

# CAPDIS-S2\_HV (R5)

## Capacitive Voltage Detecting Systems VDIS with Partial Discharge Detection

The **CAPDIS-S2\_HV (R5)** is an integrated Voltage Detecting Systems for checking for absence of voltage in high-voltage switchgear in accordance with IEC 62271-213:2021 (or IEC 61243-5) with integrated three-phase continuous indication and Signaling outputs. It also allows detection of partial discharges in the station and its surroundings.



### Properties

#### Voltage Detecting Systems VDIS for High Voltage (52 - 480 kV)

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

#### Partial discharge detection

Critical partial discharge levels are detected, shown on the display and output via the relay collective fault signal. The sensitivity of the PD detection is set or also deactivated via a DIP switch on the rear of the device. A socket behind the front flap is available for PD diagnostics.

#### Maintenance-free due to self-monitoring, fail-safe

No periodic retesting according to IEC 61243-5 or IEC 62271-213 u. BGV A3 required, as the device permanently monitors the response threshold and displays it with a three-stage voltage level indicator (half, full and outlined lightning arrow).

#### Integrated self-test function

No external test device is required to test for absence of voltage. Integrated function test by means of test button, according to patent DE 103 04 396. Clear indication of primary voltage present and not present.

#### Relay outputs and LED displays

For remote monitoring of voltage states, two signal relays [changeover contacts] are integrated, which are operated with auxiliary voltage. The status of the relays is additionally indicated via LEDs in the front.

#### Integrated V-interface

For further processing of the voltage signals via a smart grid system (e.g. IKI-50, IKI-22) connection via optional Y-cable.



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### Integrated three-phase measuring point

The device has a three-phase LRM measuring point for phase comparison, rotating field direction measurement e.g. by means of CAP phase or connection of CAPDIS-M.

### No battery required

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

## Technical Data

### Device data

Article number	2502134_H009
Product designation	CAPDIS-S2_HV (R5) Capacitive Voltage Detecting Systems with relay contacts   with partial discharge detection  for high voltage
Standard	IEC 61243-5, IEC 62271-213
Required data for order	Rated operating voltage Un, coupling capacitance C1

### 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"><li>• Device detects partial discharges</li><li>• 4 sensitivity levels adjustable</li><li>• Remote indication of partial discharge e.g. to IKI-23, IKI-50_1F R2, IKI-50_1F R2e or IKI-55 for partial discharge trend detection</li></ul>

### Controls and display

Response time relay	$\leq 0,2$ s
Front display	Monochrome LC display and colored LEDs
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

# CAPDIS-S2\_HV (R5)

## Capacitive Voltage Detecting Systems VDIS with Partial Discharge Detection

### Operating conditions

Operating temperature	-25°C ... 55°C
Storage temperature	-30°C ... 75°C
Protection class	IP54
Voltage level	53..480 kV (High-voltage)
Rated frequency	50 Hz, 60 Hz
Type of interface	LRM
Lifetime	Minimum 22 years (MTBF)

### Signaling outputs

Connection of connecting cables	By means of flat plug sleeve 4.8 x 0.8 mm or system plug (order separately)
Switching capacity relay	250 VAC, 5 A (resistive load) / 30 VDC, 5 A / 250 VDC 0.3 A (resistive load)

### Voltage supply

Auxiliary power supply	24 - 230 V AC/DC +-10%
Power supply	24 - 230 V AC/DC +- 10%; Power input < 1 Watt
Power consumption	< 1 W
Insulation voltage	2 kV
Battery	No battery required

## Accessories

Article number	Product designation
3500939	Connector strip- 8-pole for CAPDIS-S2x
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



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