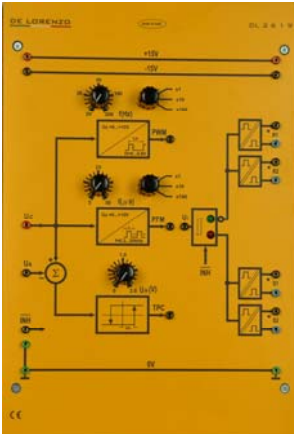# 🚆 POWER ELECTRONICS

PWM, PFM, TPC CONTROL UNIT

DL 2619

Technical features:
Power supply:
+15V/0V/- 15V (600 mA)
Control voltage:
U_c: 0 to 10V
PWM: 20-200 Hz/0.2-2 kHz/2-20 kHz
Duty cycle
$D = t_{on}/T = 0-0.95$
PFM: 5-50 ms/50-500 ms/0.5-5 s

Unit for the control of the conduction time of the electronic switches. Control methods: PWM (Pulse Width Modulation), PFM (Pulse Frequency Modulation) and TPC (Two-Point Control).

Frequency:
20 Hz to 20 kHz
TPC: Hysteresis: $U_H = 0$ to 2 V
Number of outputs: 2 x 2, with led indication of the status
Output amplifier: threshold voltage 5 V, short-circuit proof
Inhibit voltage:
$U_{INH} = 15$ V (open): trigger pulses.
$U_{INH} = 0$ V: longer pulses at certain outputs only.

RUN-UP CONTROL UNIT
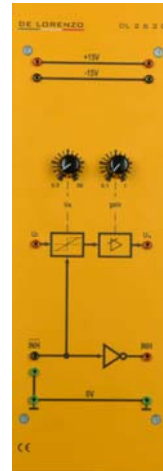
DL 2620

For generating a ramp voltage for a step change at the input, mainly applied in automatic speed control loops.

Technical features:
Power supply:
-15 V/0 V/ 15 V
Input signal range:
U_i = -10 V ... 10 V
Fine adjustment of the slew-rate:
0.5 . . . 50 V/s
Fine adjustment of the voltage gain:
0.1 . . . 1
Inhibit voltage:
$U_{INH} = 0$ V: zero output voltage U0 and output
$U_{INH} = 15$ V
$U_{INH} = 15$ V (open): output voltage U_0 runs up and output $U_{INH} = 0$ V

PID CONTROLLER
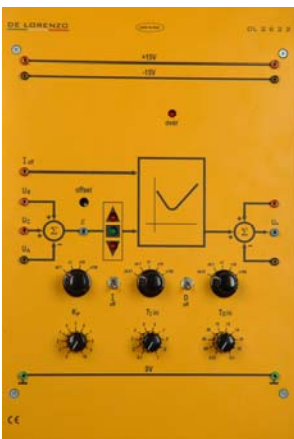
DL 2622

Technical features:
Power supply:
-15 V/0 V/+15 V
Input summing point for two different reference variables U_R and U_C and one controlled variable U_A.

Standard industrial controller for use as P, PI, PD or PID regulator in automatic closed-loop control systems.

Signal voltage range:
-10 V . . . + 10 V
Controller continuously adjustable parameters:
proportional gain:
$K_p = 0...1000$
integral action time:
$T_I = 1$ ms...100 s
differential action time
$T_D = 0.2$ ms . . . 20 s
Separate input for integral element reset.
Output summing point for adding or subtracting disturbance variables.

ABSOLUTE VALUE GENERATOR

DL 2623
Absolute value circuit used primarily for inverting the analogue input signal in reversible converters, triggered via a switching logic.

Technical features:
Power supply:
-15 V/0 V/+15 V
Input signal range U_i:
-10 V . . . + 10 V
Adjustable gain: 0 . . . 1
Inverting control input:
$U_{INV} = 0$ V: the input signal is inverted
$U_{INV} = 15$ V or disconnected: the input signal is not inverted
Inhibit voltage:
$U_{INH} = 0$ V: the output signal is zero
$U_{INH} = 15$ V (open): the absolute value circuit is active