ELECTROTECHNICAL LABORATORY ETL-35

Electrotechnical laboratory ETL-35 is intended for:

- Testing of insulation of cables and other devices by the constant and AC (50 Hz) high voltage;
- Testing of electrical objects on the low voltage;
- Measurement of capacitance and dissipation factor of electrical objects under the voltage up to 10 kV.

Operating conditions:

- A range of temperatures of air: from - 20°C up to +40°C;
- Relative humidity of air at the temperature 25°C: up to 80%;
- Atmospheric pressure, mm mercury: 650 – 800.

Power supply of ETL-35 is from an industrial three-phases or single-phase AC network with frequency 50 Hz. A supply from the independent generator by capacity not less than 2,2 kVA is supposed.

ETL-35 is operated by the brigade consists of 2 persons which have permission on the work in networks with voltage over 1000 kV.

SPECIFICATIONS:

Power supply of three-phases/single-phase AC network, V	380/220±10%
Consumed current, A	No more than 100
Maximum rectified voltage, kV	60
Maximum operating current (average value) under rectified voltage, mA	40
Maximum operating AC voltage (rms value), kV	100
Maximum operating current (rms value) under high AC voltage, mA	40
Length of a network connecting 4-core cable on a drum	30 m, section – 4.0 mm^2, Cable type – PRRP
Length of protective grounding wire on a drum	30 m, section – 10 mm^2, Cable type - PML
Length of working grounding wire on a drum	30 m, section – 5 mm^2, Cable type - PML
Length of test cables and wires, m	25 - 30
Weight of the equipment, kg, no more	400
The attendants	2 operators (not less)
Laboratory life, years	10

HIGH-VOLTAGE TEST UNIT УВИ:

Maximum rectified voltage in prolonged mode of operation, kV	60
Maximum operating current (average value) under rectified voltage, mA	50
Maximum operating AC voltage (rms value), kV	100
Maximum operating alternating current (rms value), mA	75
Relative error of measurement of high AC and DC test voltages, no more, %,	3
Measurement limits: AC voltage, kV DC voltage, kV	 100 35 and 100
Current meter ИТВ-2-4 provides measurement of leakage current under high potential and constant voltage up to 60 kV	
Specification of current meter ИТВ-2-4: Measurement limits, mA Limiting reduced measurement error, % Maximum repetition factor of mikroamperemeter overload Dimensions, mm Weight of the equipment, kg	 0,1; 0,3; 1,0; 3,0 4,0 3,5 ∅165x120 1

Dimensions of HVTU components, mm High-voltage test unit БВИ-60/50-М2 Booster transformer ТВ with high-voltage short circuitor КЗМК-100 High-voltage short circuitor КЗМК-60 with capacitor ИК-100-0,25 УХЛ4	 400x400x750 500x600x1000 520x250x570
Weight of the equipment, kg	No more than 191

DIELECTRIC LOSSES METER ИДП-10

ИДП-10 provides the measurement of capacitance and dissipation factor of electric objects under the AC voltage up to 10 kV with frequency 50 Hz in the measurement limits, which have high voltage bridge CA7100.
ИДП-10 provides the measurement of bridge supply AC voltage on the limit 10 kV with relative reduced error no more 3%.

LOW VOLTAGE MEASUREMENT UNIT БНИ

Low voltage measurement unit is intended for:

- Measurement of transformer standby loss;
- Measurement of windings DC resistance by the method of amperemeter and voltmeter;
- Definition of transformer turn ratio.

Low voltage measurement unit operates in common with instruments К-540 (is not included in ETL-35 set) and TEC (or car accumulator). During the operation with low voltage measurement unit it is necessary to follow additionally to manuals of these instruments.