primary (A): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   10. CT Secondary (A): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. On filling of each section user must have a Help () icon to support & guide on input text (Front End)
6. At the end of each section, must have Acknowledge & Submit button, when clicked, a Pop-up message with Supporting Standards
7. Check and add all the IEC / Utility Board standards & Regulations
8. Toggle for Alert Behaviour: Acknowledge Below Points
   1. Trigger Warning alerts if any parameter exceeds Warning range in latest payload.
   2. Trigger Critical alerts if any parameter exceeds Critical range for 2 consecutive payloads.
   3. Auto-reset once parameter falls back within acceptable range in latest payload.