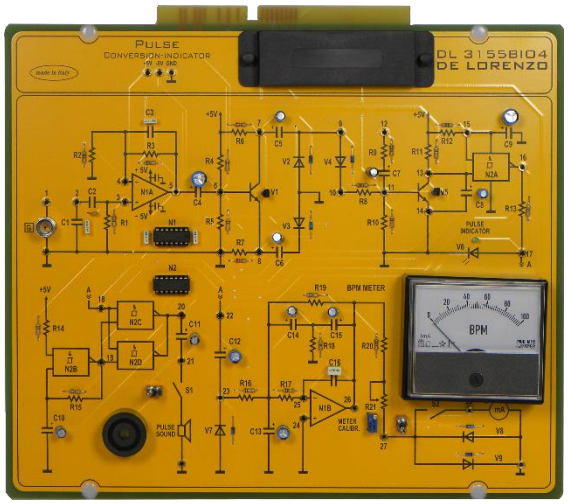
TIME ELECTRONIC BOARDS

PULSE CONVERSION



DL 3155BIO4

The design and construction of electronic circuits to solve practical problems is an essential technique in the fields of electronic engineering and computer engineering.

The events monitoring systems such as the frequency of the cardiac pulsations, the breathing frequency, etc., require that an analogue signal be converted to pulses and visualized on a display in order to be measured. In this course students will study some circuits for analogue to pulse conversion, sound indicator and analogue frequency meter.

THEORETICAL TOPICS

- Role of the analogue-pulsed conversion
- Different types of pulse generators
- Description of a conversion block
- Role of the audio and visual signaling
- Description of a visual signalling block
- Description of an audio signaling block
- Different types of visual and audio indicators
- Role of the measurement of the frequency
- Instruments for the measurement of the frequency for biomedical applications
- Difference between analogue and digital meters

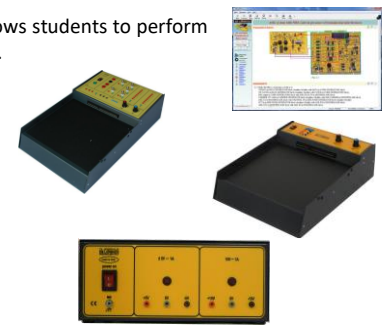
CIRCUIT BLOCKS

- Circuit for the conversion of an analogue signal to a pulse signal
- Measurement of the frequency of a periodical signal
- Evaluation of the average cardiac frequency

Complete with theoretical and practical manual.
Dimensions of the board: 297x260mm

This board does not substitute the medical device under study. The results of the experiments have no medical value. They are just for demonstration purposes.

CAI SOFTWARE:
Each board of the TIME system can be supplied complete with a Student Navigator software that allows students to perform their learning activities through a Personal Computer, without the need for any other documentation.
Ordering code: please add SW after the code of the board (i.e. DL 3155BIO4SW)



Required:
POWER SUPPLY NOT INCLUDED
Base frame with power supply (completed with connecting cables):
- **DL 3155AL3** - Base frame with power supply and interface to pc and virtual instrumentation
- **DL 3155AL2** - Base frame with power supply and interface to pc

Basic power supply (connecting cables not included):
- **DL 2555ALG** - DC power supply ±5 ±15 Vdc, 1A
- **TL 3155AL2** - Connecting cables

Choosing this power supply, for the execution of the experiments, it is normally required the use of an oscilloscope and two multimeters.