

TESTING MODULE FOR ACQUISITION AND PROCESSING OF BIOMEDICAL SIGNALS

Mod. EB-B1/EV

INTRODUCTION

EB-B1/EV is one of the modules that constitute the Interactive Practical Electronics System – I.P.E.S for the study of Biomedical Equipment.

It consists of a set of components and circuits used in biomedical equipment.

For the lessons development, the module operates in computerized mode, by means of the interactive software version of the handbook SWBB-B1/EV and the Unit mod. GAU/EV. The software inserts circuit variations and faults automatically, enabling the development of the lessons, even without the teacher's assistance.

EB-B1/EV

The detection and interpretation of signals coming from the human body is certainly one of the most important aspects in the sector of biomedical instruments. These signals are detected by appropriate transducers and enable to diagnose the functioning of the various organs in the human body.

The circuits under examination are parts of equipment used in cardiology, surgery, neurology, medicine and intensive care.

The module enables the basic study and application of biomedical signals and their processing.

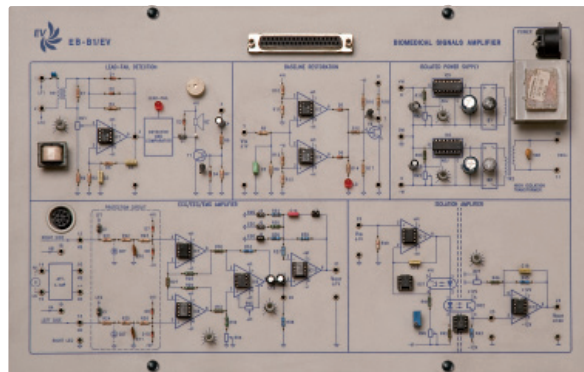
TRAINING PROGRAM:

- ECG signals
- Electrodes for ECG signals
- Amplification and filtering of ECG signals
- Common-mode noise rejection
- Noise and artefacts
- Safety power supply units and insulation circuits
- Detecting the connection failure of electrodes (Lead-fail detection)
- Electrical protection for the input lines of electrodes
- EEG signals and amplification
- EMG signals and amplification
- Galvanic insulation (photo decoupling) between patient and instruments' references
- Signal calibration before acquisition

TECHNICAL SPECIFICATIONS:

- High insulation transformer
- Transistor optocoupler
- Lead-fail buzzer
- 3 electrodes for ECG detection
- 2-mm interconnection and test points
- Jumpers for quick circuit modifications
- Fault simulation
- 37-pin connector for Interface Unit GAU/EV
- 8-way connector for Power Supply Unit
- Printed circuit board with protective treatment and silk-screen printed mimic diagram

Dimensions: 386 x 248 x 40 mm



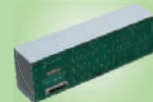
REQUIRED



**POWER SUPPLY UNIT
PS1-PSU/EV
- NOT INCLUDED -**

POWER SUPPLY

±12 Vcc – 0,5A
2x24Vca – 0,5A
+5Vcc – 2A



**BIOMEDICAL SIGNAL GENERATOR/ACQUISITION AND FAULT INSERTION UNIT - MOD. GAU/EV
SOFTWARE SWBB-B1/EV
- NOT INCLUDED -**



**PERSONAL COMPUTER
- NOT INCLUDED -**

**INSTRUMENTS - NOT INCLUDED -
- MULTIMETER
- OSCILLOSCOPE**

SUPPLIED WITH

**STUDENT HANDBOOK: THEORY AND EXERCISES
TEACHER HANDBOOK: WIRING DIAGRAMS AND SOLUTIONS OF EXERCISES**



OPTIONAL

MODULE HOLDER - BOX/EV

