

# DY5 Brake

DRIVES FOR EVERY INDUSTRY

## Technical Description

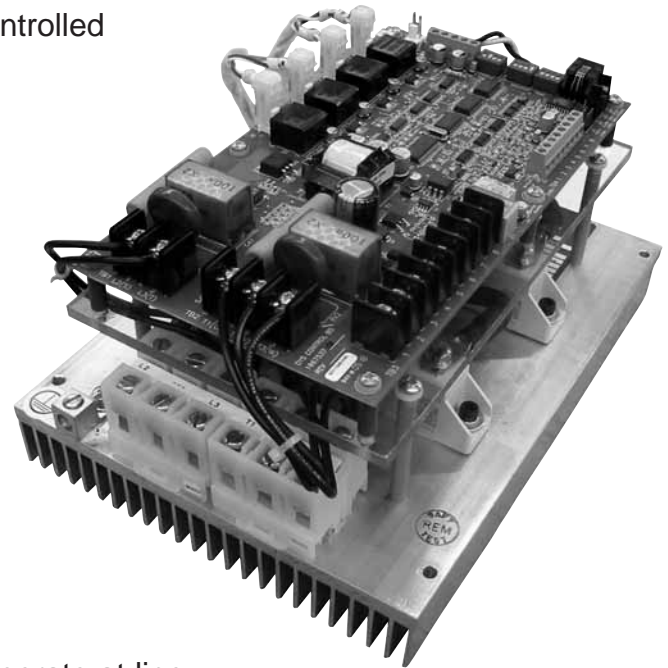
DY5 Digital Electronic Motor Brakes utilize a microprocessor and 4SCR Full Wave Bridge to apply regulated DC current to the stator of an AC induction motor causing controlled braking.

The DY5 employs zero speed sensing to automatically remove braking current as soon as the motor stops, thus minimizing motor heating and idle time before restarting.

The DY5 is designed specifically for applications requiring smooth, rapid braking to reduce motor stopping time and help meet OSHA safety standards.

Universal Source Matching allows the DY5 to operate at line voltages from 200 to 600 VAC and line frequencies between 45 and 65 Hz.

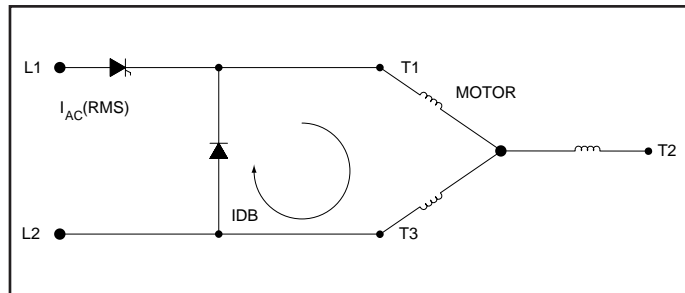
PLC programmable for custom applications and braking curves.



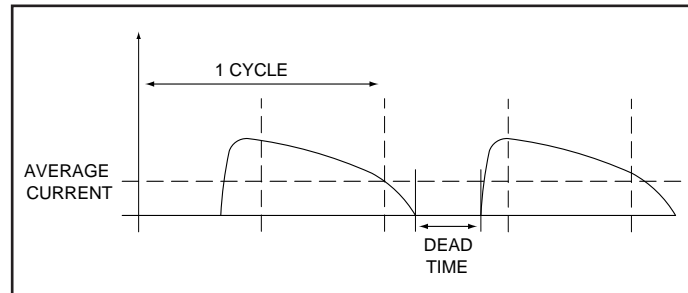
Eliminate machine coasting hazards and control vibration  
Meet ANSI safety codes

# Solid State AC Induction Motor Brakes

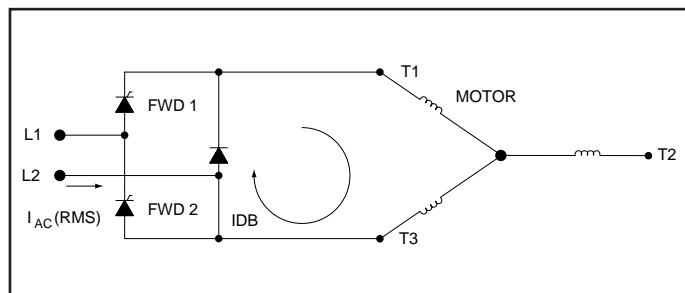
**Fig 1 (A) Conventional DB Circuit (Type A)**



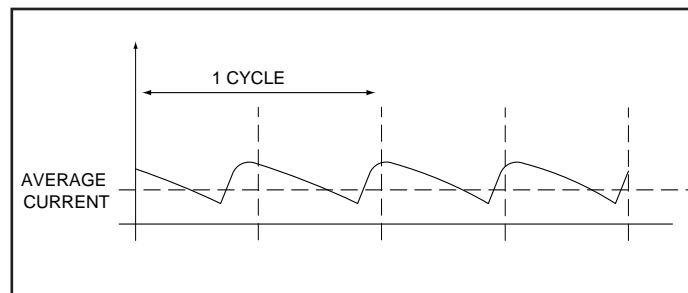
**Fig 1 (B) Intermittent Current (Type A)**



**Fig 2 (A) Saftronics DY5 DB Circuit (Type B)**



**Fig 2 (B) Continuous Current (Type B)**

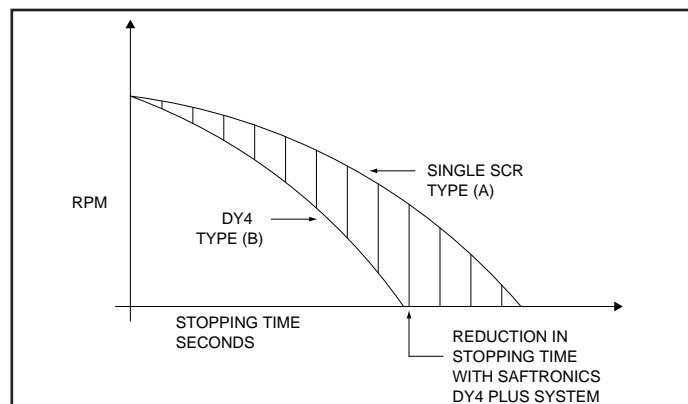


## Full Wave Control

This is a unique Saftronics feature that provides up to 30% more braking torque, for the same amount of AC current, than most conventional electronic braking packages which use a circuit consisting of a single SCR & free wheeling diode.

(Fig. 1) This circuit provides only 1 current pulse per cycle which allows the current to fall to zero before the next pulse arrives, during this zero period there is no current flow & therefore no braking torque. With the Saftronics full wave system (Fig. 2) current flows continuously giving up to 30% more current & therefore more braking torque. The motor stops faster (Fig. 3) with the operation both quieter & smoother, with less motor heating.

**Fig 3**



*Comparison of stopping time between Saftronics DY5 system and conventional single SCR system, for the same AC current input.*