DOCUMENTO PREPARADO POR:

\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_, MATRÍCULA \_\_\_\_\_\_\_\_\_\_\_

INFORME DE LA CALIDAD DE LA ENERGÍA \_\_\_\_\_\_\_\_\_\_

MEDELLÍN, \_\_ DE \_\_\_ DEL 2025

|  |  |  |  |
| --- | --- | --- | --- |
| PROYECTO: INFORME DE LA CALIDAD DE LA ENERGÍA \_\_\_\_\_\_\_\_\_ | | | |
| DIRECCIÓN: | \_\_\_\_\_\_\_\_\_\_\_ | | |
| DOCUMENTO: | \_\_\_\_\_\_\_\_\_\_\_ | | |
| CONTIENE: | \_\_\_\_\_\_\_\_\_\_\_ | | |
| INFORME N° | REVISIÓN N° | CIUDAD | FECHA |
| \_\_\_\_\_\_\_ | \_\_\_\_\_\_\_ | \_\_\_\_\_\_ | \_\_\_\_\_\_\_\_ |
| ELABORÓ: | \_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| MATRÍCULA: | \_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| REVISÓ: | \_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| MATRÍCULA: | \_\_\_\_\_\_\_\_\_\_\_\_\_ | | |

TABLA DE CONTENIDO

ÍNDICE DE TABLAS

ÍNDICE DE IMÁGENES

INTRODUCCIÓN

OBJETIVOS

OBJETIVO GENERAL:

* Indicar las recomendaciones técnicas para garantizar la seguridad, proyección y estabilidad del servicio de energía de \_\_\_\_\_\_\_\_\_\_\_ en la ciudad de \_\_\_\_\_\_\_, basados en el estudio de calidad de la energía del establecimiento a través de un analizador de redes y de la tabulación y análisis de los datos conforme a la norma NTC 5001.

OBJETIVOS ESPECÍFICOS:

* Instalar el analizador de redes durante un periodo de ocho (8) días
* Descargar y tabular la información por medio de plantillas adaptadas al estudio de calidad de la energía
* Revisión visual de las acometidas principales de la instalación

NORMAS DE REFERENCIA

Las normas técnicas con las cuales se realizará la revisión son las siguientes:

* NTC 5001: Calidad de la potencia eléctrica. Límites y metodología de evaluación en punto de conexión común.
* IEEE standards associations, st. 1459, Definition for the measurement of electric power quantities under sinusoidal no sinusoidal, balanced or unbalanced conditions. New York 2010.

UBICACIÓN

La \_\_\_\_\_\_\_\_\_\_\_\_\_\_ se encuentra ubicada en \_\_\_\_\_\_\_\_ del barrio \_\_\_\_\_\_\_ en la ciudad de \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_. En la imagen X se indican las coordenadas de la ubicación del establecimiento.

ALCANCE

Este informe indica los valores de las magnitudes eléctricas obtenidos a través de analizador Circuitor, y por medio de tabulaciones y análisis profundo de los resultados, se dan a conocer recomendaciones que permitan mejorar y garantizar la estabilidad del suministro eléctrico y a la vez identificar las magnitudes que alteran las variables eléctricas las cuales dependiendo el caso son penalizables por operador de red.

RESUMEN DE REGISTROS DE MEDICIÓN

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **RESUMEN REGISTROS DE MEDICIÓN.** | | | | | | | | | | | | | |
| **MEDIDAS ASOCIADAS A LA POTENCIA ELÉCTRICA** | | | | | | | | | | | | | |
| **PARÁMETRO** | | **MIN** | | | **MED** | | | | **MAX** | | | | **OBSERVACIONES** |
| **VOLTAJE DE**  **LINEA**  **[V]** | **VL1-L2** | | | {{ registro.L12\_MIN\_PR | default("N/A") }} | | {{ registro.L12\_MED\_PR | default("N/A") }} | | | | | {{ registro.L12\_MAX\_PR | default("N/A") }} | | NA |
| **VL2-L3** | | | {{ registro.L23\_MIN\_PR | default("N/A") }} | | {{ registro.L23\_MED\_PR | default("N/A") }} | | | | | {{ registro.L23\_MAX\_PR | default("N/A") }} | |
| **VL3-L1** | | | {{ registro.L31\_MIN\_PR | default("N/A") }} | | {{ registro.L31\_MED\_PR | default("N/A") }} | | | | | {{ registro.L31\_MAX\_PR | default("N/A") }} | |
| **CORRIENTE DE**  **LINEA**  **[A]** | **IL1** | | | {{ registro.L1\_CORR\_MIN\_PR | default("N/A") }} | | {{ registro.L1\_CORR\_MED\_PR | default("N/A") }} | | | | | {{ registro.L1\_CORR\_MAX\_PR | default("N/A") }} | | NA |
| **IL2** | | | {{ registro.L2\_CORR\_MIN\_PR | default("N/A") }} | | {{ registro.L2\_CORR\_MED\_PR | default("N/A") }} | | | | | {{ registro.L2\_CORR\_MAX\_PR | default("N/A") }} | |
| **IL3** | | | {{ registro.L3\_CORR\_MIN\_PR | default("N/A") }} | | {{ registro.L3\_CORR\_MED\_PR | default("N/A") }} | | | | | {{ registro.L3\_CORR\_MAX\_PR | default("N/A") }} | |
| **CORRIENTE NEUTRO**  **[A]** | **IN** | | | {{ registro.LN\_CORR\_MIN\_PR | default("N/A") }} | | {{ registro.LN\_CORR\_MED\_PR | default("N/A") }} | | | | | {{ registro.LN\_CORR\_MAX\_PR | default("N/A") }} | | NA |
| **POTENCIA** | ACTIVA [kW] | | | {{ registro.PQS\_POT\_ACT\_MIN\_PR | default("N/A") }} | | {{ registro.PQS\_POT\_ACT\_MED\_PR | default("N/A") }} | | | | | {{ registro.PQS\_POT\_ACT\_MAX\_PR | default("N/A") }} | | NA |
| INDUCTIVA [kVAR] | | | {{ registro.PQS\_POT\_CAP\_MIN\_PR | default("N/A") }} | | {{ registro.PQS\_POT\_CAP\_MED\_PR | default("N/A") }} | | | | | {{ registro.PQS\_POT\_CAP\_MAX\_PR | default("N/A") }} | |
| CAPACITIVA [kVAR] | | | {{ registro.PQS\_POT\_IND\_MIN\_PR | default("N/A") }} | | {{ registro.PQS\_POT\_IND\_MED\_PR | default("N/A") }} | | | | | {{ registro.PQS\_POT\_IND\_MAX\_PR | default("N/A") }} | |
| APARENTE [kVA] | | | {{ registro.PQS\_POT\_APA\_MIN\_PR | default("N/A") }} | | {{ registro.PQS\_POT\_APA\_MIN\_PR | default("N/A") }} | | | | | {{ registro.PQS\_POT\_APA\_MIN\_PR | default("N/A") }} | |
| **MEDIDAS ASOCIADAS A LA CALIDAD DE LA ENERGÍA** | | | | | | | | | | | | | |
| **ENERGÍA** | | | **ACTIVA [kWh]** | | | | **{{ registro.EN\_ACTIVA\_MED\_PR | default("N/A") }}** | | | | | **NA** | |
| **INDUCTIVA [kVARh]** | | | | **{{ registro.EN\_CAPACITIVA\_MED\_PR | default("N/A") }}** | | | | |
| **CAPACITIVA [kVARh]** | | | | **{{ registro.EN\_INDUCTIVA\_MED\_PR | default("N/A") }}** | | | | |
| **FACTOR DE POTENCIA** | | | **INDUCTIVO** | | | | **{{ registro.FACT\_PO\_CAP\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.FACT\_PO\_CAP\_MED\_PR**  **| default("N/A") }}** | | **{{ registro.FACT\_PO\_CAP\_MAX\_PR**  **| default("N/A") }}** | | **NA** | |
| **CAPACITIVO** | | | | **{{ registro.FACT\_PO\_IND\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.FACT\_PO\_IND\_MED\_PR**  **| default("N/A") }}** | | **{{ registro.FACT\_PO\_IND\_MAX\_PR**  **| default("N/A") }}** | |
| **DESBALANCE** | | | **VOLTAJE [%]** | | | | **{{ registro.VALUE\_DESBTEN\_PR**  **| default("N/A") }}** | | | | | **NA** | |
| **CORRIENTE [%]** | | | | **{{ registro.VALUE\_DESBCORR\_PR**  **| default("N/A") }}** | | | | | **NA** | |
| **FLICKER** | | | **L1 [p.u]** | | | | **{{ registro.PLT\_FLICKER\_L1\_MED\_PR**  **| default("N/A") }}** | | | | | **NA** | |
| **L2 [p.u]** | | | | **{{ registro.PLT\_FLICKER\_L2\_MED\_PR**  **| default("N/A") }}** | | | | |
| **L3 [p.u]** | | | | **{{ registro.PLT\_FLICKER\_L3\_MED\_PR**  **| default("N/A") }}** | | | | |
| **THDV** | | | **L1 [%]** | | | | **{{ registro.THD\_DIST\_TENSION\_L1\_MAX\_PR**  **| default("N/A") }}** | | | | | **NA** | |
| **L2 [%]** | | | | **{{ registro.THD\_DIST\_TENSION\_L2\_MAX\_PR**  **| default("N/A") }}** | | | | |
| **L3 [%]** | | | | **{{ registro.THD\_DIST\_TENSION\_L3\_MAX\_PR**  **| default("N/A") }}** | | | | |
| **TDD** | | | **L1 [%]** | | | | **{{ registro.TDD\_LINEA\_1\_PR**  **| default("N/A") }}** | | | | | **NA** | |
| **L2 [%]** | | | | **{{ registro.TDD\_LINEA\_2\_PR**  **| default("N/A") }}** | | | | |
| **L3 [%]** | | | | **{{ registro.TDD\_LINEA\_3\_PR**  **| default("N/A") }}** | | | | |

**Resumen de Registros de Medición.**

*Tabla 1.Tabla de Resumen – Calidad de la Energía.*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.L12\_MIN\_PR | default("N/A") }}* | *{{ registro.L12\_MED\_PR | default("N/A") }}* | *{{ registro.L12\_MAX\_PR | default("N/A") }}* | *{{ registro.L23\_MIN\_PR | default("N/A") }}* | *{{ registro.L23\_MED\_PR | default("N/A") }}* | *{{ registro.L23\_MAX\_PR | default("N/A") }}* | *{{ registro.L31\_MIN\_PR | default("N/A") }}* | *{{ registro.L31\_MED\_PR | default("N/A") }}* | *{{ registro.L31\_MAX\_PR | default("N/A") }}* |
| **MÁXIMO** | *{{ registro.L12\_MIN\_MX | default("N/A") }}* | *{{ registro.L12\_MED\_MX | default("N/A") }}* | *{{ registro.L12\_MAX\_MX | default("N/A") }}* | *{{ registro.L23\_MIN\_MX | default("N/A") }}* | *{{ registro.L23\_MED\_MX | default("N/A") }}* | *{{ registro.L23\_MAX\_MX | default("N/A") }}* | *{{ registro.L31\_MIN\_MX | default("N/A") }}* | *{{ registro.L31\_MED\_MX | default("N/A") }}* | *{{ registro.L31\_MAX\_MX | default("N/A") }}* |
| **PROMEDIO** | *{{ registro.L12\_MIN\_PM | default("N/A") }}* | *{{ registro.L12\_MED\_PM | default("N/A") }}* | *{{ registro.L12\_MAX\_PM | default("N/A") }}* | *{{ registro.L23\_MIN\_PM | default("N/A") }}* | *{{ registro.L23\_MED\_PM | default("N/A") }}* | *{{ registro.L23\_MAX\_PM | default("N/A") }}* | *{{ registro.L31\_MIN\_PM | default("N/A") }}* | *{{ registro.L31\_MED\_PM | default("N/A") }}* | *{{ registro.L31\_MAX\_PM | default("N/A") }}* |
| **MÍNIMO** | *{{ registro.L12\_MIN\_MN | default("N/A") }}* | *{{ registro.L12\_MED\_MN | default("N/A") }}* | *{{ registro.L12\_MAX\_MN | default("N/A") }}* | *{{ registro.L23\_MIN\_MN | default("N/A") }}* | *{{ registro.L23\_MED\_MN | default("N/A") }}* | *{{ registro.L23\_MAX\_MN | default("N/A") }}* | *{{ registro.L31\_MIN\_MN | default("N/A") }}* | *{{ registro.L31\_MED\_MN | default("N/A") }}* | *{{ registro.L31\_MAX\_MN | default("N/A") }}* |

Tabla 2.Tabla de Cálculos - Tensión.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.L1\_CORR\_MIN\_PR | default("N/A") }}* | *{{ registro.L1\_CORR\_MED\_PR | default("N/A") }}* | *{{ registro.L1\_CORR\_MAX\_PR | default("N/A") }}* | *{{ registro.L2\_CORR\_MIN\_PR | default("N/A") }}* | *{{ registro.L2\_CORR\_MED\_PR | default("N/A") }}* | *{{ registro.L2\_CORR\_MAX\_PR | default("N/A") }}* | *{{ registro.L3\_CORR\_MIN\_PR | default("N/A") }}* | *{{ registro.L3\_CORR\_MED\_PR | default("N/A") }}* | *{{ registro.L3\_CORR\_MAX\_PR | default("N/A") }}* | *{{ registro.LN\_CORR\_MIN\_PR | default("N/A") }}* | *{{ registro.LN\_CORR\_MED\_PR | default("N/A") }}* | *{{ registro.LN\_CORR\_MAX\_PR | default("N/A") }}* |
| **MÁXIMO** | *{{ registro.L1\_CORR\_MIN\_MX | default("N/A") }}* | *{{ registro.L1\_CORR\_MED\_MX | default("N/A") }}* | *{{ registro.L1\_CORR\_MAX\_MX | default("N/A") }}* | *{{ registro.L2\_CORR\_MIN\_MX | default("N/A") }}* | *{{ registro.L2\_CORR\_MED\_MX | default("N/A") }}* | *{{ registro.L2\_CORR\_MAX\_MX | default("N/A") }}* | *{{ registro.L3\_CORR\_MIN\_MX | default("N/A") }}* | *{{ registro.L3\_CORR\_MED\_MX | default("N/A") }}* | *{{ registro.L3\_CORR\_MAX\_MX | default("N/A") }}* | *{{ registro.LN\_CORR\_MIN\_MX | default("N/A") }}* | *{{ registro.LN\_CORR\_MED\_MX | default("N/A") }}* | *{{ registro.LN\_CORR\_MAX\_MX | default("N/A") }}* |
| **PROMEDIO** | *{{ registro.L1\_CORR\_MIN\_PM | default("N/A") }}* | *{{ registro.L1\_CORR\_MED\_PM | default("N/A") }}* | *{{ registro.L1\_CORR\_MAX\_PM | default("N/A") }}* | *{{ registro.L2\_CORR\_MIN\_PM | default("N/A") }}* | *{{ registro.L2\_CORR\_MED\_PM | default("N/A") }}* | *{{ registro.L2\_CORR\_MAX\_PM | default("N/A") }}* | *{{ registro.L3\_CORR\_MIN\_PM | default("N/A") }}* | *{{ registro.L3\_CORR\_MED\_PM | default("N/A") }}* | *{{ registro.L3\_CORR\_MAX\_PM | default("N/A") }}* | *{{ registro.LN\_CORR\_MIN\_PM | default("N/A") }}* | *{{ registro.LN\_CORR\_MED\_PM | default("N/A") }}* | *{{ registro.LN\_CORR\_MAX\_PM | default("N/A") }}* |
| **MÍNIMO** | *{{ registro.L1\_CORR\_MIN\_MN | default("N/A") }}* | *{{ registro.L1\_CORR\_MED\_MN | default("N/A") }}* | *{{ registro.L1\_CORR\_MAX\_MN | default("N/A") }}* | *{{ registro.L2\_CORR\_MIN\_MN | default("N/A") }}* | *{{ registro.L2\_CORR\_MED\_MN | default("N/A") }}* | *{{ registro.L2\_CORR\_MAX\_MN | default("N/A") }}* | *{{ registro.L3\_CORR\_MIN\_MN | default("N/A") }}* | *{{ registro.L3\_CORR\_MED\_MN | default("N/A") }}* | *{{ registro.L3\_CORR\_MAX\_MN | default("N/A") }}* | *{{ registro.LN\_CORR\_MIN\_MN | default("N/A") }}* | *{{ registro.LN\_CORR\_MED\_MN | default("N/A") }}* | *{{ registro.LN\_CORR\_MAX\_MN | default("N/A") }}* |

Tabla 3.Tabla de Cálculos - Corriente.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.V1\_DESBTEN\_MED\_PR*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_MED\_PR*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_MED\_PR*  *| default("N/A") }}* | *{{ registro.DESBTEN\_PROMEDIO\_PR*  *| default("N/A") }}* | *{{ registro.V1\_DESBTEN\_DELTA\_PR*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_DELTA\_PR*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_DELTA\_PR*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBTEN\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.V1\_DESBTEN\_MED\_MX*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_MED\_MX*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_MED\_MX*  *| default("N/A") }}* | *{{ registro.DESBTEN\_PROMEDIO\_MX*  *| default("N/A") }}* | *{{ registro.V1\_DESBTEN\_DELTA\_MX*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_DELTA\_MX*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_DELTA\_MX*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBTEN\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.V1\_DESBTEN\_MED\_PM*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_MED\_PM*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_MED\_PM*  *| default("N/A") }}* | *{{ registro.DESBTEN\_PROMEDIO\_PM*  *| default("N/A") }}* | *{{ registro.V1\_DESBTEN\_DELTA\_PM*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_DELTA\_PM*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_DELTA\_PM*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBTEN\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.V1\_DESBTEN\_MED\_MN*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_MED\_MN*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_MED\_MN*  *| default("N/A") }}* | *{{ registro.DESBTEN\_PROMEDIO\_MN*  *| default("N/A") }}* | *{{ registro.V1\_DESBTEN\_DELTA\_MN*  *| default("N/A") }}* | *{{ registro.V2\_DESBTEN\_DELTA\_MN*  *| default("N/A") }}* | *{{ registro.V3\_DESBTEN\_DELTA\_MN*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBTEN\_MN*  *| default("N/A") }}* |

Tabla 4.Tabla de Cálculos – Desbalance de Tensión.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.V1\_DESBCORR\_MED\_PR*  *| default("N/A") }}* | *{{ registro.V2\_DESBCORR\_MED\_PR*  *| default("N/A") }}* | *{{ registro.V3\_DESBCORR\_MED\_PR*  *| default("N/A") }}* | *{{ registro.DESBCORR\_PROMEDIO\_PR*  *| default("N/A") }}* | *{{ registro.DESBCORR\_MAXMED\_PR*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBCORR\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.V1\_DESBCORR\_MED\_MX*  *| default("N/A") }}* | *{{ registro.V2\_DESBCORR\_MED\_MX*  *| default("N/A") }}* | *{{ registro.V3\_DESBCORR\_MED\_MX*  *| default("N/A") }}* | *{{ registro.DESBCORR\_PROMEDIO\_MX*  *| default("N/A") }}* | *{{ registro.DESBCORR\_MAXMED\_MX*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBCORR\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.V1\_DESBCORR\_MED\_PM*  *| default("N/A") }}* | *{{ registro.V2\_DESBCORR\_MED\_PM*  *| default("N/A") }}* | *{{ registro.V3\_DESBCORR\_MED\_PM*  *| default("N/A") }}* | *{{ registro.DESBCORR\_PROMEDIO\_PM*  *| default("N/A") }}* | *{{ registro.DESBCORR\_MAXMED\_PM*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBCORR\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.V1\_DESBCORR\_MED\_MN*  *| default("N/A") }}* | *{{ registro.V2\_DESBCORR\_MED\_MN*  *| default("N/A") }}* | *{{ registro.V3\_DESBCORR\_MED\_MN*  *| default("N/A") }}* | *{{ registro.DESBCORR\_PROMEDIO\_MN*  *| default("N/A") }}* | *{{ registro.DESBCORR\_MAXMED\_MN*  *| default("N/A") }}* | *{{ registro.VALUE\_DESBCORR\_MN*  *| default("N/A") }}* |

Tabla 5.Tabla de Cálculos – Desbalance de Corriente.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.PQS\_POT\_ACT\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MED\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MED\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MED\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MED\_PR*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MAX\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.PQS\_POT\_ACT\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MED\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MED\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MED\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MED\_MX*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MAX\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.PQS\_POT\_ACT\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MED\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MED\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MED\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MED\_PM*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MAX\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.PQS\_POT\_ACT\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MED\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_ACT\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MED\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_CAP\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MED\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_IND\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MED\_MN*  *| default("N/A") }}* | *{{ registro.PQS\_POT\_APA\_MAX\_MN*  *| default("N/A") }}* |

Tabla 6.Tabla de Cálculos – PQS Potencias.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.FP\_POT\_CAP\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MED\_PR*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MED\_PR*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MAX\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.FP\_POT\_CAP\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MED\_MX*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MED\_MX*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MAX\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.FP\_POT\_CAP\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MED\_PM*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MED\_PM*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MAX\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.FP\_POT\_CAP\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MED\_MN*  *| default("N/A") }}* | *{{ registro.FP\_POT\_CAP\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MED\_MN*  *| default("N/A") }}* | *{{ registro.FP\_POT\_IND\_MAX\_MN*  *| default("N/A") }}* |

Tabla 7.Tabla de Cálculos – Factor de Potencia.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.EN\_ACTIVA\_MED\_PR | default("N/A") }}* | *{{ registro.EN\_CAPACITIVA\_MED\_PR | default("N/A") }}* | *{{ registro.EN\_INDUCTIVA\_MED\_PR | default("N/A") }}* | *{{ registro.EN\_KWH\_PR | default("N/A") }}* | *{{ registro.EN\_KARH\_IND\_PR | default("N/A") }}* | *{{ registro.EN\_KVARH\_CAP\_PR | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_NEG\_PR | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_POS\_PR | default("N/A") }}* |
| **MÁXIMO** | *{{ registro.EN\_ACTIVA\_MED\_MX | default("N/A") }}* | *{{ registro.EN\_CAPACITIVA\_MED\_MX | default("N/A") }}* | *{{ registro.EN\_INDUCTIVA\_MED\_MX | default("N/A") }}* | *{{ registro.EN\_KWH\_MX | default("N/A") }}* | *{{ registro.EN\_KARH\_IND\_MX | default("N/A") }}* | *{{ registro.EN\_KVARH\_CAP\_MX | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_NEG\_MX | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_POS\_MX | default("N/A") }}* |
| **PROMEDIO** | *{{ registro.EN\_ACTIVA\_MED\_PM | default("N/A") }}* | *{{ registro.EN\_CAPACITIVA\_MED\_PM | default("N/A") }}* | *{{ registro.EN\_INDUCTIVA\_MED\_PM | default("N/A") }}* | *{{ registro.EN\_KWH\_PM | default("N/A") }}* | *{{ registro.EN\_KARH\_IND\_PM | default("N/A") }}* | *{{ registro.EN\_KVARH\_CAP\_PM | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_NEG\_PM | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_POS\_PM | default("N/A") }}* |
| **MÍNIMO** | *{{ registro.EN\_ACTIVA\_MED\_MN | default("N/A") }}* | *{{ registro.EN\_CAPACITIVA\_MED\_MN | default("N/A") }}* | *{{ registro.EN\_INDUCTIVA\_MED\_MN | default("N/A") }}* | *{{ registro.EN\_KWH\_MN | default("N/A") }}* | *{{ registro.EN\_KARH\_IND\_MN | default("N/A") }}* | *{{ registro.EN\_KVARH\_CAP\_MN | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_NEG\_MN | default("N/A") }}* | *{{ registro.EN\_FACT\_POTENCIA\_POS\_MN | default("N/A") }}* |

Tabla 8.Tabla de Cálculos – Consolidado de Horarios / Energías.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.THD\_DIST\_TENSION\_L1\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L2\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L3\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_DIST\_ARM\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.THD\_DIST\_TENSION\_L1\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L2\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L3\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_DIST\_ARM\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.THD\_DIST\_TENSION\_L1\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L2\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L3\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_DIST\_ARM\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.THD\_DIST\_TENSION\_L1\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L2\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L3\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_DIST\_ARM\_MN*  *| default("N/A") }}* |

Tabla 9.Tabla de Cálculos – Distorsión de Tensión.

|  |  |  |  |
| --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.THD\_DIST\_CORRIENTE\_L1\_MED\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L2\_MED\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L3\_MED\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.THD\_DIST\_CORRIENTE\_L1\_MED\_MX*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L2\_MED\_MX*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L3\_MED\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.THD\_DIST\_CORRIENTE\_L1\_MED\_PM*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L2\_MED\_PM*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L3\_MED\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.THD\_DIST\_CORRIENTE\_L1\_MED\_MN*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L2\_MED\_MN*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L3\_MED\_MN*  *| default("N/A") }}* |

Tabla 10.Tabla de Cálculos – Distorsión de Corriente.

|  |  |  |  |
| --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.TDD\_LINEA\_1\_PR*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_2\_PR*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_3\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.TDD\_LINEA\_1\_MX*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_2\_MX*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_3\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.TDD\_LINEA\_1\_PM*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_2\_PM*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_3\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.TDD\_LINEA\_1\_MN*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_2\_MN*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_3\_MN*  *| default("N/A") }}* |

Tabla 11.Tabla de Cálculos – Armónicos de Corriente de Cargabilidad TDD.

|  |  |  |  |
| --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.PLT\_FLICKER\_L1\_MED\_PR*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L2\_MED\_PR*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L3\_MED\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.PLT\_FLICKER\_L1\_MED\_MX*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L2\_MED\_MX*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L3\_MED\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.PLT\_FLICKER\_L1\_MED\_PM*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L2\_MED\_PM*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L3\_MED\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.PLT\_FLICKER\_L1\_MED\_MN*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L2\_MED\_MN*  *| default("N/A") }}* | *{{ registro.PLT\_FLICKER\_L3\_MED\_MN*  *| default("N/A") }}* |

Tabla 12.Tabla de Cálculos – Flicker PLT.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PERCENTIL** | *{{ registro.FACTOR\_K\_L1\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MIN\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MED\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MED\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MED\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MAX\_PR*  *| default("N/A") }}* |
| **MÁXIMO** | *{{ registro.FACTOR\_K\_L1\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MIN\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MED\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MED\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MED\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MAX\_MX*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MAX\_MX*  *| default("N/A") }}* |
| **PROMEDIO** | *{{ registro.FACTOR\_K\_L1\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MIN\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MED\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MED\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MED\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MAX\_PM*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MAX\_PM*  *| default("N/A") }}* |
| **MÍNIMO** | *{{ registro.FACTOR\_K\_L1\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MIN\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MED\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MED\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MED\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L1\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L2\_MAX\_MN*  *| default("N/A") }}* | *{{ registro.FACTOR\_K\_L3\_MAX\_MN*  *| default("N/A") }}* |

Tabla 13.Tabla de Cálculos – Factor K.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***THDV – Armónicos Individuales de Tensión*** | ***Línea 1 - PR*** | ***Línea 1 - MX*** | ***Línea 1 - PM*** | ***Línea 1 - MN*** | ***Línea 2 - PR*** | ***Línea 2 - MX*** | ***Línea 2 - PM*** | ***Línea 2 - MN*** | ***Línea 3 - PR*** | ***Línea 3 - MX*** | ***Línea 3 - PM*** | ***Línea 3 - MN*** |
| ***Armónico 3*** | *{{ registro.THDV\_ARM\_N3\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L3\_MN | default("N/A") }}* |
| ***Armónico 5*** | *{{ registro.THDV\_ARM\_N5\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L3\_MN | default("N/A") }}* |
| ***Armónico 7*** | *{{ registro.THDV\_ARM\_N7\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L3\_MN | default("N/A") }}* |
| ***Armónico 9*** | *{{ registro.THDV\_ARM\_N9\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L3\_MN | default("N/A") }}* |
| ***Armónico 11*** | *{{ registro.THDV\_ARM\_N11\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L3\_MN | default("N/A") }}* |
| ***Armónico 13*** | *{{ registro.THDV\_ARM\_N13\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L3\_MN | default("N/A") }}* |
| ***Armónico 15*** | *{{ registro.THDV\_ARM\_N15\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L1\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L1\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L1\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L2\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L2\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L2\_MN | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L3\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L3\_MX | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L3\_PM | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L3\_MN | default("N/A") }}* |

Tabla 14.Tabla de Cálculos – Armónicos de Distorsión de Tensión.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***DHIT – Armónicos Individuales de Corriente*** | ***Línea 1 - PR*** | ***Línea 1 - MX*** | ***Línea 1 - PM*** | ***Línea 1 - MN*** | ***Línea 2 - PR*** | ***Línea 2 - MX*** | ***Línea 2 - PM*** | ***Línea 2 - MN*** | ***Línea 3 - PR*** | ***Línea 3 - MX*** | ***Línea 3 - PM*** | ***Línea 3 - MN*** |
| ***Armónico 3*** | *{{ registro.DHIT\_ARM\_N3\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L3\_MN | default("N/A") }}* |
| ***Armónico 5*** | *{{ registro.DHIT\_ARM\_N5\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L3\_MN | default("N/A") }}* |
| ***Armónico 7*** | *{{ registro.DHIT\_ARM\_N7\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L3\_MN | default("N/A") }}* |
| ***Armónico 9*** | *{{ registro.DHIT\_ARM\_N9\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L3\_MN | default("N/A") }}* |
| ***Armónico 11*** | *{{ registro.DHIT\_ARM\_N11\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L3\_MN | default("N/A") }}* |
| ***Armónico 13*** | *{{ registro.DHIT\_ARM\_N13\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L3\_MN | default("N/A") }}* |
| ***Armónico 15*** | *{{ registro.DHIT\_ARM\_N15\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L1\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L1\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L1\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L2\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L2\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L2\_MN | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L3\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L3\_MX | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L3\_PM | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L3\_MN | default("N/A") }}* |

Tabla 15.Tabla de Cálculos – Armónicos de Distorsión de Corriente.

{{ registro.imagen\_Linea\_Tiempo\_Tension | default("N/A") }}

Imagen 1.Línea de Tiempo - Tensión.

{{ registro.imagen\_Linea\_Tiempo\_Corriente | default("N/A") }}

Imagen 2.Línea de Tiempo - Corriente.

{{ registro.imagen\_Linea\_Tiempo\_DesbTension | default("N/A") }}

Imagen 3.Línea de Tiempo – Desbalance de Tensión.

{{ registro.imagen\_Linea\_Tiempo\_DesbCorriente | default("N/A") }}

Imagen 4.Línea de Tiempo – Desbalance de Corriente.

{{ registro.imagen\_Linea\_Tiempo\_PQS\_ActApa | default("N/A") }}

Imagen 5.Línea de Tiempo – PQS – Potencia Activa / Potencia Aparente.

{{ registro.imagen\_Linea\_Tiempo\_PQS\_CapInd | default("N/A") }}

Imagen 6.Línea de Tiempo – PQS – Potencia Capacitiva / Potencia Inductiva.

{{ registro.imagen\_Linea\_Tiempo\_FactorPotencia | default("N/A") }}

Imagen 7.Línea de Tiempo – Factor de Potencia.

{% for dia, graficos\_dia in registro.graficos\_Barras\_Energias.items() %}

*Día: {{ dia }}*

{% for nombre\_grafico, imagen in graficos\_dia.items() %}

*- {{ nombre\_grafico }}*

{{ imagen }}

{% endfor %}

{% endfor %}

Imágenes (8). Barras con relación al Tiempo – Energías.

{{ registro.imagen\_Linea\_Tiempo\_DistTension | default("N/A") }}

Imagen 9.Línea de Tiempo – Distorsión Armónica de la Tensión.

{{ registro.imagen\_Linea\_Tiempo\_DistCorriente | default("N/A") }}

Imagen 10.Línea de Tiempo – Distorsión Armónica de la Corriente.

{{ registro.imagen\_Linea\_Tiempo\_CargTDD | default("N/A") }}

Imagen 11.Línea de Tiempo – Distorsión Armónica de Cargabilidad TDD.

{{ registro.imagen\_Linea\_Tiempo\_Flicker | default("N/A") }}

Imagen 12.Línea de Tiempo – Flicker PLT.

{{ registro.imagen\_Linea\_Tiempo\_FactorK | default("N/A") }}

Imagen 13.Línea de Tiempo – Factor K.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **VALORES DE REFERENCIA** | | | | |
| **REG. -10% VNOMINAL [V]** | | **VNOMINAL [V]** | **REG. +10% VNOMINAL [V]** | |
| **{{ registro.var\_Lim\_Inf\_Tension | default("N/A") }}** | | **{{ registro.var\_Nominal\_Value | default("N/A") }}** | **{{ registro.var\_Lim\_Sup\_Tension | default("N/A") }}** | |
| **VALORES DE REGISTRO DE MEDICIONES** | | | | |
| **V LINEA-LINEA** | **V MAXIMO [V]** | **VARIACION-MAX [%]** | **V MINIMO [V]** | **VARIACION-MIN [%]** |
| **VL1-L2** | **{{ registro.L12\_MAX\_PR | default("N/A") }}** | **{{ registro.val\_Pct\_Max\_VL1 | default("N/A") }} %** | **{{ registro.L12\_MIN\_PR | default("N/A") }}** | **{{ registro.val\_Pct\_Min\_VL1 | default("N/A") }} %** |
| **VL2-L3** | **{{ registro.L23\_MAX\_PR | default("N/A") }}** | **{{ registro.val\_Pct\_Max\_VL2 | default("N/A") }} %** | **{{ registro.L23\_MIN\_PR | default("N/A") }}** | **{{ registro.val\_Pct\_Min\_VL2 | default("N/A") }} %** |
| **VL3-L1** | **{{ registro.L31\_MAX\_PR | default("N/A") }}** | **{{ registro.val\_Pct\_Max\_VL3 | default("N/A") }} %** | **{{ registro.L31\_MIN\_PR | default("N/A") }}** | **{{ registro.val\_Pct\_Min\_VL3 | default("N/A") }} %** |

Tabla 16.Tabla de Valores de Referencia - Tensión.

|  |  |  |  |
| --- | --- | --- | --- |
| **VALORES DE REGISTRO DE CORRIENTES** | | | |
| ***IL-IN*** | **I MÍNIMA [A]** | **I PROMEDIO [A]** | **I MÁXIMA [A]** |
| **Línea 1** | {{ registro.L1\_CORR\_MIN\_PR | default("N/A") }} | {{ registro.L1\_CORR\_MED\_PR | default("N/A") }} | {{ registro.L1\_CORR\_MAX\_PR | default("N/A") }} |
| **Línea 2** | {{ registro.L2\_CORR\_MIN\_PR | default("N/A") }} | {{ registro.L2\_CORR\_MED\_PR | default("N/A") }} | {{ registro.L2\_CORR\_MAX\_PR | default("N/A") }} |
| **Línea 3** | {{ registro.L3\_CORR\_MIN\_PR | default("N/A") }} | {{ registro.L3\_CORR\_MED\_PR | default("N/A") }} | {{ registro.L3\_CORR\_MAX\_PR | default("N/A") }} |
| **Neutro** | NA | NA | NA |
| **TRANSFORMADOR [KVA]** | {{ registro.var\_Cap\_Trafo | default("N/A") }} | **INOMINAL** | {{ registro.var\_Corr\_Nominal\_Value | default("N/A") }} |

Tabla 17.Tabla de Valores de Referencia - Corriente.

|  |  |  |
| --- | --- | --- |
| **RANGO**  **DE**  **TENSIÓN** | **VALOR DE**  **REFERENCIA** | **VALOR DE**  **DESBALANCE** |
| **DESBALANCE DE TENSIÓN** | **REGISTRADO** |
| **Vn < 69 Kv** | **2%** | {{ registro. VALUE\_DESBTEN\_PR | default("N/A") }} % |
| **Vn** ≥ **69 Kv** | **1.50%** | {{ registro. VALUE\_DESBTEN\_PR\_2 | default("N/A") }} % |

*Tabla 18.Tabla de Valores de Referencia – Desbalance de Tensión.*

|  |  |  |
| --- | --- | --- |
| **RANGO**  **DE**  **TENSIÓN** | **VALOR DE**  **REFERENCIA** | **VALOR DE**  **DESBALANCE** |
| **DESBALANCE DE CORRIENTE** | **REGISTRADO** |
| **Vn < 69 Kv** | **20.00%** | {{ registro. VALUE\_DESBCORR\_PR | default("N/A") }} % |
| **Vn** ≥ **69 Kv** | **5.00%** | {{ registro. VALUE\_DESBCORR\_PR\_2 | default("N/A") }} % |

*Tabla 19.Tabla de Valores de Referencia – Desbalance de Corriente.*

|  |  |  |  |
| --- | --- | --- | --- |
| **REGISTROS DE POTENCIA** | | | |
| **POTENCIA** | **MÍNIMA** | **PROMEDIO** | **MÁXIMO** |
| ACTIVA | **{{ registro.PQS\_POT\_ACT\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_ACT\_MED\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_ACT\_MAX\_PR**  **| default("N/A") }}** |
| REACTIVA  INDUCTIVA | **{{ registro.PQS\_POT\_IND\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_IND\_MED\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_IND\_MAX\_PR**  **| default("N/A") }}** |
| APARENTE | **{{ registro.PQS\_POT\_APA\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_APA\_MED\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_APA\_MAX\_PR**  **| default("N/A") }}** |
| REACTIVA  CAPACITIVA | **{{ registro.PQS\_POT\_CAP\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_CAP\_MED\_PR**  **| default("N/A") }}** | **{{ registro.PQS\_POT\_CAP\_MAX\_PR**  **| default("N/A") }}** |

*Tabla 20.Tabla de Registros de Potencia.*

|  |  |  |
| --- | --- | --- |
| **SUBESTACIÓN [KVA]** | **CARGABILIDAD MÁXIMA** | **DISPONIBILIDAD DE CARGA** |
| {{ registro.var\_Cap\_Trafo | default("N/A") }} | {{ registro.PQS\_CARGABILIDAD\_MAX | default("N/A") }} | {{ registro.DISPONIBILIDAD\_CARGA | default("N/A") }} |

*Tabla 21.Tabla de Registros de Cargabilidad y Disponibilidad.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **REGISTROS DE FACTOR DE POTENCIA** | | | | |
| **FACTOR DE POTENCIA** | **VALOR DE REFERENCIA** | **MÍNIMO** | **PROMEDIO** | **MÁXIMO** |
| **INDUCTIVO** | **0.9** | **{{ registro.FP\_POT\_IND\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.FP\_POT\_IND\_MED\_PR**  **| default("N/A") }}** | **{{ registro.FP\_POT\_IND\_MAX\_PR**  **| default("N/A") }}** |
| **CAPACITIVO** | **0.9** | **{{ registro.FP\_POT\_CAP\_MIN\_PR**  **| default("N/A") }}** | **{{ registro.FP\_POT\_CAP\_MED\_PR**  **| default("N/A") }}** | **{{ registro.FP\_POT\_CAP\_MAX\_PR**  **| default("N/A") }}** |

*Tabla 22.Tabla de Registros de Factor de Potencia.*

|  |  |  |  |
| --- | --- | --- | --- |
| ***ÍNDICE DE ARMÓNICOS INDIVIDUALES DE TENSIÓN – PERCENTIL 95%*** | | | |
| ***NRO. ARMÓNICO*** | ***LÍNEA 1 (%)*** | ***LÍNEA 2 (%)*** | ***LÍNEA 3 (%)*** |
| ***Armónico 3*** | *{{ registro.THDV\_ARM\_N3\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N3\_L3\_PR | default("N/A") }}* |
| ***Armónico 5*** | *{{ registro.THDV\_ARM\_N5\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N5\_L3\_PR | default("N/A") }}* |
| ***Armónico 7*** | *{{ registro.THDV\_ARM\_N7\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N7\_L3\_PR | default("N/A") }}* |
| ***Armónico 9*** | *{{ registro.THDV\_ARM\_N9\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N9\_L3\_PR | default("N/A") }}* |
| ***Armónico 11*** | *{{ registro.THDV\_ARM\_N11\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N11\_L3\_PR | default("N/A") }}* |
| ***Armónico 13*** | *{{ registro.THDV\_ARM\_N13\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N13\_L3\_PR | default("N/A") }}* |
| ***Armónico 15*** | *{{ registro.THDV\_ARM\_N15\_L1\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L2\_PR | default("N/A") }}* | *{{ registro.THDV\_ARM\_N15\_L3\_PR | default("N/A") }}* |
| ***THDV TOTAL DE TENSIÓN*** | *{{ registro.THD\_DIST\_TENSION\_L1\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L2\_MAX\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_TENSION\_L3\_MAX\_PR*  *| default("N/A") }}* |

*Tabla 23.Tabla de Registros de Armónicos de Tensión.*

|  |  |  |  |
| --- | --- | --- | --- |
| ***ÍNDICE DE ARMÓNICOS INDIVIDUALES DE CORRIENTE – PERCENTIL 95%*** | | | |
| ***NRO. ARMÓNICO*** | ***LÍNEA 1 (%)*** | ***LÍNEA 2 (%)*** | ***LÍNEA 3 (%)*** |
| ***Armónico 3*** | *{{ registro.DHIT\_ARM\_N3\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N3\_L3\_PR | default("N/A") }}* |
| ***Armónico 5*** | *{{ registro.DHIT\_ARM\_N5\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N5\_L3\_PR | default("N/A") }}* |
| ***Armónico 7*** | *{{ registro.DHIT\_ARM\_N7\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N7\_L3\_PR | default("N/A") }}* |
| ***Armónico 9*** | *{{ registro.DHIT\_ARM\_N9\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N9\_L3\_PR | default("N/A") }}* |
| ***Armónico 11*** | *{{ registro.DHIT\_ARM\_N11\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N11\_L3\_PR | default("N/A") }}* |
| ***Armónico 13*** | *{{ registro.DHIT\_ARM\_N13\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N13\_L3\_PR | default("N/A") }}* |
| ***Armónico 15*** | *{{ registro.DHIT\_ARM\_N15\_L1\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L2\_PR | default("N/A") }}* | *{{ registro.DHIT\_ARM\_N15\_L3\_PR | default("N/A") }}* |
| ***THDI TOTAL DE CORRIENTE*** | *{{ registro.THD\_DIST\_CORRIENTE\_L1\_MED\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L2\_MED\_PR*  *| default("N/A") }}* | *{{ registro.THD\_DIST\_CORRIENTE\_L3\_MED\_PR*  *| default("N/A") }}* |
| ***TDD TOTAL DE DEMANDA*** | *{{ registro.TDD\_LINEA\_1\_PR*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_2\_PR*  *| default("N/A") }}* | *{{ registro.TDD\_LINEA\_3\_PR*  *| default("N/A") }}* |

*Tabla 24.Tabla de Registros de Armónicos de Corriente.*

|  |  |  |
| --- | --- | --- |
| ***RANGO DE TENSIÓN*** | ***NÚMERO DE LÍNEA*** | ***VALOR DEL PLT*** |
| ***Vn < 69 kV*** | ***1*** | *{{ registro.PLT\_FLICKER\_L1\_MED\_PR*  *| default("N/A") }}* |
| ***2*** | *{{ registro.PLT\_FLICKER\_L2\_MED\_PR*  *| default("N/A") }}* |
| ***3*** | *{{ registro.PLT\_FLICKER\_L3\_MED\_PR*  *| default("N/A") }}* |

*Tabla 25.Tabla de Registros de Flicker PLT.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***E. Activa*** | ***E. Capacitiva*** | ***E. Inductiva*** | ***KWH*** | ***KARH\_IND*** | ***KVARH\_CAP*** | ***F.P. III -*** | ***F.P. III*** |
| *{% for row in registro.table\_Data\_Energy %}* | | | | | | | |
| *{{ row['E.Activa T1'] }}* | *{{ row['E.Capacitiva T1'] }}* | *{{ row['E.Inductiva T1'] }}* | *{{ row['KWH'] }}* | *{{ row['KARH\_IND'] }}* | *{{ row['KVARH\_CAP'] }}* | *{{ row['F.P. III -'] }}* | *{{ row['F.P. III'] }}* |
| *{% endfor %}* | | | | | | | |