Wet Test System for High Voltage Devices - Type HSR

Instruction Manual

The contents complies with the requirements of DIN EN ISO/IEC 17025 - CI. 5.4.1 as instruction on the use and operation of the device for wet tests according to the standards IEC 60060-1 and IEEE Std. 4

duct Description nded Use ety - Risks and Safety Precautions Supply Voltage High Voltage for Test Transport of the Device in Ready-to-Use Condition uirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4 Precipitation Range, Water Chartacteristics, Pre-Wetting and Test Duration Requirements for Passing the Test Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	 3 3 3 3 4 4 5 5 6 6
Inded Useety - Risks and Safety PrecautionsSupply VoltageHigh Voltage for TestTransport of the Device in Ready-to-Use Conditionuirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4Precipitation Range, Water Chartacteristics, Pre-Wetting and Test DurationRequirements for Passing the TestAdjustment of Nozzle Distance, Spacing, Angle and Pressure StagePrecipitation Range acc. IEC 60060-1Precipitation Range acc. IEE Std. 4dling and OperationSet Up - Operational PositionGrounding Connection to the System of the Test LaboratoryTelescopic Mast for the Nozzles - Adjustment	 3 3 4 4 5 5 6 6
ety - Risks and Safety PrecautionsSupply VoltageHigh Voltage for TestTransport of the Device in Ready-to-Use Conditionuirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4Precipitation Range, Water Chartacteristics, Pre-Wetting and Test DurationRequirements for Passing the TestAdjustment of Nozzle Distance, Spacing, Angle and Pressure StagePrecipitation Range acc. IEC 60060-1Precipitation Range acc. IEEE Std. 4dling and OperationSet Up - Operational PositionGrounding Connection to the System of the Test LaboratoryTelescopic Mast for the Nozzles - Adjustment	3 3 4 4 5 5 5 6 6
Supply Voltage High Voltage for Test Transport of the Device in Ready-to-Use Condition uirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4 Precipitation Range, Water Chartacteristics, Pre-Wetting and Test Duration Requirements for Passing the Test Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	3 4 4 5 5 5 6 6
High Voltage for Test Transport of the Device in Ready-to-Use Condition uirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4 Precipitation Range, Water Chartacteristics, Pre-Wetting and Test Duration Requirements for Passing the Test Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	3 4 4 5 5 5 6 6
Transport of the Device in Ready-to-Use Condition uirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4 Precipitation Range, Water Chartacteristics, Pre-Wetting and Test Duration Requirements for Passing the Test Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	4 4 5 5 6 6
uirements for Wet Tests acc. IEC 60060-1 and IEEE Std. 4 Precipitation Range, Water Chartacteristics, Pre-Wetting and Test Duration Requirements for Passing the Test Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	4 4 5 5 5 6 6
Requirements for Passing the Test Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	4 5 5 6 6
Adjustment of Nozzle Distance, Spacing, Angle and Pressure Stage Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	5 5 6 6
Precipitation Range acc. IEC 60060-1 Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	5 5 6 6
Precipitation Range acc. IEEE Std. 4 dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	5 6 6
dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	6 6
dling and Operation Set Up - Operational Position Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	6
Grounding Connection to the System of the Test Laboratory Telescopic Mast for the Nozzles - Adjustment	
Telescopic Mast for the Nozzles - Adjustment	C
	6
	6
Power Supply Connection	6
Pump feeding by Integrated or External Tank	7
Pressure Generation and Controll	7
Precipitation Procedure	8
rurement of the Precipitation Rates with the Collecting Vessel	9
Collecting Procedure according IEC 60060-1, IEEE Std. 4	9
ductivity and Temperature of the Water	10
Temperature of the Water - Measurement acc. Standard	10
Conductivity Reference Temperature and Temperature of the Water	10
Conductivity Meters without/with Temperature Compensated Indication	11
Conductivity of the Water - Adjustment	12
ospheric Correction Factors for External Insulation	12
Wetting and Test	13
hnical Data	14
ntenance and Repetition of Electric Tests acc. DGUV 3 (BGV A3)	15
age und Transport	16
	16
	ospheric Correction Factors for External Insulation Wetting and Test hnical Data

- 2 Test Report of the Electric System
- 3 EU Declaration of Conformity for the Installed Components

11 Technical Data

Power supply:2P+E, IEC 60309Rated voltage:230 V, 50 HzOvercurrent protection of power supply:16 AIntegrated overcurrent protection:10 A Type BRated current:4 AIntegrated RCD:30 mAOvertemperatue protection of the pump:ThermoswitchElectric protection class:Pump CI I, Controll box CI II isolatedDegree of protection:IP 44, IEC 60529
Overcurrent protection of power supply:16 AIntegrated overcurrent protection:10 A Type BRated current:4 AIntegrated RCD:30 mAOvertemperatue protection of the pump:ThermoswitchElectric protection class:Pump Cl I, Controll box Cl II isolatedDegree of protection:IP 44, IEC 60529
Integrated overcurrent protection:10 A Type BRated current:4 AIntegrated RCD:30 mAOvertemperatue protection of the pump:ThermoswitchElectric protection class:Pump Cl I, Controll box Cl II isolatedDegree of protection:IP 44, IEC 60529
Rated current:4 AIntegrated RCD:30 mAOvertemperatue protection of the pump:ThermoswitchElectric protection class:Pump Cl I, Controll box Cl II isolatedDegree of protection:IP 44, IEC 60529
Integrated RCD:30 mAOvertemperatue protection of the pump:ThermoswitchElectric protection class:Pump Cl I, Controll box Cl II isolatedDegree of protection:IP 44, IEC 60529
Overtemperatue protection of the pump:ThermoswitchElectric protection class:Pump Cl I, Controll box Cl II isolatedDegree of protection:IP 44, IEC 60529
Electric protection class:Pump Cl I, Controll box Cl II isolatedDegree of protection:IP 44, IEC 60529
Degree of protection: IP 44, IEC 60529
Degree of protection: IP 44, IEC 60529
Rated pressure: 0.83.0 bar _{rel} , max. 5.0 bar _{rel}
Volume of the tank: 500 I
Duration of precipitation: 90 min (IEC 60060-1, 500 I, 8 Nozzles)
External water supply: 3/4" IG
Filter infront of pump meshsize: 0.50 mm
Filter infront of nozzles meshsize: 0.16 mm
Torque for rack connections: 30 Nm
Size for transport L x W x H: 155 x 90 x 195 cm
Size for operation L x W x H: 155 x 140 x 5501100 cm
Mast and side beam removeable
Weight: 160 kg