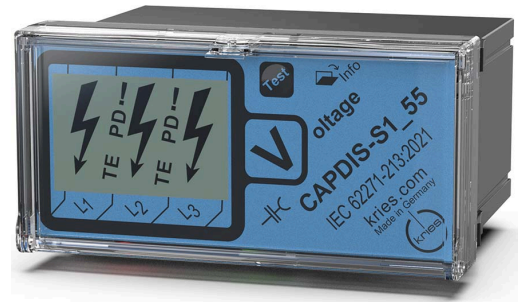


CAPDIS-S1_55 (R5)

The **CAPDIS-S1_55 (R5)** is an integrated Voltage Detecting Systems for checking for absence of voltage in medium-voltage switchgear according to IEC 62271-213:2021 (or IEC 61243-5) with integrated three-phase continuous indication. It also allows the detection of partial discharges in the transformer station and its surroundings.



Properties

Voltage Detecting Systems VDIS for medium voltage (1..52 kV)

Testing for absence of voltage in medium voltage switchgear according to IEC 61243-5 or IEC 62271-213 with integrated three-phase continuous display.

Maintenance-free due to self-monitoring

No periodic retesting required according to IEC 62271-213 and BGV A3, as the device permanently monitors the response threshold and indicates it with a three-stage voltage level display (half, full and outlined flash arrow).

Voltage testing for power systems

Voltage testing system according to protection device standard IEC 60255 and voltage tester standard IEC 61243-5 or IEC 62271-213. The CAPDIS-S1_55 is specially dimensioned for use in power systems and absorbs high-frequency disturbance variables from atmospheric surge voltage loads, backfiring and resonance oscillations at all inputs and outputs. This also prevents the propagation of interference to the rest of the secondary equipment. The extended immunity to interference also allows the CAPDIS-S1_55 to be used for safety-relevant functions.

Partial discharge detection

Critical partial discharge levels are detected and shown in the display as a warning message. The sensitivity of the PD detection is set via a DIP switch on the back of the device or also deactivated. A socket behind the front flap is available for PD diagnostics.

Complete insulation monitoring of the capacitive divider

Complete primary-side and secondary-side monitoring and display of the insulation status of the capacitive voltage divider.

Adjustment capability for smart grid applications

Adjustment capability and monitoring of the capacitive divider for standard voltage test system response and further processing of voltage signals by smart grid systems (e.g.



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CAPDIS-M, IKI-50, IKI-22...). Adjustable 6-stage capacitor switching module allows adjustment of the voltage divider and shows the correct setting on the display.

Integrated self-test function

No external test equipment is required to test for voltage freedom. Integrated function test by means of test button, according to patent DE 103 04 396. Clear display for primary voltage present and not present. Optional conductor break detection and ground monitoring.

Integrated Y-interface

For further processing of voltage signals via a smart grid system (e.g. IKI-50); connection via optional Y-cable. Integrated three-phase measuring point The device has a three-phase LRM measuring point. This serves as an interface for phase comparison and rotary field direction measurement (e.g. by means of universal tester type CAP-Phase, see data sheet CAP-Phase).

No battery required

Voltage test as well as self-test without battery or auxiliary voltage.

Technical Data

General data

| | |
|-------------------------|---|
| Article number | 2502145_H004 |
| Product designation | CAPDIS-S1_55 (R5) Capacitive Voltage Detecting Systems with Partial Discharge Detection |
| Standard | IEC 61243-5, IEC 62271-213, IEC 60255-1 |
| Required data for order | Nominal voltage U_n , coupling capacitance C_1 |

Functions

| | |
|-----------------------------|---|
| Intrinsic safety | Device is intrinsically safe |
| Broken lead detection | Can be activated/deactivated via DIP switches |
| Partial discharge detection | <ul style="list-style-type: none">• Device detects partial discharges• 4 sensitivity levels adjustable |

Display and HMI interfaces

| | |
|---------------|------------------|
| Front display | LC-Display |
| Controls | Self-test button |



Dimensions and type of installation

| | |
|-----------------------------|-----------------------|
| Case height x width x depth | 48 x 96 x 37 mm |
| Cutout height x width | 45 x 92 mm |
| Norm cutout dimensions | DIN IEC 61554:2002-08 |
| Installation type | Panel mounting |

Environmental conditions

| | |
|-----------------------|---------------------------|
| Operating temperature | -25°C ... 55°C |
| Storage temperature | -30°C ... 75°C |
| Protection class | IP54 |
| Voltage level | 1..52 kV (Medium-voltage) |
| Rated frequency | 50 Hz, 60 Hz |
| Type of interface | LRM |
| Lifetime | Minimum 31 years (MTBF) |

Voltage supply

| | |
|--------------|----------------------------------|
| Power supply | No auxiliary power supply needed |
| Battery | No battery required |

Accessories

| Article number | Product designation |
|----------------|---|
| 2502360 | PD-Trend-Check |
| 2510647_H001 | Shield-Installation-Set for CAPDIS (R5) |
| C2m | C2m-Module for CAPDIS-Sx |
| 2500828_S999 | Cable set Custom-made for specific switchgear On request 0,5 - 40 m |