

HAL SERIES

Electrical Safety, AC/DC Hipot, Insulation and Ground Bond Tester with Results Memory



The HAL family is designed to offer advanced automation techniques which can make dramatic improvements in productivity and efficiency of the production line test process.

The isolated floating test outputs make it one, if not the, safest flash/hipot tester on the market. The user interface can be operated manually or in automatic mode, with a barcode scanner to automate the production flow. The HAL family can be linked directly into most ISO quality systems which cover production, laboratory and audit usage.

The HAL family will collect up to 6000 test results internally. These can be downloaded to a PC if required (software is an optional accessory). It will even scan the equipment's barcode under test and produce result labels, making the whole test process accurate, efficient and fast. Test sequences can be automatically configured using a barcode scanner and the tester includes remote start and stop ports. In addition, the HAL family all have RS232 ports, both of which makes the HAL ideal for system integration.

Key Features

- Earth Bond Test
- AC / DC Flash / Hipot Test
- Insulation Resistance
- Scanner
- Arc Detection
- Visual Alarm
- Audible Alarm
- Storage of test results
- Predefined and custom test sequences
- PLC interface



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Clare

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SPECIFICATION

AC Flash / Hipot Test

Voltage Range	0.100-5.000kV (programmable)
Voltage Resolution	10V / step (settable)
Voltage Accuracy	1% of reading +/-2 digits
Maximum Output Current	20mA @5kV 50 / 60hz selectable
Display Current Range	0.0-20.00mA
Current Accuracy	1% of reading +/-2 digits
Display Current Resolution	0.01mA

DC Flash / Hipot Test

Voltage Range	0.100 – 6.000kV (programmable)
Voltage Resolution	10V / step (settable)
Voltage Accuracy	1% of reading +/-2 digits
Maximum Output Current	10mA @ 6kV
Display Current Range	0.01 – 10.00mA
Current Accuracy	1% of reading +/-2 digits
Display Current Resolution	0.01mA
Output Ripple	<5% @ 6kV

Earth / Ground Bond (HAL Combi Only)

Test Voltage	Nominal 6V AC
Output Current Range	0.1 – 40.0A settable in 0.1A steps
Compliance Ranges	0-200m Ω up to 25.0A, 0-500m Ω up to 10A
Measurement Range	0-1000m Ω +/- 1% +/-5 digits
Test Duration	0.5 – 10.0s
Trip Level Upper / Lower	1 - 1000 Ω

DC Insulation Resistance

DC Output Voltage	250, 500 or 1000V selectable or fully adjustable from 10-1000V
Resistance Ranges Measurement	0.1 – 99.99M Ω and 100.0M Ω – 999.9M Ω
Resistance Ranges (Accuracy)	0.50M Ω – 99.99M Ω 5% of reading +/- 5 digits, 100.0M Ω - 699.0M Ω 5% of reading +/- 5 digits, 700.0 – 999.9M Ω 10% of reading +/- 5 digits

Arc Detection

Detect Current	10 levels
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External Connections

Printer	RS232
PC	RS232
Beacon	Yes
Guard Switch	Yes via 3 pin rear connection
Scanner Boards (HAL Scan Only)	5 (1 pair on front panel, 4 pairs on the rear)

ADDITIONAL INFORMATION

Optional Extras

Hardware

312A912	Desk Test 'n' Tag Printer
194A922	Barcode Scanner
H-5014	Data Cable
G2/5001	H103 Class I Output Socket Box
H-5009	H101 Class I Output Socket Box
H-5022	H101 Class II Output Socket Box
H-5008	Foot Guard Switch
DCS317	Guard Switch
01521/1	Earth Clip
01520/1	Earth Probe
03919/2	HT Probe - Yellow
03918/2	HT Probe - Red
H-5017	Status Beacon
H-5003	HT - Clip
H-5030	Printer Lead (Desk Test 'n' Tag)

Software

352A910	PATGuard Elite 2 – Premier
352A920	PATGuard Pro 2 – Professional
352A930	PATGuard Lite 2 – Entry level

Service

Onsite or return to base
Service
Calibration

Order Numbers

H101	HAL
H102	HAL Scan
H103	HAL Combi



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Mechanical

Dimensions 370W x 300H x 204D mm
Weight Approx 12kg

Electrical

Supply Voltage Selectable 115V / 230V 50 or 60Hz
Operating Temperature 0°C to +40°C
Storage Temperature -10°C to +60°C
EN50191 Compliant when used with appropriate accessories

Supplied With

Class I Grounded Output Box (HAL Combi only)
Guard Plug
Earth Probe (HAL Combi only)
HT Probe
HT Clip Lead, 5 supplied (excluding HAL Combi)
Mains Lead
Instruction Manual



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