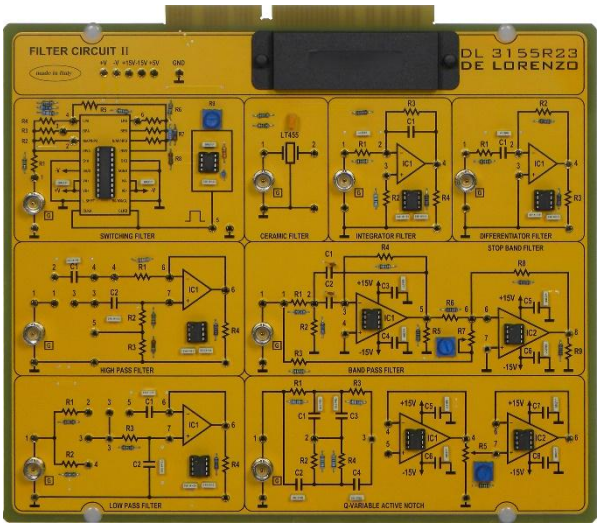
ELECTRONICS

CIRCUITS WITH FILTERS



DL 3155R23

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

With this board the students can study the operating principle and the features of a large series of active filters.

THEORETICAL TOPICS

- The ideal Operational Amplifier
- The negative feedback
- Inverting configuration
- Not inverting configuration
- Integrator
- Differentiator
- Filters and parameters
- Filters transfer functions
- Study of ceramic filters
- Study of active filters
- Study of passive and active notch filters
- Study of switching filters (Chebyshev filter)
- Filters in cascade
- Attenuation characteristics of the active low-pass, high-pass, stop-band and band-pass filters
- Fault simulation

CIRCUIT BLOCKS

- Switching filter
- Ceramic filter
- High pass filter
- Band pass filter
- Stop band filter
- Low pass filter
- Q-variable active notch filter
- Integrator
- Differentiator

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

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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 3155R23SW)

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 2555ALF -** DC power supply ±5 ±15 0±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.

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