

Electronic Brake Release Indicator (Proving Switch) Armature-Actuated Brake Series

Indicates when the brake is released by sensing the change in the brake coil current waveform.
For use with the Series 333/350/360 brakes



Features

- Mount in remote location (control cabinet)
- Operating temperature -40°C through 65°C
- Not susceptible to common problems of mechanical switches, such as mechanical fatigue, tolerances, and vibration.
- Relay contacts are silver-cadmium oxide
- Utilize either normally-open contacts (UL rated 2-20A, inductive or resistive, at 12-240 VAC and CSA rated 10A, inductive or resistive at 240 VAC) or normally-closed contacts (UL rated 2-10A, inductive or resistive, at 12-240 VAC and CSA rated 10A, inductive or resistive, at 240 VAC)

Brake Operation

When electrical power is applied to the armature-actuated brake coil, the armature is attracted by the electromagnetic force generated by the magnet body, which overcomes spring action. This allows the friction disc to rotate freely. When electrical power is interrupted, the electromagnetic force is removed and the pressure spring mechanically forces the armature plate to clamp the friction disc between itself and the pressure plate. This develops torque to stop or hold the load.

Switch Operation

When the brake armature is pulled in to the magnet body to release the brake, a change in the brake coil current waveform occurs. By tracking this change in the brake coil current, the electronic switch indicates when the brake is released.

Ordering Information

List Price	Discount Symbol
\$330.00	R3

Part Number Example: 4 - 4 - 0 7 0 9 0 - X X

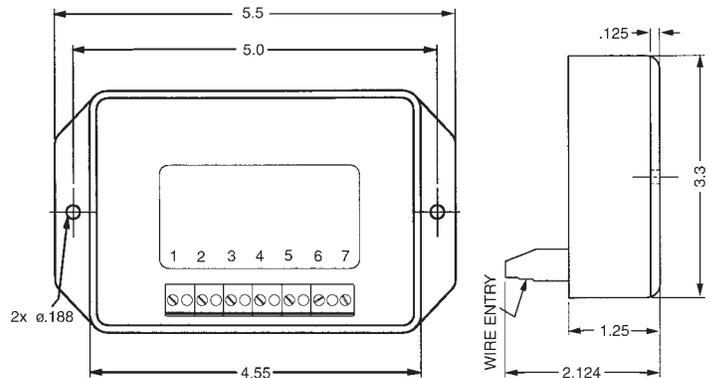
DC Voltage*	Characters To Insert
24	024
48	048
90	090
103	103
180	180
205	205
240	240
414	414

Specify brake model number. The last 2 digits of the switch part number will depend upon the brake size

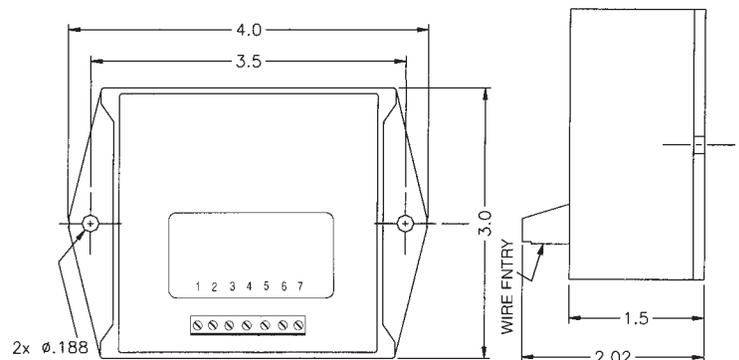
*Standard voltages listed. For other voltages, contact factory.

Dimensions

414V Unit



24V thru 240V Units



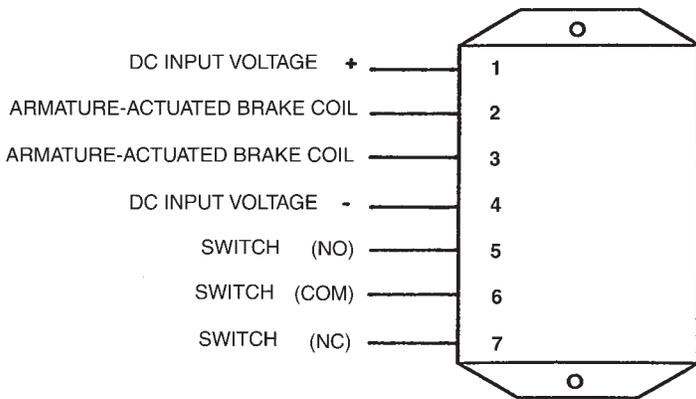
NOTE: Cannot be used with half-wave rectifier. Use with full-wave or TOR-AC full-wave rectifier only.

Wiring Instructions

IMPORTANT: Please read these instructions carefully before installing, operating or servicing your Stearns switch. Failure to comply with these instructions could cause injury to personnel and/or damage to property if the switch is installed or operated incorrectly. For definition of limited warranty/liability, contact Rexnord Industries, Inc., Stearns Division, 5150 S International Drive, Cudahy, Wisconsin 53110, (414) 272-1100.

CAUTION!

1. Installation and servicing must be made in compliance with all local safety codes including Occupational Safety and Health Act (OSHA). All wiring and electrical connections must comply with the National Electrical Code (NEC) and local electrical codes in effect.
2. To prevent an electrical hazard, disconnect power source before working on equipment. If the power disconnect is out of sight, lock the disconnect in the *off* position and tag it to prevent accidental application of power.
3. Make sure voltage rating of the switch corresponds to the voltage rating shown on the nameplate of the brake.
4. Installation and servicing should be performed only by qualified personnel familiar with the construction and operation of this equipment.



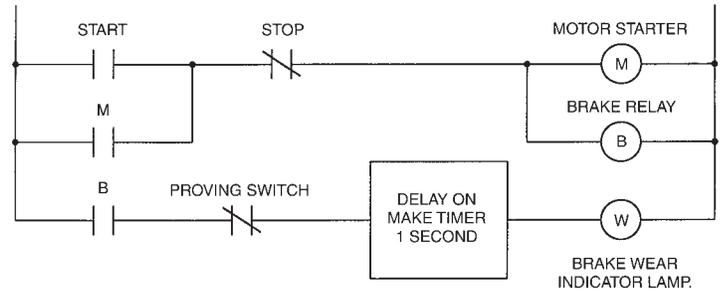
WARNING!

This switch is designed for use with a full wave rectifier only, **DO NOT USE THIS SWITCH WITH A HALF WAVE RECTIFIER.**

Applications

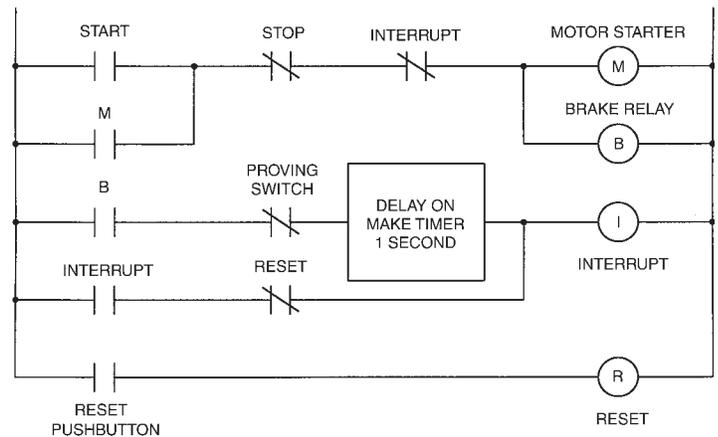
The Stearns electronic proving switch has been designed to detect and analyze the brake or clutch coil current waveform "signature" and thereby determine the operational status of the power transmission device. This operational status signal is delivered via a single pole, double throw relay contact. The status signal can be utilized in a wide variety of control and warning functions, as described in diagrams A and B.

A. SIMPLE BRAKE WEAR INDICATOR



LOGIC: If, within one second after application of power to the motor and brake, the proving switch N.C. contact does not open, the brake has not released, or has not released in an appropriate manner. The brake wear indicator lamp will illuminate, alerting the user that brake wear is excessive and service is required.

B. BRAKE RELEASE DETECTOR WITH SYSTEM SHUTDOWN



LOGIC: If, within one second after application of power to the motor and brake, the proving switch N.C. contact does not open, the brake has not released, or has not released in an appropriate manner. Interrupt relay "I" is energized and latched, disabling motor starter "M" and brake relay "B". An indicator lamp may be wired in parallel with the interrupt relay coil, indicating "Brake not Released". Adjust/repair brake, depress "Reset" push-button, depress "Start" button, system resumes operation. Control voltage may simply be interrupted to eliminate "Reset" function, if desired. Proving switch contact must be utilized to interrupt *both motor starter and brake relay !!!* If only motor starter is interrupted, load may be free to fall !!!



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