

CAPDIS-S1_HV (R5)

Capacitive Voltage Detecting Systems VDIS with Partial Discharge Detection

The **CAPDIS-S1_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. It also allows detection of partial discharges in the station and its surroundings.



Properties

Voltage Detecting Systems VDIS for high voltage applications (53..480 kV)

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

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 indicator (half, full and outlined flash arrow).

Complete isolation monitoring of the capacitive divider

Complete primary-side and secondary-side monitoring and indication of the isolation state of the capacitive voltage divider.

Partial discharge detection

Critical partial discharge levels are detected and indicated 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.

Adjustment option for smart grid applications

Adjustment option and monitoring of the capacitive divider for the standard-compliant response of the voltage test system and further processing of the voltage signals by smart grid systems (e.g. CAPDIS-M, IKI-50, IKI-22...). Adjustable 6-stage capacitor switching module allows adjustment of the voltage divider and shows the correct setting in 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 indication of primary voltage present and not present. Optional conductor break detection and ground monitoring.



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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 rotating 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.

Information about vulnerabilities of this product can be reported and received on this website: te.com/productsecurity.

Technical Data

General data

Article number	2502145_H005
Product designation	CAPDIS-S1_HV(R5) Capacitive Voltage Detecting Systems with Partial Discharge Detection
Standard	IEC 61243-5, IEC 62271-213
Required data for order	Nominal 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	• 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
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Environmental conditions

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 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



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