

# Brake Operation and Connection Diagram.

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## Brake Operation

When motor is disconnected from power supply, the control also switches off the coil current and the electromagnet stops operating. The pressure springs force the armature towards the motor non drive endshield. Fitted in the braking disc, the braking pads are compressed between the two friction surfaces, the armature and the endshield braking the motor until it stops. When the motor is switched on, the coil is powered and the armature is pulled against the electromagnet frame by eliminating the spring force. Once they are free, the braking pads move axially in their seating and they remain out of the friction area. Now the braking process is ended and allows starting the motor freely.

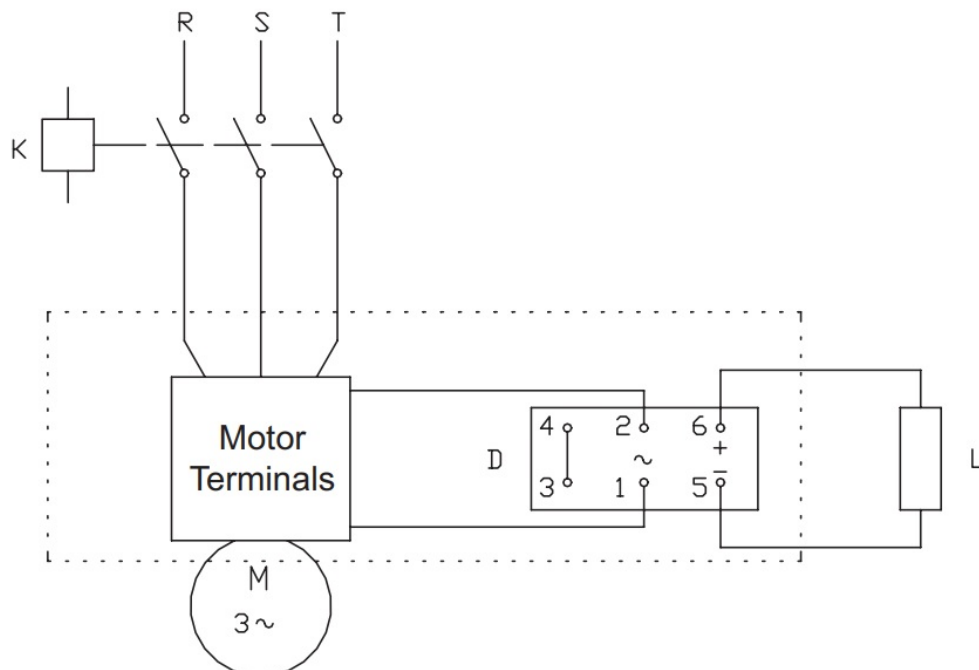
As option, AmTecs can supply the motors with brake lining.

## Connection Diagram

The AmTecs brake motor allows 3 types of connection diagrams supplying slow, medium and quick braking.

### a ) Slow braking

The power supply of the brake coil bridge rectifier is applied directly from the motor terminals, without interruption, as shown below:

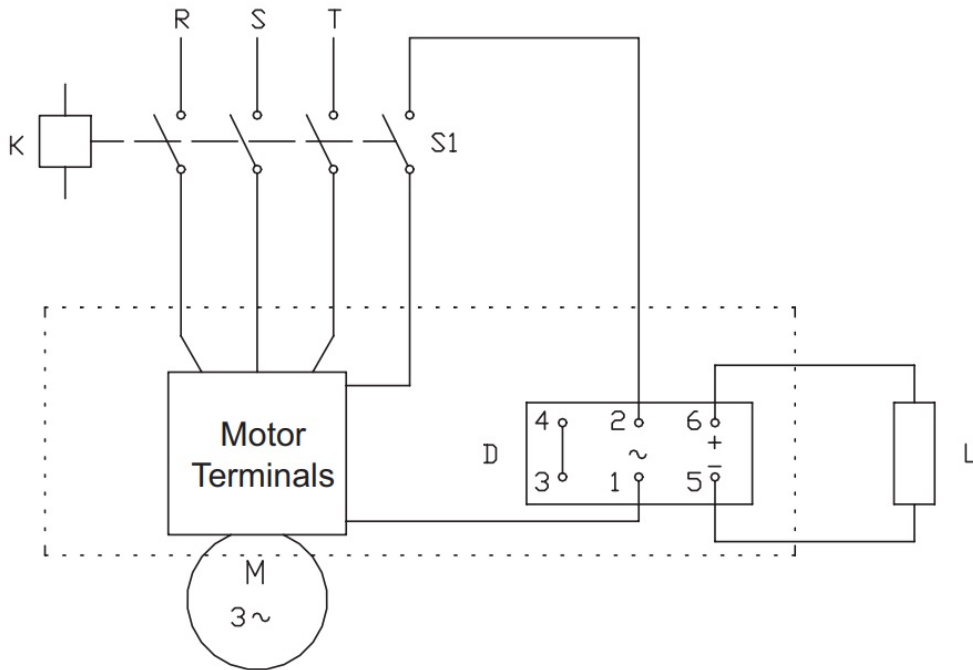


*D - Bridge rectifier*  
*L - Electromagnet coil*  
*K - Contactor*

*Connection diagram for slow braking.*

**b ) Medium braking**

In this case a contact for interruption of the bridge rectifier supply current in the AC circuit is interconnected. It is essential that this is a NO auxiliary contact ( S1 ) of the contactor itself or of the motor magnetic switch in order to allow switching on and off of the brake and motor simultaneously.

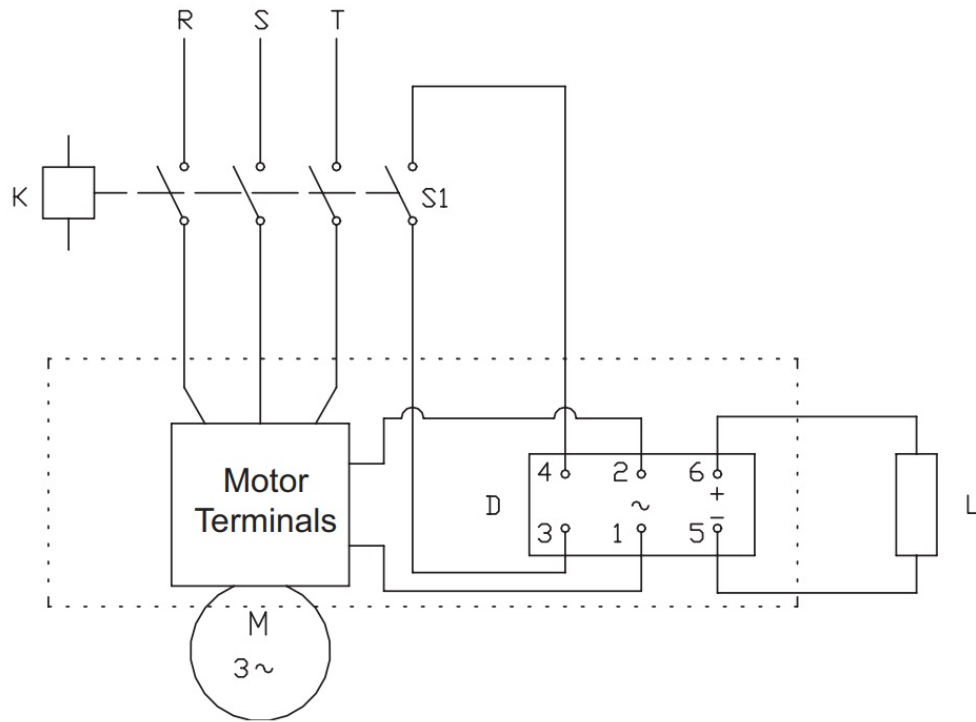


*D - Bridge rectifier*  
*L - Electromagnet coil*  
*K - Contactor*  
*S1- NO auxiliary contact*

*Connection diagram for medium braking.*

**c ) Fast braking**

A contact for interruption is directly connected to one of the coil supply cables in the DC circuit. It is essential that this is a NO auxiliary contact of the contactor itself or a magnetic switch of the motor.



- D - Bridge rectifier*
- L - Electromagnet coil*
- K - Contactor*
- S1 - NO auxiliary contact*

*Connection diagram for fast braking.*