

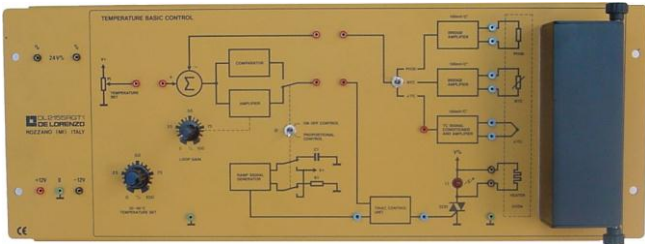


Temperature Control

DL 2155RGT

This system has been designed for the study of a model of a temperature industrial control; it is composed of two boards.

Temperature Basic Control



DL 2155RGT1

This board includes a small oven with a heating element and three temperature sensors (thermocouple, thermistor, and thermo-resistance) with relevant interface circuits.

Complete with error amplifier that can be configured for on-off or proportional control, and with a piloting circuit of the power stage with triac.

The board is supplied complete with a set of stackable, plug-in cables of suitable lengths and colours and with a training manual.

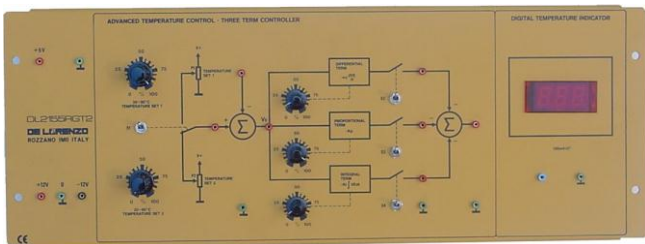
Power supply:

24Vac, 1A, 50/60Hz and $\pm 15Vdc$, 100mA

Experiments

- $V = f(t^\circ)$ characteristics of a thermocouple, with relevant linearization, of the thermistor and of the thermo-resistance
- Analysis of the operation of an on-off control
- Analysis of the operation of a proportional control

Advanced Temperature Control – PID Controller



DL 2155RGT2

This board includes two reference signal generators, a comparison node and the three terms network (proportional, integral and derivative).

Complete with digital temperature indicator $100mV/^\circ C$.

This board is an option to the board DL 2155RGT1 since it uses its oven, the heating element and the temperature transducers.

The board is supplied complete with a set of stackable, plug-in cables of suitable lengths and colours and with a training manual.

Power supply: $\pm 15Vdc$, 100mA and $+5Vdc$, 150mA

Experiments

- Analysis of the operation of a proportional, proportional-derivative and proportional-integral control
- PID control circuits
- PID controllers calibration