

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.

SMARTER SOLUTIONS FOR RELIABLE CONNECTIONS

Locating a fault on hundreds of kilometers of power lines is a challenge for any distribution network owner. Aging infrastructure, extreme weather events, wildlife interaction, fallen conductors, or even the increased demand for electricity, can cause power interruptions in high fault currents. These unplanned outages must be resolved promptly to minimize the impact on consumers.

Our grid monitoring devices pinpoint faults and weak connections, providing an effective tool for power monitoring and asset management. Gain crucial data thanks to TE Raychem cable accessories and TE Kries fault indicators, to prevent failures and reduce both the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI).

INCREASE YOUR GRID VISIBILITY WITH OUR SMART SOLUTIONS



+ Grid Monitoring
+ Reduced Cost of Ownership

+ Easy, Fast, Safe Operation
+ Power Flow Monitoring

+ Grid Transparency
+ Grid Reliability


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

Our Kries CAP-Line is a permanently installed voltage monitoring system. It comes with an integrated screen which indicates the presence of partial discharge, helping to prevent potential failures. CAP-line of products offer improved personal safety as it is not necessary to open the switchgear to take voltage measurements. Grid operators are thereby protected against incidental contact with energized equipment.



Switchgear Connectors



Adapter Set



CAPDIS R4.5
(Voltage Detection)



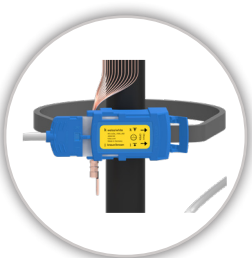
CAPDIS R5
(Voltage detection
+ Partial Discharge)

Features & Benefits

- Permanent voltage monitoring.
- Increased reliability and safety by eliminating the risk of electric arc when opening the switchgear.
- Preventive fault detection with partial discharge.

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

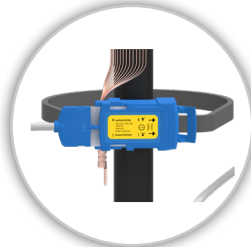
- Improves the time to locate a fault on the grid.
- Fault prediction with intermittent earth fault detection.
- Possibility to combine IKI-23 with CAPDIS for directional fault detection and voltage monitoring.

IKI-50 & IKI-55 - ADVANCED SUBSTATION FEEDER CONTROL UNITS FOR SWITCHGEARS

TE Kries IKI-50 and IKI-55 are compact and easy-to-install field monitoring and control devices, enabling grid visibility, transparency and network automation. They can be integrated into switchgears to provide load and fault information, preventing overloads or grid saturation. Combined with our Smart RSTI, they are 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*



*Substation Feeder
Control Unit IKI-50
(Remote Control)*



*Advanced Substation
Feeder Control Unit IKI-55
(Network Automation)*

Features & Benefits

- Minimize downtime with the remote control and automation switch
- Prevent outages thanks to partial discharge detection with CAPDIS-S2_55
- Integrate seamlessly with your SCADA system and compatible with a wide range of protocols

KFDI - KRIES FEEDER INSPECTOR FOR NEW AND RETROFIT SWITCHGEARS

The TE Kries Feeder Inspector (KFDI) is an advanced solution combining CAPDIS-Sx_55 (R5), enabling voltage detection and partial discharge indication, along with IKI fault current indicators, into an all-in-one plug-and-play magnetic compact unit. The KFDI is a cost-effective and easy-to-install solution for modernizing and upgrading medium voltage distribution switchgears and offshore wind installations.



*KFDI-23
(Directional fault detection)*



*KFDI-50
(Remote Control)*



*KFDI-55
(Network Automation)*

Features & Benefits

- Prevent unplanned outages by detecting early signs of faults
- Significantly reduce the time to locate faults
- Combine voltage and partial discharge detection with load flow monitoring in one plug-and-play solution

ONE CONNECTIVITY PARTNER

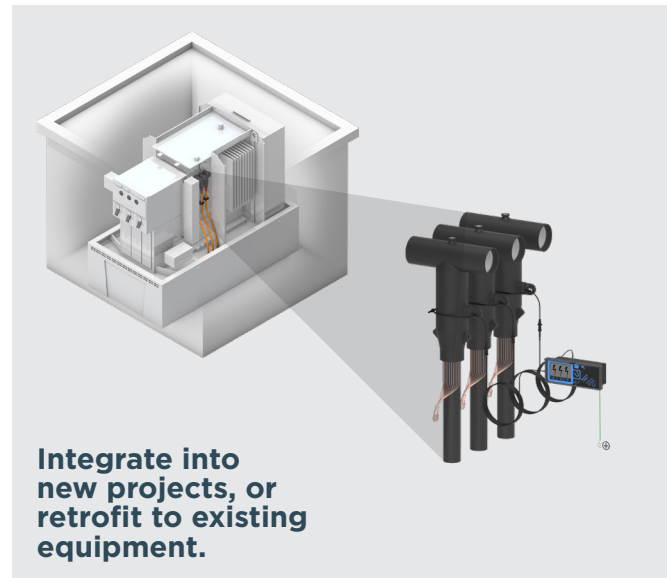
We carry more than 65 years of experience in cable accessories, and we offer a complete portfolio of Raychem switchgear connectors and terminations.

They can fit virtually any cable size or installed product and offer reliable performance in the harshest environmental conditions.

Our acquisition of the German pioneering company Kries expands TE's portfolio in power grid monitoring, protection and automation systems.

For 30 years, Kries has been helping distribution network owners to effectively improve grid uptime and network efficiency.

By adding intelligence to their distribution grid, grid operators can detect fault conditions, perform predictive maintenance and stabilize the interplay between power generation and consumption, which is critical for the transition to renewable energy.



1 MILLION +

units of Kries voltage
detecting systems
installed worldwide



Learn more: [TE.com/smartgrid](https://www.te.com/smartgrid) | [Kries.com](https://www.kries.com)

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Kries is now part of
TE Connectivity.

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