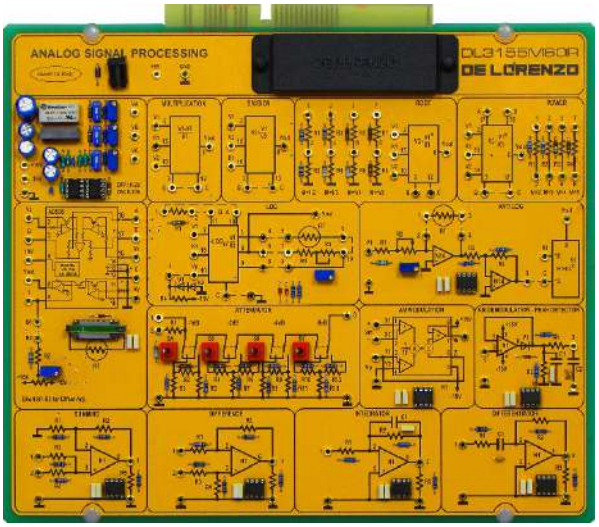
TIME ELECTRONIC BOARDS

ANALOGUE SIGNAL PROCESSING



DL 3155M60R

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 of analog communication systems and analog signal processing techniques such as multiplication, division, square root, power, logarithm, antilogarithm, attenuation, amplitude modulation and demodulation, non-inverting adder, difference amplifier, integrator and shunt.

THEORETICAL TOPICS

- Familiarization with analogue computing technique
- Basic and advanced linear operations
- Simultaneous multiplication and division
- Analog computation of powers and roots
- Log ratio computation
- Antilog computation
- Square root operation
- Attenuator overview
- Characteristics and key specifications for fixed and step attenuators
- Audio attenuators
- Forms of amplitude modulation
- Amplitude modulation and demodulation methods
- The Operational Amplifier characteristics
- Main configurations of the OA

CIRCUIT BLOCKS

- Reference power supply unit
- Real-time Analog computational unit
- One-quadrant multiplication unit
- One-quadrant division unit
- Root circuit
- Power circuit
- Log ratio operation with thermic compensation
- Antilog operation with thermic compensation
- Attenuator
- Amplitude modulation and demodulation
- Non inverting summing block
- Difference amplifier
- Integrator
- Differentiator (Shunt)

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 3155M60RSW)




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.