

# 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
- PS410/DPM1B Bundle kit with custom carrying case for quick ECG/NIBP patient monitor testing

## Specifications

<b>Normal sinus rhythm</b> (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	± 1 %	
Output impedance	940 Ω between leads	
ECG amplitudes	0.5, 1, and 2 mV	
Amplitude accuracy	± 2 % Lead II	
High-level output	1000x Lead II	
Adult or pediatric ECG waveform		
<b>ECG performance</b> (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	
<b>ST segment analysis</b>		
Elevated or depressed	-0.6 mV to 6 mV in, 0.2 mV steps	
<b>Pacemaker</b>		
Pacemaker rhythm	Demand pacer with occasional sinus	Demand pacer with frequent sinus
Pacer non-capture*		A-V sequential
Pacer non-function		
<b>Artifact selections</b>		
50 Hz artifact	Muscle artifact	Respiration artifact
60 Hz artifact	Baseline artifact	
<b>Arrhythmia selections</b>		
PVC1 left ventricular focus*	Trigeminy	Nodal rhythm
PVC1 early, LV focus*	PVCs at a rate of 6 per minute	Irregular rhythm
PVC1 R on T, LV focus*	PVCs at a rate of 12 per minute	Atrial flutter
Pair of PVCs*	PVCs at a rate of 24 per minute	Atrial fibrillation
Run of 5 PVCs*	Ventricular tachycardia	Atrial fibrillation 1/2 size
Run of 11 PVCs*	Ventricular fibrillation	Atrial tachycardia
Multi-focal PVCs*	Ventricular fibrillation 1/2 size	First-degree block
Frequent multi-focal PVCs*	Supraventricular tachycardia	Second-degree block
PVC2 right ventricular focus*	Premature atrial contraction*	Third-degree block
PVC2 early, RV focus*	Premature nodal contraction*	Right-bundle-branch block
PVC2 R on T, RV focus*	Asystole	Left-bundle-branch block
Bigeminy	Missed beat*	
*Event occurs once. To repeat, enter the selection again.		

<b>General specifications</b>		
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
Power	9 V battery/battery eliminator	
Housing	ABS plastic case	
Dimensions	11.3 cm L x 7 cm W x 3.4 cm H (6.1 in L x 3.7 in W x 1.3 in H)	
Weight	0.4 kg (0.9 lb)	
Temperature	Operating	15 °C to 35 °C (59 °F to 95 °F)
	Storage	0 °C to 50 °C (32 °F to 122 °F)

## Ordering information

### Item numbers/descriptions

**PS410** PS410 Patient Simulator

**PS410/DPM1B Bundle** PS410/DPM1B Bundle Kit (includes PS410, DPM1B, all accessories, and a custom carrying case)

### Standard accessories

**MANUAL** PS410 Users Manual (printed)

**CD-ROM** PS410 Users Manual (CD)

**BE-UNVSL-IEC320C14** Battery Eliminator 100 V ac to 240 V ac

9 V Battery



### Optional accessories

**17024** Universal Banana Adapter

**17191** Carrying Case, single pocket

**17192** Carrying Case, double pocket

### 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. Highly credentialed and equipped with a NVLAP Lab Code 200566-6 accredited laboratory, Fluke Biomedical also offers the best in quality and customer service for all your equipment calibration needs.

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

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

### Fluke Biomedical.

*Better products. More choices. One company.*

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