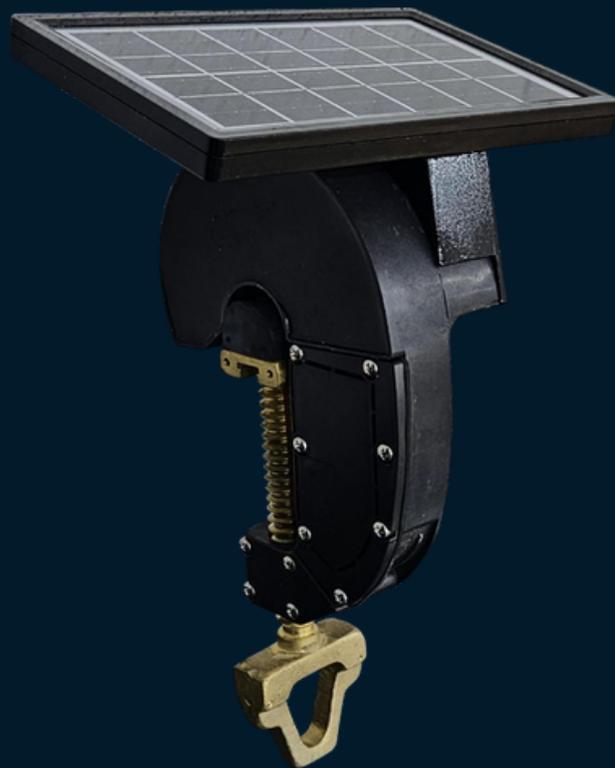


SMART GRIDS

FAULT INDICATOR



SMART GRIDS

Description

The HVEX Fault Indicator is a current sensor with specific communication and function capabilities for fault detection. The sensor provides a local indication of a fault occurrence via a high-intensity lighting system and is equipped with a LoRa or NB-IoT communication module for remote indication via the HVEX system.

Features:

- It identifies faults, sending alerts instantly through operational logic;
- Using the measured RMS current data and operational status, it recognizes normal operation;
- Detection of permanent and temporary absences.

The equipment is easy to install as it is non-intrusive, since it uses charging via a photovoltaic panel. This installation can be done using a maneuvering rod on energized power lines.

All equipment settings are configured via Bluetooth using a dedicated app, available for download on the Play Store.

Operation

First, the HVEX Fault Indicator must be turned on using a magnet that will be included with the equipment. It will be on if the LED flashes twice. If it flashes three times, this indicates that the equipment is off.

With the equipment turned on, the settings must be configured via the app.

After completing the previous step, the equipment is installed on the network. It is recommended that the installation be carried out at a distance of 0.9 m to 1.8 m from the pole's crossarm.

The fault indicator should be inserted into the operating rod via the anchor, securing it with the clamp. The equipment must have the conductor connection channel open enough so that the indicator can be hoisted onto this phase conductor of the network.

The operator must achieve maximum channel closure by rotating the operating rod until the cable is fully wrapped around the opening.



Technical Specifications

Standards Met	IEC 60529, IEEE Std. 495, IEC 60255-21, IEC 60068-2, IEC 60060-1, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8	
Degree of protection	IPx5, IP6x	
Operating temperature	-40° a 85 °C (40° a 185 °F)	
Cable gauge	Up to 38 mm	
Dimensions without photovoltaic panel	151 mm x 220 mm x 83 mm (5,44" x 8,66" x 3,25")	
Weight	1,7 kg (3,7 lb)	
Battery	3.7 VDC (self-recharging by induction)	
Certifications - Brazil	ANATEL	
Communication	NB-IoT	GPRS/EDGE 850/900/1800/1900 MHz
	LoRa	902 - 928 MHz
Parameterization	Bluetooth	2,402 – 2,480 GHz
Voltage	Voltage presence indicator	
Nominal voltage	Up to 138 kV (line)	
Current measurement	5 A – 10 kA; 5% accuracy	
Missing item detection	Current level or maximum variation di/dt	
Trip current range	50 A – 10 kA	
di/dt range of variation	80 A/ms – 10 kA/ms	

Technical Specifications

Signalable events	Permanent absence and temporary absence
Unmarkable events	Inrush current, surge current, and load increase.
IPx5 and IP6x Protection Test	IEC 60529
Load Withstanding Test	IEEE Std. 495
Vibration and Impact Resistance Testing	IEC 60255-21
Temperature Cycle Test	IEC 60068-2
Applied Voltage and Energization Test	IEC 60060-1
Atmospheric Impulse Test	IEC 60060-1
Electrostatic Discharge Immunity Test	IEC 61000-4-2
Irradiated RF Immunity Assay	IEC 61000-4-3
Outbreak Immunity Trial	IEC 61000-4-5
RF Immunity Assay Conducted	IEC 61000-4-6
Magnetic Field Immunity Test	IEC 61000-4-8

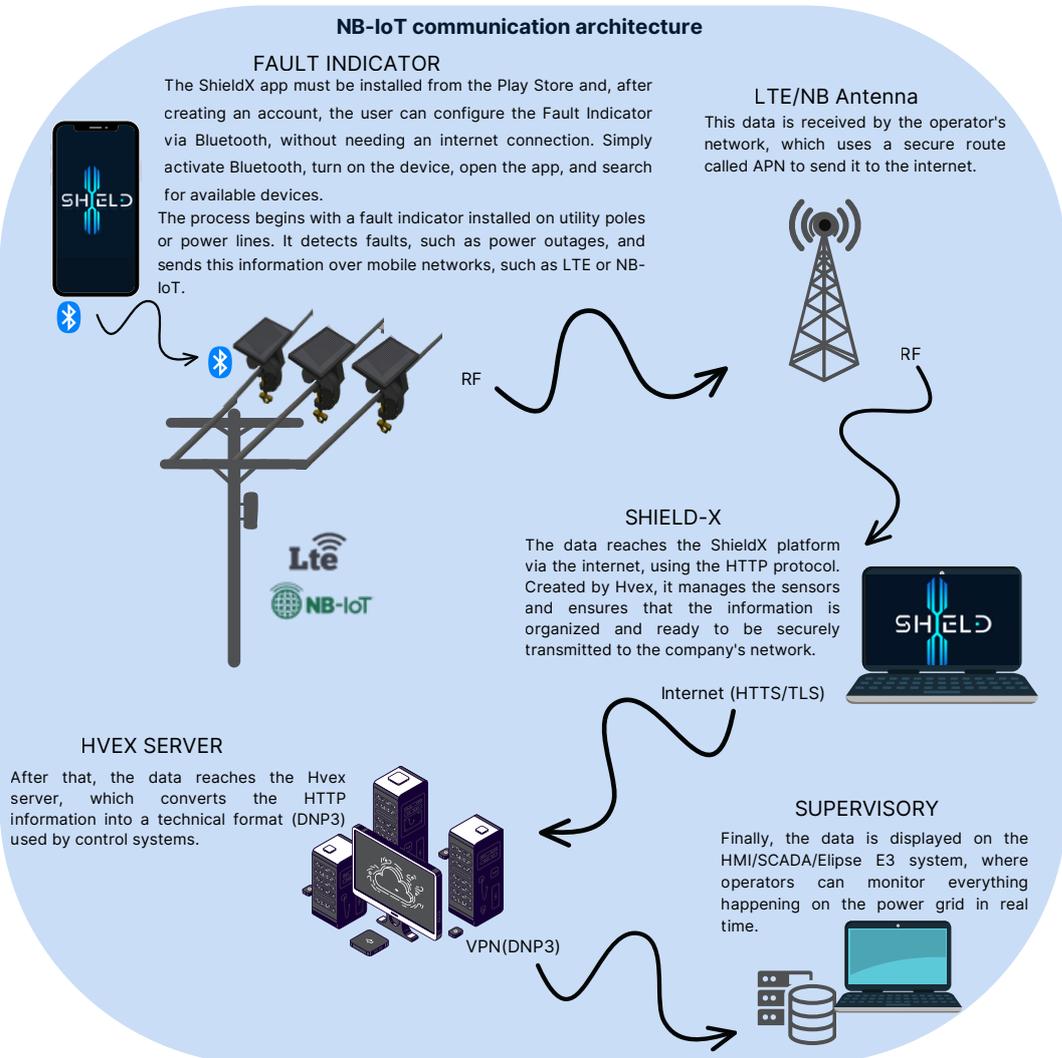
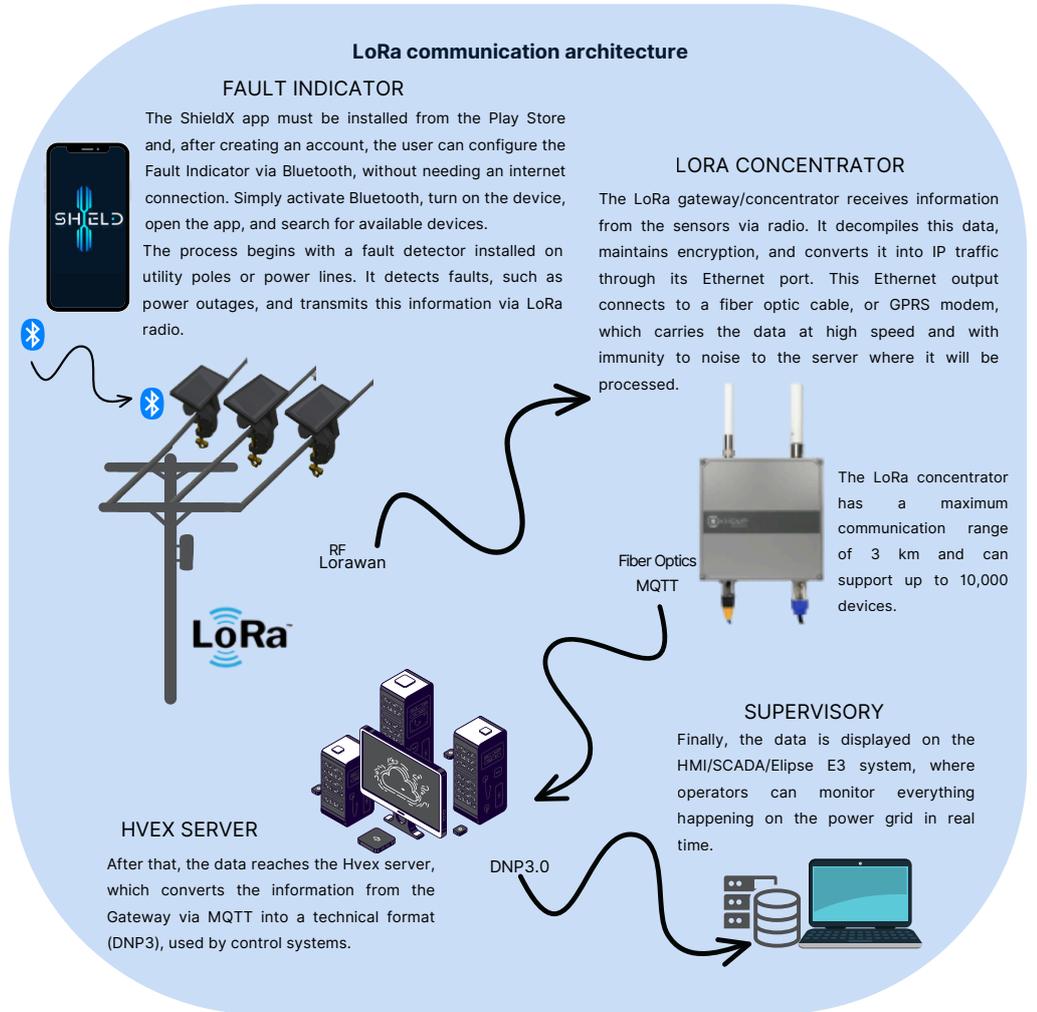
Charging circuit

Photovoltaic panel

Decoupled from the line

We provide solutions for improving the efficiency and quality of the power generation, transmission, and distribution sectors. With a highly specialized team experienced in research, development, and innovation, HVEX has developed tailor-made solutions for the Brazilian market. A wide range of products with solutions focused on signal transduction for measurement and protection.

Communication architecture



HVEX

Driving Innovation



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