

CAPDIS[®] -S2+(R4.5)

FAIL-SAFE

Integrated capacitive voltage monitoring system with relay contacts



Fail-Safe-Functions

- **Voltage detecting system (VDS) for high voltage**
Detection of voltage condition in high voltage equipment according to IEC 61243-5. Integrated continuous three phase voltage indication.
- **No battery required, free of maintenance**
For voltage detecting and self test no external power supply or battery is required.
- **Complete insulation monitoring of capacitive divider**
Primary and secondary insulation monitoring of capacitive divider. Insulation problems are indicated.
- **Inherent safety**
The CAPDIS-S1+ includes a self test which offers inherent safety; no external test device is required. Self test function according to patent DE 103 04 396. The test is activated by the Test-button and does not need any auxiliary supply. This test allows to distinguish between voltage absence and any device fault. This test is mandatory for safe detection of voltage absence! Optional broken signal lead detection.
- **Adjustable divider for Smart-Grid applications**
Secondary part of capacitive divider is adjustable by user. Correct adjustment is important to use CAPDIS[®] in combination with Smart-Grid Systems (IKI-50, IKI-20a). Six steps to set the correct value are available. In case of a non-correct setting, the mismatch is indicated.
- **Relay and LED outputs**
For remote monitoring of voltage condition two relay contacts are integrated. The relays are driven by auxiliary voltage. Two LEDs show the actual relay state.
- **Integrated 3-phase test point**
Acc. to the LR-specification in IEC 61243-5.
The test point can be used for phase comparison and phase sequence test, e.g. by universal tester type CAP-Phase.
- **Integrated Y-Interface**
To connect CAPDIS[®] to Smart-Grid Systems such as IKI-50 or IKI-22.

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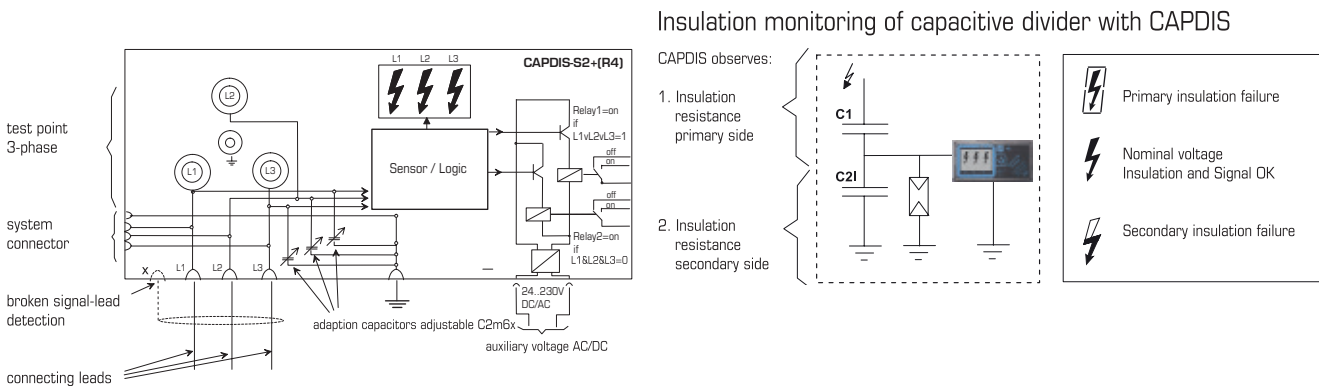
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Function and Technical Data

Applied standard	IEC 61243-5 (integrated voltage detecting system)				
LCD indications	Indication LCD	Indication during normal operation with nominal voltage Explanation	Indication during bringing into service with nominal voltage	Indication with pressed Test-button	Relay functions CAPDIS-S2+
		Overvoltage Insulation problem at primary part of divider or $U \gg 1.2 \times U_n$	$C_{2m} < \text{Min.}$	CAPDIS [®] OK	Relay 1 and 2: ON at least 1 phase with $U \gg 1.2 \times U_n$ or earth fault (asymmetry)
		Nominal voltage present Signal OK Insulation OK $U > 0.45 \times U_n$	C_{2m} correct	internal error	Relay 1: ON min. 1 phase with $U \geq 0.1 \times U_n$
		Voltage present Insulation problem at secondary part of divider $0.1 \times U_n < U < 0.45 \times U_n$	$C_{2m} > \text{Max.}$	internal error	
		No voltage Short circuit at connecting leads $U < 0.1 \times U_n$	$C_{2m} \gg \text{Max.}$	internal error	Relay 2: ON all 3 phases with $U < 0.1 \times U_n$
	ERROR	System error	System error	broken lead	Relay 1 and 2: OFF Missing auxiliary power, or internal fault, or broken lead detection
LEDs	Green LED: Relay 2, red LED: Relay 1				
Auxiliary voltage	24 - 230 VAC/DC +/- 10%, power consumption: < 1 W				
Switching - power of relays	250 VAC, 5 A / 30 VDC, 5 A / 250 VDC, 0.3 A				
Dimensions	h x w x d = 48 x 96 x 37 mm, recommended cutout: h x w = 45 x 92 mm				
Operating temperature	-25 °C to +75 °C, storage temperature: -30 °C to +70 °C, IP 54				
Connectors for signal leads	fast-on receptacles 4.8 x 0.8 mm				
Required data for order	rated voltage UN, capacitance of coupling electrode C1				
Item no.	2502134 (CAPDIS-S2+_R4.5 with signal lead test)				
Universal C2m-Modules (Standard)	2501155 Low values (100, 470, 570, 1000, 3300, 4700 pF) 2501156 Medium values (330, 2200, 2530, 6800, 10000, 16800 pF) 2501157 High values (330, 2200, 2530, 10000, 22000, 32000 pF) further values on request				



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