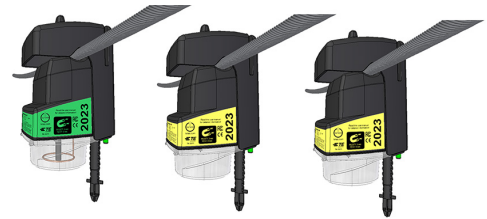


# IKI-Overhead R2.5 (Set)

Fault indicator for overhead lines with communication

With the IKI-Overhead R2.5, overhead lines can be easily monitored for faults and thus integrated into the overall protection concept to minimize downtime. Fault indication is provided locally via strong LEDs and optionally via remote transmission to a central control station. The set consists of three units (2 x IKI-Overhead-Radio and 1 x IKI-Overhead-Butler) for three-phase monitoring at one installation location.



## Properties

### Fault detection of all typical overhead line faults

Short circuits, transients and ground faults

### Ultra-bright LED display

Visibility cone 360°, visible even in bright sunlight

### Easy installation using actuating rod

Integrated torque indicator shows correct installation. No additional tools required. Installation is possible with operating rods for bayonet or ring eyelet, an adapter is supplied with each.

### Reliable fault detection

for overcurrent and short-circuit due to independent current/time characteristic; short and earth [short] circuit detection; high impedance fault detection by  $dl/dT$  detection; inrush suppression; fault confirmation by monitoring for disconnection via integrated voltage sensor

### Simple parameter setting by DIP switch

Response current (automatic or fixed thresholds 200 - 600 A). Reset time (2 - 8 h, manual or automatic after load current recovery). Access to DIP switches possible without tools.

### Long life

>10 years due to high quality lithium battery, nanowatt technology and corrosion-free housing.

### Easy installation

Torque indicator for safe mounting



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## **IKI overhead with remote messaging: Radio and Butler versions**

All communication elements are directly installed in the overhead line indicators. Therefore, no additional remote control unit mounted on the pole is required.

## **4G-Modem**

The modem integrated in the IKI-Overhead-Butler, can use 4G LTE-M / NB-IoT networks.

## **Easy connection to the control center via IEC 60870-5-104**

With the optionally available PONLINE-Gateway, all installed IKI overhead are connected to a SCADA-System.

## **Detection of conductor breakage in the overhead line**

Detection of conductor breakage without fault current

## **Transmission of load current values**

Instantaneous or average values are transmitted cyclically

## **Remote parameterization of settings possible**

## **Communication principle**

Up to 2 IKI-Overhead-Radios communicate with one IKI-Overhead-Butler via short-range radio. The IKI-Overhead-Butler communicates via the 4G LTE-M or 4G NB-IoT mobile network. Communication takes place either via SMS or TCP/IP to the PONLINE-Gateway or any SMS receiver or host. The PONLINE-Gateway can be connected to the SCADA via an IEC 60870-5-104 interface.

## **Principle of fault detection with remote signalling**

Faults are detected and reported right up to the fault location in each case

## **Display of all relevant status information**

All important information (faults and load flow) from the overhead line network, such as all types of faults as well as load flow information, is recorded and transferred.

## **Set of three devices**

The set of three (article number 2510699) consists of two IKI-Overhead-Radio devices (article number 2501307\_H022) and one IKI-Overhead-Butler device (2501309\_H022). This enables three-phase monitoring of one installation location.



# IKI-Overhead R2.5 (Set)

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## Variants

Item number	Description
2510699	IKI-Overhead R2.5 Fault indicator for overhead line   Set 2 x Radio and 1 x Butler

## Technical Data

### Device data

Article number	2510699
Product designation	IKI-Overhead R2.5 Fault indicator for overhead line   Set 2 x Radio and 1 x Butler

### Dimensions and installation instructions

Case height x width x depth	290 x 102 x 145 mm
Conductor cross section	20 - 490 mm <sup>2</sup> ; 5 - 35 mm diameter

### Operating conditions

Operating temperature	-30°C ... 75°C
Storage temperature	-30°C ... 80°C
Protection class	IP67
Voltage level	Applicable up to 36 kV
Maximum height operation	4500 m above sea level
Maximum wind force	70 m/s

### Communication

Frequency bands	4G bands: B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B85 Frequencies 4G LTE-M/NB-IoT: 698 – 748 MHz, 777 – 787 MHz, 807 – 915 MHz, 1710 – 1785 MHz, 1850 – 1915 MHz, 1920 – 1980 MHz Frequencies 2.4 GHz RF: 2403 – 2479 MHz
Mobile phone network standard	4G LTE Cat M1 (Rel. 14) = LTE-M 4G LTE Cat NB2 (Rel. 14) = NB-IoT
SIM card format	Standard-SIM (Mini-SIM)



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# IKI-Overhead R2.5 (Set)

Fault indicator for overhead lines with communication

## Power supply

Battery	Lithium battery
Battery life	> 10 years
Total flashing duration (Battery life)	1.500 hours

## Accessories

Article number	Product designation
2503136_S001	PONLINE gateway for connection of IKI overhead to SCADA systems   hardware and software
2500035	Actuating rod IKI-Overhead L=1473mm   For installation of IKI-Overhead with bayonet connection
2502234	Actuating rod IKI-Overhead L=2590mm   For installation of IKI-Overheads with ring eyelet
2502280	Test/Reset Magnet-Tool IKI-Overhead Bayonet

## Safety notes

The IKI Overhead R2.5 can be installed and also uninstalled directly on live overhead lines using suitable installation tools. For the installation, working principles must be defined by the responsible safety engineer. The safety instructions regarding the insulating rod must also be observed.

