



Electromagnetic holding brakes are continious powered during operation and switched off in emergency situations.

Opening the brake requires a nominal voltage to generate a magnetic field that "works against" a spring load or permanent magnet force.

As a result the electrical / thermal losses are connected to the nominal voltage.

The KEB POWERBOX sets down the release voltage to a smaller holding voltage after switch on time - resulting in a square time reduced power consumption.

Application:	Spring applied brake, Permanent magnet brake	
Advantage:	Sufficient power to release the brake and than keep it in holding position with a minimum of energy.	
	Short time cost amortisation of Powerbox invest	
Cost savings:	without Powerbox 130 W; 24 h operation; 1 year => 1,138 KWh x 9 Cent = $102.42 \in$	
	with Powerbox 130 W down to 8 W => 70 KWh x 9 Cent = $6.31 \in$	
		Saving 96.11 € per year



COMBITRON 98 rapid-switching rectifiers with overexcitation for optimal turn-on and turn-off times of spring-applied brakes and electromagnets.

Two Powerbox versions with similiar rigit housing to fit on DIN rail or bolt on version.

COMBITRON 90.98.200-CE09 UL - certification (No.: E.308765)

	90.98.200-CE04	90.98.200-CE09 ¹⁾
Input voltage	24 V DC ±20 %	180-300 V AC ±0 %
Overexcitation time	800 ms ±15 %	350 ms ±10 %
Cable length	max. 10 m to brake coil	max. 100 m to brake coil
Current I _N 45 °C	1.2 A continous 7 A for 800 ms	1.2 A continous 2.4 A for 350 ms
Current I 75 °C	0.6 A continous 3.5 A for 800 ms	0.7 A continous 1.4 A for 350 ms
Temperature	CCV -40° 75°	CCV -40° 75°
Switching rate	max. 6 per minute at max current	max. 1 per minute at max current
Side altitude above sea level	> 1,000 m - 1 % current reduction/m	> 1,000 m - 1 % current reduction/m
Wiring diagrams	24 V Secondary Secondary Value Value Secondary Value Value Value Value Value Value	L1 L2 L3 POWERBOX 90.98.200-CE09 Umax = 300V 50/60Hz Imax = 1.2A at T = 45 °C Imax = 0,7A at T = 75 °C C ~ ~ - + ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

¹⁾ different values (U, A) when used under conditions of UL



