

MONITORING SOLUTIONS FOR SMART GRIDS

The acquisition of Kries expands TE's portfolio in power grid monitoring, protection and automation systems. By adding intelligence, grid operators can make their distribution grid smarter and more flexible.

Emerging Challenges in Distribution Grids

The transformation of distribution grids is an ongoing process. The way electricity is generated, renewable energies and the increasing need for power availability all contribute to causing stress, grid saturation or over-voltages on electrical grids, particularly those which are outdated.

It is critical for utilities and industrial plant owners to have the right solution in place to monitor power flow, using real time data. Adjusting to changing conditions with intelligent monitoring solutions will make power grids more flexible and reliable.

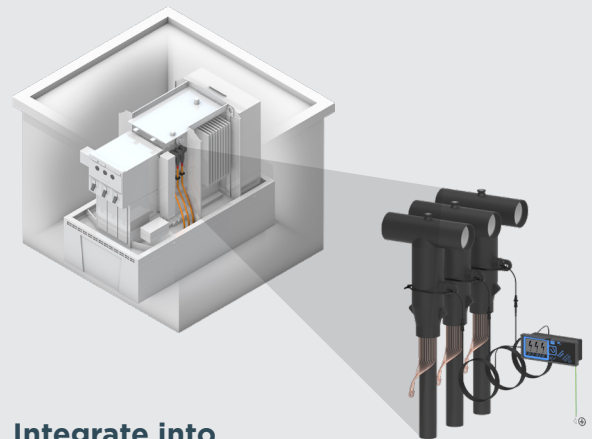
Smarter Solutions for Reliable Connections

We believe in enabling smarter, more reliable and sustainable power grids.

Our Raychem cable accessories, paired with Kries devices, enable our customers to gain crucial data about their networks, helping to prevent failures and reducing both the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI). Rather than deploying costly and labor-intensive upgrades on entire networks, grid monitoring devices can pinpoint faults and weak connections, providing an effective solution for a fraction of the investment.

1 MILLION +

units of Kries voltage detecting systems installed worldwide



Integrate into new projects, or retrofit to existing equipment.

Our solutions adapt to new or retrofit installations for a wide array of applications including:



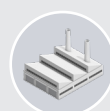
AIS/GIS Switchgear & Transformers



Wind Energy



Solar Energy



Industrial & Commercial



Data Center



Underground Distribution

CAP-LINE - VOLTAGE DETECTION AND PARTIAL DISCHARGE INDICATION FOR SWITCHGEARS

The Kries CAP-Line is a monitoring solution, engineered for permanent voltage monitoring and detection. It comes with an integrated screen which displays partial discharge, preventing impending failures. It offers improved personal safety for grid operators as it is not necessary to open the switchgear to take voltage measurements, thereby protecting the operator against incidental contact with energized equipment.



Deadbreak Elbow



Connecting Cable



CAPDIS R4.5
(Voltage detection)



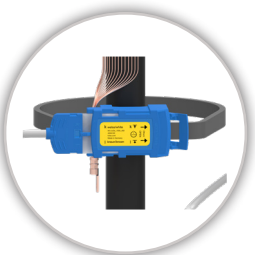
CAPDIS R5
(Voltage detection
+ Partial Discharge)

Features & Benefits

- Permanent voltage monitoring.
- Replaces hot-sticks and clamping voltage detectors, increasing reliability and safety by eliminating the risk of electric arc when opening the switchgear.

IKI-LINE - FAULT PASSAGE DETECTION AND INDICATION FOR UNDERGROUND DISTRIBUTION GRIDS

The Kries IKI-Line monitors over-current and fault conditions enabling a faster fault location and reducing the outage duration. IKI-23, combined with CAPDIS devices, improves SAIDI indicators by enabling directional fault indication, reducing the Mean Time to Repair (MTTR) for operators.



Split Core Current
Transformer



IKI-10-Light
(Visual Indication via
Integrated LED)



IKI-23
(Earth Fault Detection)



IKI-23
(Directional Fault Detection
when combined with CAPDIS)

Features & Benefits

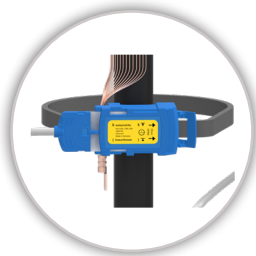
- Improves the time to locate a fault on the grid.
- Fault prediction with intermittent earth fault detection.
- Possibility to combine IKI-23 with CAPDIS for directional fault detection and voltage monitoring.

IKI-50 - GRID INSPECTOR AND REMOTE CONTROL FOR SWITCHGEARS

Kries IKI-50 is a compact and easy-to-install field monitoring and control device, enabling grid visibility and transparency. It can be integrated into switchgears to provide load and fault information, preventing overloads or grid saturation. Combined with our Smart RSTI, IKI-50 is able to monitor both voltage and current with one device, turning the switchgear into a digital substation.



Smart RSTI
(Voltage Measurement)



Split Core Current
Transformer



Grid Inspector IKI-50
(Fault Detection
& Remote Control)



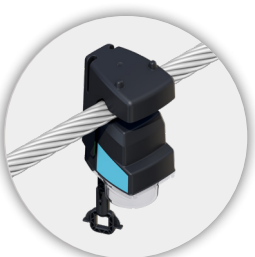
IKI-50 + CAPDIS
(Directional Fault
Detection)

Features & Benefits

- Power load monitoring increasing grid visibility.
- Enables fault detection reducing downtime (SAIDI).
- Remote control and network automation, improving grid flexibility and increasing reliability.

IKI-OVERHEAD (OH) - FAULT PASSAGE INDICATOR FOR DISTRIBUTION OVERHEAD LINES

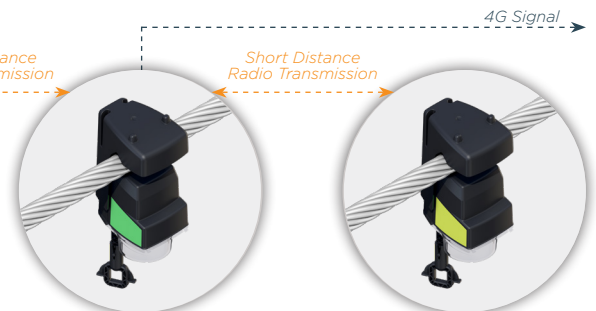
Kries IKI-OH portfolio are fault passage indicators for distribution overhead lines from 1 to 36 kV. They are engineered to monitor for fault conditions such as short circuits, temporary and ground faults on overhead lines. The IKI-Overhead indicates a fault condition locally with integrated LEDs, whereas the combination of IKI-Overhead-Radio and Butler allow remote reporting to a SCADA software.



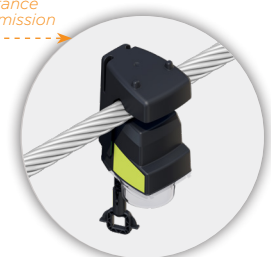
IKI-Overhead
Visual Indication



IKI-Overhead Radio
Radio Link Up To 70m



IKI-Overhead Butler
Fault Indicator - 4G

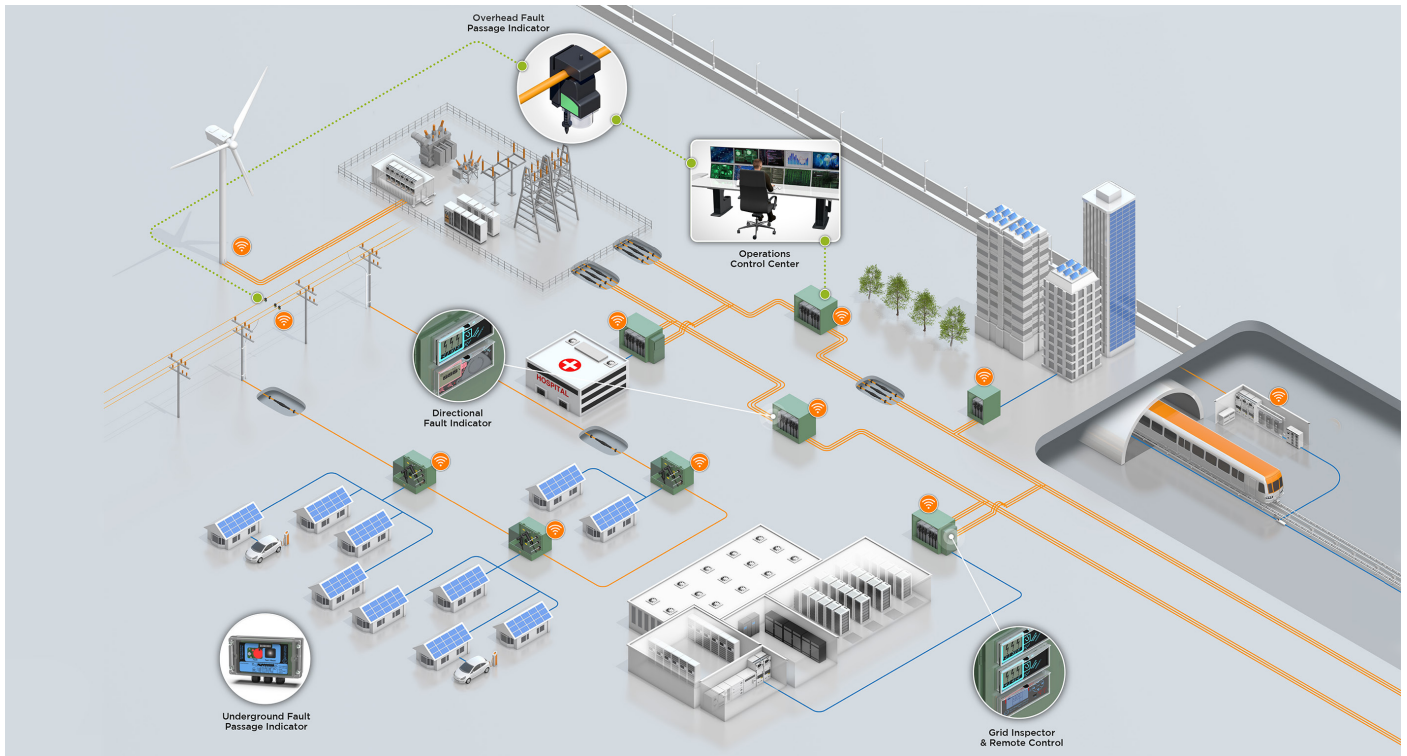


IKI-Overhead Radio

Features & Benefits

- Install & forget solution - Long battery life (10 to 15 years)
- Easy installation on energized power lines.
- Ability to detect broken or fallen lines.
- Reduced downtime - Faster to locate the source of the fault.

OUR SOLUTIONS ADAPT TO NEW OR RETROFIT INSTALLATIONS FOR A WIDE ARRAY OF APPLICATIONS



+ Grid Monitoring
+ Reduced Cost of Ownership

+ Easy, Fast, Safe Operation
+ Power Flow Monitoring

+ Grid Transparency
+ Grid Reliability

Learn more: [TE.com/energy](https://www.te-connectivity.com/energy)

© 2022 TE Connectivity. All Rights Reserved. GN-BRO-18-GRID MONITORING IEEE-04-23-EN

TE, TE Connectivity, TE connectivity (logo), EVERY CONNECTION COUNTS are trademarks owned or licensed by TE Connectivity. Other logos, product and company names mentioned herein may be trademarks of their respective owners. While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions, specifications, and/or information contained herein are for reference purposes only and are subject to change without notice. Consult TE for the latest dimensions, specifications, and/or information. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

Kries is now part of
 TE Connectivity.

Connect with us:
[TE.com/energy-contact](https://www.te-connectivity.com/energy-contact)