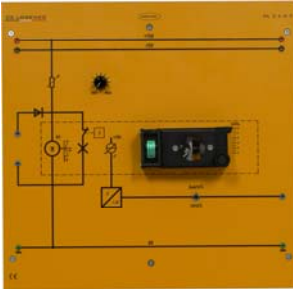# AUTOMATIC CONTROL TECHNOLOGY

DE LORENZO

Temperature control system

DL 2685

It represents a process for the control of the temperature, suitable for analysing continuous and discontinuous closed loop control systems.
A halogen lamp represents the heating element; a PTC sensor provides the feedback signal; a fan and a shutter valve allow, besides the reaching of a uniform temperature within given safety limits, also the insertion of noise variable.

Technical features:
Power supply: +15 V ; 0 V ; -15 V
Max. temperature: 100 °C
Temperature for the intervention of the bimetallic safety switch: 90 ....100 °C
Feedback signal:
2 mA / 10 °C
1 V / 10 °C
Apparent dead time TU: about 10 s
Compensation time TG: about 120 s

Light control system
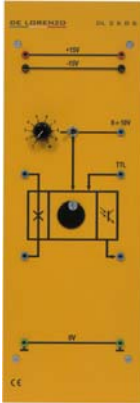
DL 2686

It represents a process for the control of the light.
In this module an incandescent lamp represents the opto-transmitter element, while a phototransistor is the opt-receiver element.
There are different possibilities for generating noise variables.

Technical features
Power supply: +15 V ; 0 V ; -15 V
Signal voltage range: 0 ... 20 V
Output signal: 0 .... 10 V
Maximum power: 10 W

Test function generator

DL 2687

It is a generator of functions such as: Dirac pulse, square wave and triangular wave selectable through selection switch. At some terminals the output signal has a fixed amplitude; at other terminals the amplitude can be continuously adjusted, from 0 V to 10 V, through a potentiometer. The frequency can be continuously adjusted, from 0.02 Hz to 10 Hz, through a potentiometer. For what concerns the square wave, it is possible to set the ratio between high signal and period, by choosing between 1/2 and 9/10.

Technical features
Power supply: +15 V ; 0 V ; -15 V
Output wave forms:
Dirac pulse function: 0 .... +10 VP
Triangular wave function: 0 .... 20 VPP balanced with respect to ground
Square wave function: 0 .... 20 VPP with "high signal/period" ratio = 1/2
Square wave function: 0 .... +10 VP with "high signal/period" ratio = 9/10
Frequency of the output signal: 0.02 .... 10 Hz
Signal Ioff for resetting the integral controllers.