

PS410

Patient Simulator

Technical Data



The PS410 is a compact high-performance simulator for patient monitor testing.

This handheld device simulates a full range of cardiac rhythms and a wide variety of ECG conditions. It includes pacemaker simulation, 35 arrhythmia selections, and adult and pediatric normal-sinus rhythms.

Small enough to fit in a pocket, the handy PS410 weighs less than a pound and is easy to operate. Technicians simply connect the simulator to the device under test and use the PS410 keypad to enter the code presets. The simulator then transmits the selected preset simulations to the device.

Key Features

- Handheld
- 12-lead ECG simulation
- 12 arrhythmia selections
- Universal ECG jacks
- Auto sequencing of performance waveforms
- Battery operated

Technical Specifications

Normal Sinus Rhythm

12-lead with independent outputs referenced to RL
Normal Rate: 80 BPM
Selectable Rates: 30, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, and 300 BPM
Accuracy: $\pm 1\%$
Output Impedance: 940 Ω between leads
ECG Amplitudes: 0.5, 1, and 2 mV
Amplitude Accuracy: $\pm 2\%$ Lead II
High-Level Output: 1000x Lead II
Adult or Pediatric ECG Waveform

ECG Performance

Lead II
Square Wave: 2, and 0.125 Hz
Pulse: 30, 60, and 120 BPM; 60 ms pulse width
Sine Waves: 0.5, 5, 10, 40, 50, and 60 Hz (1 mV amplitude only, lead II)
Triangle Wave: 2 Hz

ST Segment Analysis

Elevated or depressed: -0.6 mV to 6 mV in
0.2 mV steps

Pacemaker

Pacemaker rhythm
Pacer non-capture*
Pacer non-function
Demand pacer with occasional sinus
Demand pacer with frequent sinus
A-V sequential

Artifact Selection

50 Hz artifact
60 Hz artifact
Muscle artifact
Baseline artifact
Respiration artifact

Arrhythmia Selections

PVC1 Left Ventricular Focus*
PVC1 Early, LV Focus*
PVC1 R on T, LV Focus*
Pair of PVCs*
Run of 5 PVCs*
Run of 11 PVCs*
Multi-focal PVCs*
Frequent multi-focal PVCs*
PVC2 Right Ventricular Focus*
PVC2 Early, RV Focus*
PVC2 R on T, RV Focus*
Bigeminy
Trigeminy
PVCs at a rate of 6 per minute
PVCs at a rate of 12 per minute
PVCs at a rate of 24 per minute
Ventricular Tachycardia
Ventricular Fibrillation
Ventricular Fibrillation 1/2 size
Supraventricular Tachycardia
Premature atrial contraction*
Premature nodal contraction*
Asystole
Missed beat*
Nodal Rhythm
Irregular Rhythm
Atrial flutter
Atrial fibrillation
Atrial fibrillation 1/2 size
Atrial Tachycardia
First-Degree Block
Second-degree block
Third-degree block
Right-bundle-branch block
Left-bundle-branch block
* Event occurs once. To repeat, enter the selection again.

Operation

Outputs are easily selected or adjusted using top-panel controls and the large two-digit numeric display.

Controls

Display: 2-line LCD
Control: 6 control keys; ON/OFF power switch
RS232: Bidirectional interface, 9600 Baud

Power

9 V battery/battery eliminator

Housing

ABS plastic case

Dimensions

6.1 in L x 3.7 in W x 1.3 in H
(11.3 cm L x 7 cm W x 3.4 cm H)

Weight

0.9 lb (0.4 kg)

Temperature

Operating: 59 °F to 95 °F (15 °C to 35 °C),
Storage: 32 °F to 122 °F (0 °C to 50 °C)

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Ordering Information

Model

2631276: PS410 Patient Simulator

Standard Accessories

2631742: PS410 User manual (CD)
2631795: PS410 printed-version user manual
2647372: Battery eliminator 100 VAC to 240 VAC
N/A: 9 V battery

Optional Accessories

2647372: Battery eliminator 100 VAC to 240 VAC
2462189: Carrying case, single pocket
2462177: Carrying case, double pocket
2462072: 10 universal banana adapters
2670239: PS410 service & calibration manual

About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

Fluke Biomedical Regulatory Commitment

As a medical device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- FDA Compliant
- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required

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Better products. More choices. One company.

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