

DCC-24B Manual Tension Controller

Switch-mode (PWM) power regulator for magnetic powder clutch / brake tension control



The DCC-24B is a manual (open-loop) web-tension controller that supplies a smoothly adjustable DC output to drive a magnetic powder clutch or brake. Built on an adaptive switch-mode power supply with pulse-width-modulated (PWM) regulation, the output is set by an external 10 k Ω potentiometer, giving stepless control of braking / clutch torque for constant material tension on unwind and rewind stations. An integrated stop-gain function counteracts inertia to prevent the web from slackening when the line stops. The unit is compact, forced-air cooled, and simple to wire and operate.

General

Model	DCC-24B
Product type	Manual (open-loop) web-tension controller / power regulator
Regulation method	Adaptive switch-mode power supply, pulse-width modulation (PWM)
Tension setting	Stepless, via external 10 k Ω potentiometer
Cooling	Forced-air (built-in cooling fan)

Electrical

Input supply voltage	AC 180 – 260 V
Input frequency	50 / 60 Hz
Output voltage	DC 0 – 24 V (adjustable)
Output current	4 A
Output drive	To magnetic powder clutch / brake coil

Functional Features

Control mode	Manual tension setting (potentiometer)
Stop-gain function	Prevents web slackening caused by roll inertia when the line stops
Adjustment	Stepless 0–100% output via 10 k Ω pot

Connections / Terminals

R, T	AC input supply (AC 180–260 V, 50/60 Hz)
G1, G2	Stop / Gain
V3 / V2 / V1	Tension setting – +10 V / IN / GND (10 k Ω potentiometer)
N, P	DC output to magnetic powder clutch / brake

Typical Applications

Constant-tension unwind and rewind control on printing, coating, laminating, slitting, bag-making, paper, wire & cable and textile machinery – wherever a magnetic powder clutch or brake sets material tension.

Specifications are taken from the manufacturer's published data and are subject to change without notice. Confirm against the current manufacturer manual before rated or safety-critical use.