

vPad-ES 2™

vPad-ES 2 is the desktop version of the vPad-Rugged 2 and is designed for users who do not require portability. Like the vPad-Rugged 2, it is much more than an Electrical Safety Analyzer - it's the heart of your Preventive Maintenance process. Using one of our CMMS Interface Apps, work orders can be downloaded at the start of the day. Automated Preventive Maintenance routines ensure that PMs are consistently carried out per OEM requirements. Completed PM records are uploaded to your CMMS to automate closure of open work orders

Key features:

- Tests to NFPA 99, AAMI-ES1, IEC60601 and IEC62353 standards
- Field upgradeable by installation of optional Apps
- Built-in wireless communication enables transfer of data from remote sites to corporate CMMS systems
- Can be configured to retrieve test data from non-Datrend Instruments



Innovation by design

For more information please contact your local Datrend distributor or direct at sales@datrend.com

Electrical Safety Testing Standards

NFPA 99
IEC 62353
IEC 60601
AAMI-ES1

Safety Tests

Mains Voltage
External (point-to-point) Voltage
External (point-to-point) Micropotential
Equipment Load Current
Equipment Power Consumption
Protective Earth Resistance
External (point-to-point) Resistance
Equipment Leakage Current
Applied Part Leakage
Insulation Resistance

Instrument Specifications

Voltage Measurement

Mains voltage
Range..... 90 to 264 V rms
Accuracy±(2 % of reading + 0.2 V)
External (point-to-point) voltage
Range..... 0 to 300 V rms
Accuracy±(1 % FS + 0.2 V)
External (point-to-point) micropotential
Ranges..... 0 to 199.9 mV rms
200 to 1,999 mV rms
2,000 to 19,999 mV rms
Accuracy±(1 % of reading + 1 mV)

Load Current Measurement

Ranges 0 to 1.999 A ac rms
2.00 to 19.99 A ac rms
Accuracy ±(2 % reading + 0.2A)
Duty cycle 0 A to 10 A, continuous
10 A to 15 A, 7 min. on/3 min. off
15A to 20 A, 5 min. on/5 min. off

Power Measurement

Range 0 to 2400 watts
Accuracy±(5 % reading + 5W)

Earth Resistance Measurement

Modes Four-terminal, fully isolated
Test Current1A pulsed, 0.2A rms
Range 0.000 to 2.000 Ω
Accuracy±(1 % of reading + 0.02 Ω)

Insulation Resistance Measurement

Ranges..... Test Voltage: 500V and 250V
0.5 to 4.9 MΩ
5 to 49 MΩ
50 to 999.9 MΩ
Test Voltage: 100V and 50V
0.1 to 0.9 MΩ
1 to 9.9 MΩ
10 to 999.9 MΩ
Range Selection..... Automatic
Accuracy
Test Voltage: 500V and 250V
5 MΩ Range..... ±(1 % of reading + 0.1 MΩ)
50 MΩ Range..... ±(2 % of reading + 0.2 MΩ)
50 to 500 MΩ..... ±(5 % of reading + 0.2 MΩ)
Test Voltage: 100V and 50V
1 MΩ Range..... ±(1 % of reading + 0.1 MΩ)
10 MΩ Range..... ±(2 % of reading + 0.2 MΩ)
10 to 100 MΩ..... ±(5 % of reading + 0.2 MΩ)
Test Voltage
Selections.....500V, 250V, 100V or 50V
Accuracy..... ±5 % for 0 to 1 mA load
Maximum load capacitance..... 1 µF

Equipment and Applied Part Leakage Tests (vPad-623 app)

Measurement..... True RMS
Method..... Direct, Alternative or Differential method
Patient Load..... Per IEC 62353
Functional Group Selections..... AP1; AP1 and AP2; AP3 and AP4; AP1 to AP3; AP1 to AP4; AP5 to AP10; AP1 to AP10

Chassis and Lead Leakage Tests (vPad-ES app)

Measurement..... AC+DC (True RMS)
AC only
DC only
Patient Load Selections..... IEC 60601 and AAMI-ES1

Leakage Current Measurement

Crest Factor..... ≤ 3
Ranges..... Direct and Alternative Methods
0.0 to 199.9 µA
200 to 1,999 µA
2,000 to 19,999 µA
Differential Method
50.0 to 199.0 µA
200 to 1,999 µA
2,000 to 19,999 µA

Accuracy

Direct and Alternative Methods
DC to 1 kHz..... ±(1 % of reading + 1 µA)
1 to 100 kHz..... ±(2 % of reading + 1 µA)
100 kHz to 1 MHz..... ±(5 % of reading + 1 µA)
Differential Method
50.0 to 20,000 µA..... ±(5 % of reading + 20 µA)
Isolation test voltage..... 100 % ±5 % of AC supply

ECG Simulator

Output
Amplitude..... 1 mV QRS into Lead II
Impedance..... 500 ohms
Accuracy
Frequency..... ±1 %
Amplitude..... ±2 %
Waveforms
ECG Complex..... 30, 60, 120, 180, 240 and 300 BPM
Square wave..... 0.125 Hz, 2 Hz and 1 kHz
Pulse wave..... 63 msec, 30PPM and 60PPM
Triangle wave..... 2 Hz
Sine wave..... 0.5, 10, 40, 50, 60 and 100 Hz
CMRR tests..... SQR 2Hz & 1 kHz, PUL 4 sec, SIN 0.5, 50 & 60Hz
Arrhythmias..... VFIB, AFIB, SVT, VTACH, PVC and ASYS

User Interface

Display..... 10.1" colour LCD (1280 x 800)
User Controls..... Capacitive touchscreen
Wired Connectivity..... Micro USB 2.0 Type B
XBUS Interface (RJ11-6)
Wireless Connectivity..... 802.11 b/g/n
Bluetooth 2.1+ EDR
Memory Internal..... 16GB Maximum †
Memory Expansion..... 16GB to 32GB Micro SD Card (optional)
Modes of Operation..... Manual (standard)
Automatic (accessory option)

Dimensions

Base unit..... 11.8 x 8.9 x 3.3 in. (30 x 23 x 8.4 cm)
Tablet PC..... 10.5 x 6.7 x 0.5 in. (27 x 17 x 1.3 cm)
(detachable from Base Unit)

Weight

5.5lb (2.5kg)

All specifications subject to change without notice.



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