

Introduction

The Robin HVT 5020 is a high voltage insulation tester that you can use to test general circuits including switchgear and cables.

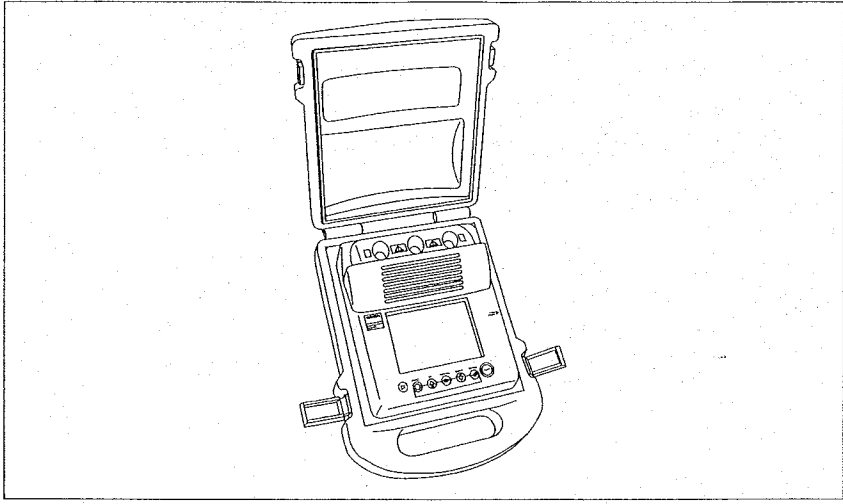


Figure 1. Robin HVT 5020

Features of the tester include:

- Test voltages of 500 V, 1000 V, 2500 V, and 5000 V
- Measurement range of 0 to 1 T Ω
- Large liquid crystal display (LCD)
- Text display for special functions
- Infrared port for downloading test data
- Ramp mode that gradually increases the applied test voltage
- Test timer
- Test results storage
- Rechargeable lead-acid battery

1

HVT 5020 Users Manual

Electrical Specifications

Insulation		
Test Voltage (DC)	Insulation Resistance Range	Accuracy (+/- reading)
500 V	200 k Ω to 10 G Ω 10 G Ω to 100 G Ω	5% 20%
1000 V	200 k Ω to 20 G Ω 20 G Ω to 200 G Ω	5% 20%
2500 V	200 k Ω to 50 G Ω 50 G Ω to 500 G Ω	5% 20%
5000 V	200 k Ω to 100 G Ω 100 G Ω to 1 T Ω	5% 20%
Bar graph range: 0 to 1 T Ω Insulation test voltage accuracy: -0%/+10% at 1 mA load current Induced ac mains current rejection: 2 mA maximum Charging rate for capacitive load: 5 seconds per μ F		
Leakage current measurement		
Range		Accuracy
1 nA to 2 mA		+/- (5% + 2 nA)
Capacitive measurement		
Range		Accuracy
0.01 μ F to 15.00 μ F		+/- (15% rdg + 0.03 μ F)
Timer		
Range		Resolution
0 to 99 minutes		Setting: 1 minute Indication: 1 second
Live circuit warning	Warning range: 30 V to 1000 V ac/dc, 50/60 Hz Voltage accuracy: +/- (5% + 2 V)	

Note

All stated accuracy tolerances apply to the temperature range 0° to 35 °C. For operating temperatures between -20 °C to 0 °C and 35 °C to 40 °C, these tolerances double.

Specifications

General Specifications

Display: 75 mm x 105 mm

Power: 12 V lead-acid rechargeable battery

Charger Input (AC): 85 V to 265 V ac 50/60 Hz 50 VA

Charger Input (DC): 10 to 15 V dc, 30 VA

Fuse: HBC 100 mA, 250 V, Type F to IEC127

Dimensions (H x W x L): 170 mm x 242 mm x 330 mm

Weight: 4 Kg

Temperature (operating): -20 °C to 40 °C

Temperature (storage): -20 °C to 65 °C

Humidity: 80% to 31 °C decreasing linearly to 50% at 40 °C

Altitude: 2000 m

Enclosure Sealing: IP40

Input Overload Protection: 1000 V ac continuous

Safety Rating: BS EN 61010-1, CAT III 1000 V

Electromagnetic Compatibility: Generic EN 50081-1, EN 50082-1

Performance: BS EN 61557 – Parts 1 and 2

Typical Battery Charge Capability:

Test Voltages	Number of Tests
500 V	3600
1 kV	3200
2.5 kV	2500
5 kV	1500

Note

At higher temperatures, the battery requires more frequent charging.