

OMNI TRAF0

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## Description

The Omni Trafo was developed to integrate electrical power transformers from distribution networks with smart grids.

This equipment sends real-time information, allowing remote management of important network data such as voltage, current, power flow, energy, temperature, overload, among others, mapping its operation, predicting the lifespan of assets, and assessing technical and non-technical losses.

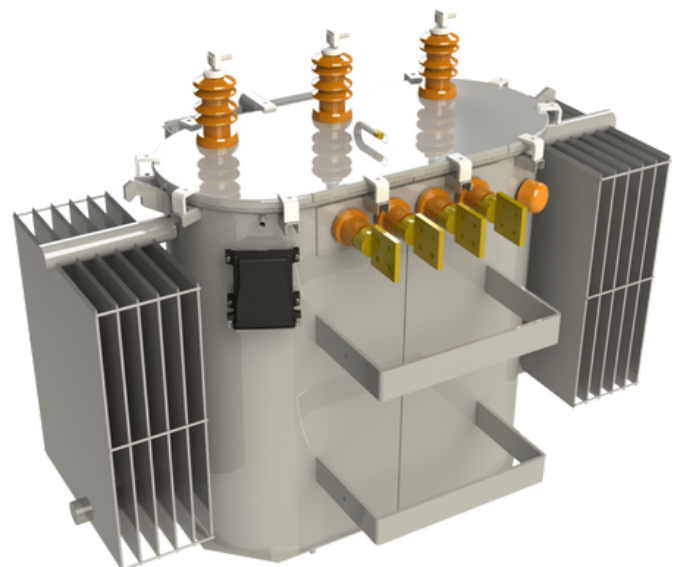
Being a semi-distributed meter, it provides energy balance between the feeder and the consumption centers. The equipment sends data remotely, improves the information structure with systemic forecasts, and hourly seasonal billing.

### Benefits:

- Consumption and expenditure history;
- Transformer self-diagnosis;
- Proposes a new standard of meter ideal for commercial, industrial consumers, and networks with non-technical losses.

## Features

- Detection of power outage;
- Supervision and measurement of low-voltage transformer (voltage and current);
- Internal temperature measurement;
- Power factor;
- Current and voltage harmonics;
- Voltage, current, and load imbalances;
- Analysis of transformer lifespan loss;
- Energy balance measurement for comparison and assessment of technical and non-technical losses.



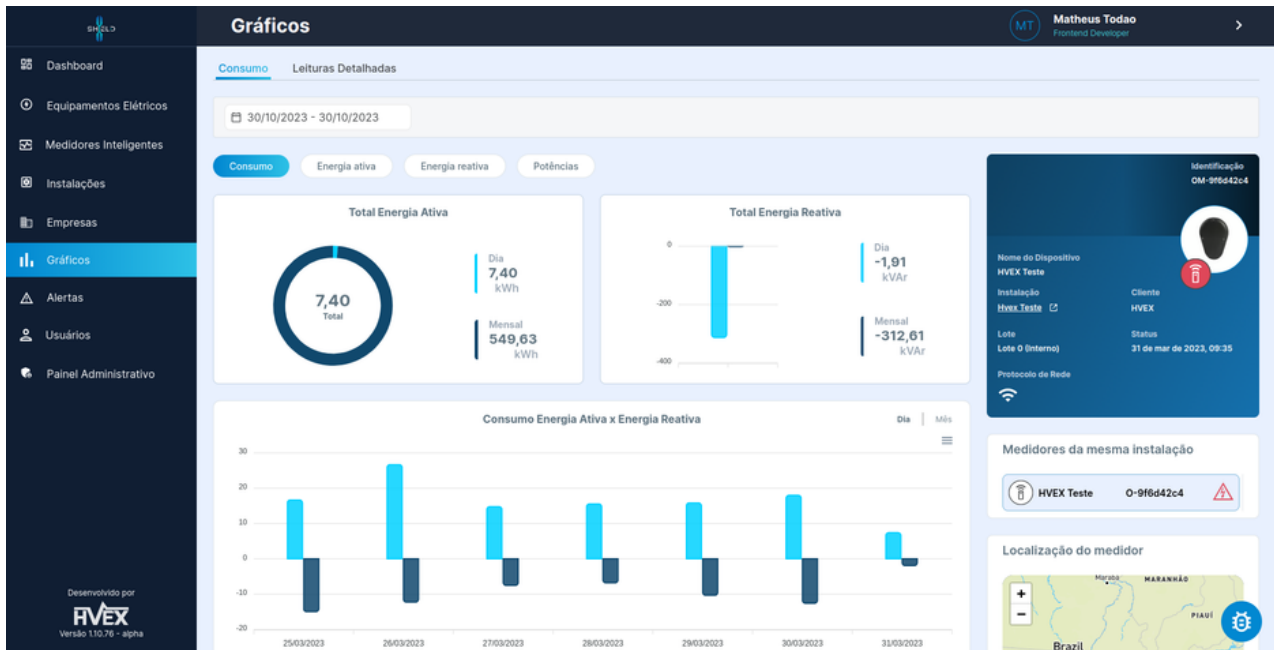
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## Web Interface

- Customer, user, and installation management;
- Intuitive interface, aggregating information for the administrator;
- Business Intelligence tools;
- Platform for data visualization updated every 5 minutes;
- Multiple levels of access for inspection, from the consumer to the utility manager;
- Excellent tool for energy management in consumers with mini or micro photovoltaic generation: the meter is at the connection point with the utility.

## Benefits

- Low measurement cost;
- Fraud-proof, as the measuring instruments will be internal to the transformer;
- Sensor network around the board will detect attempted fraud;
- Improved analysis quality by reducing the sampling space, clearly defining the transformers' performance, and possible reallocation of productive resources.



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## Modular Connection

The user can change the communication mode of the Omni Trafo by simply disconnecting the communication board from its terminals and replacing it with one that supports the desired communication technology.

The Omni Trafo is a proven solution for asset monitoring.

Through this equipment, critical network information is sent in real-time, enabling remote data management such as:

- Wi-Fi technology is standardized by IEEE 802.11, which defines related protocols. This type of communication can be implemented at different frequency levels, but the most common, also applied to the Omni Trafo, is 2.4 GHz.
- Narrow Band (NB-IoT) technology offers efficient and low-power connectivity, ideal for monitoring and control devices in the electrical sector.

- Communication with support for LoRa operates at a frequency of 915 MHz and has a range of 5 to 15 km, depending on the urban barriers between the installation location and the Gateway.
- Similar to GSM, communication via LTE network also has wide coverage in Brazil. Regarding the Operating Frequency, the Omni Trafo is prepared for all telecommunications operators in Brazil.



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## Technical Specifications

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Applied to	Single-phase, two-phase and three-phase transformer
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Power consumption	< 2 W peak
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Weight	1,5 kg
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Measurements	164 mm x 176 mm x 64 mm
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Reading voltage	0 to 300 V phase-ground (0,2% uncertainty)
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Modular connection	Wi-Fi, GSM, LoRa or LTE
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Reading current	Split Core CT (up to 200 A)
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Rogowski CT (up to 2 kA)
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Notes	For voltages greater than 127 Volts and 220 Volts, it is necessary to use an HVEX capacitive divider.
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For industrial customers who experience frequent surge events on the network, the ideal solution is Omni Trafo coupled to a panel.
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We provide solutions for improvement of electrical energy generation, transmission and distribution efficiency, quality and reliability. With a highly specialized and experienced team in research, development and innovation, HVEX develops tailor-made solutions for Brazilian and foreign markets. Wide range of products with solutions focused on signal transduction, measurement, monitoring and protection.



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