

Wiring and Service Instructions for DC Voltage Coils 56,XXX and 8X,XXX Series

Important

Please read these instructions carefully before installing, operating or servicing your Stearns Brake. Failure to comply with these instructions could cause injury to personnel and/or damage to property if the brake is installed or operated incorrectly. For definition of limited warranty/liability, contact Rexnord Industries, LLC, Stearns Division, 5150 International Dr., 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 Electric Code (NEC) and local electric codes in effect.
2. Do not install the brake in atmospheres containing explosive gases or dusts.
3. To prevent an electrical hazard, disconnect power source before working on the brake. If power disconnect point is out of sight, lock disconnect in the *off* position and tag to prevent accidental application of power.
4. Make certain power source conforms to the requirements specified on the brake nameplate.
5. Be careful when touching the exterior of an operating brake. Allow sufficient time for brake to cool before disassembly. Surfaces may be hot enough to be painful or cause injury.
6. Do not operate brake with housing removed. All moving parts should be guarded.
7. Installation and servicing should be performed only by qualified personnel familiar with the construction and operation of the brake.
8. For proper performance and operation, only genuine Stearns parts should be used for repairs and replacements.

Caution! Due to high initial current demands of a DC solenoid, a separate DC power source of adequate current capacity is usually required.

Caution 2! Never use a series resistor to drop power supply voltage to the coil as brake malfunction will result.

Caution 3! For electrical release of brake, apply full rated coil voltage instantly. Do not increase voltage slowly.

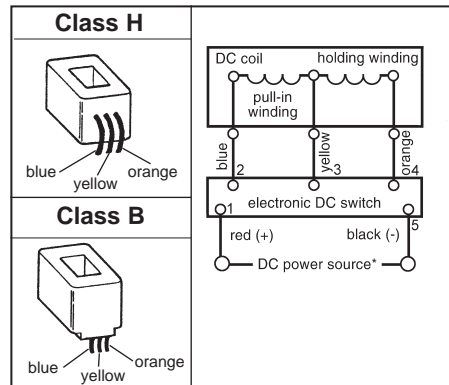


Figure 1

The (red +) lead wire must be connected to positive and the (black -) lead wire to negative.

Do not use a half wave rectifier

56,XXX and 8X,XXX

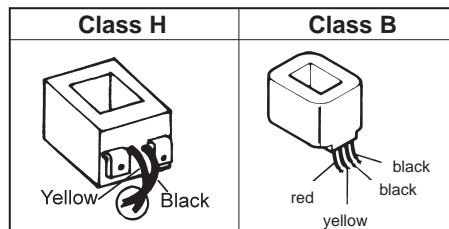


Figure 2

These Stearns DC coils are single voltage dual winding. A high current pull-in winding is initially energized to start the plunger movement, while a low current holding winding is momentarily shunted from the circuit until the plunger has pulled in. The electronic switch design incorporates an electronic timing circuit to allow the plunger to pull in, then electrically switch to the holding winding. Polarity of the power supply to the electronic switch and coil must be maintained. Refer to Figure 2 or 3 for proper wiring. Refer to Figure 4 (next page) for approximate switch position.

Table 1: Air Gap Settings

Nominal Static Torque (lb-ft)	Air Gap
56,XXX Series	
1 disc	3/8"
2 disc	7/16"
3 disc	1/2"
87,XXX Series	
all torques	7/8" to 15/16"
81,XXX; 82,XXX and 86,XXX Series	
all torques	1-3/8" to 1-7/16"

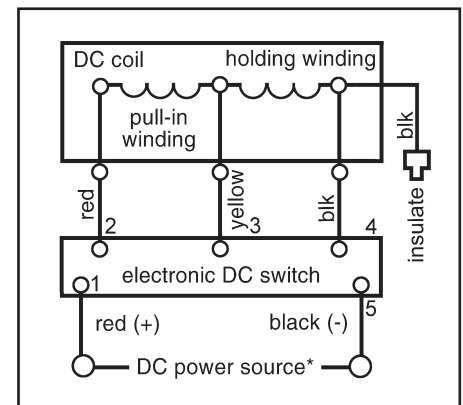


Figure 3

Solenoid Kits

Series	Electronic
55,X00 and 57,500 Series	
55,000	5-66-5041-00
55,100	5-66-5041-00
55,400	5-66-5549-00
55,500	5-66-5041-00
55,700	5-12-5547-00
57,500	5-12-5544-00
56,X00 Series	
56,600	5-66-5042-00
56,100	5-66-5042-00
56,200	5-66-5047-00
56,300	5-66-5042-00
56,400	5-66-5042-00
56,500	5-66-5042-00
56,700	5-66-5047-00
56,900	5-66-5047-00

Torque (lb-ft)	Electronic
87,000; 87,100 and 87,200 Series	
6 and 10	5-66-5051-00
15, 25 and 50	5-66-5061-00
35, 75 and 105	5-66-5081-00
87,700 Series	
6 and 10	5-66-5052-00
15, 25 and 50	5-66-5062-00
35, 75 and 105	5-66-5081-00
81,000 and 82,000 Series	
all	5-12-5529-00
86,X00 Series	
right hand } left hand }	5-12-5521-00

Typical Switch Mounting Position

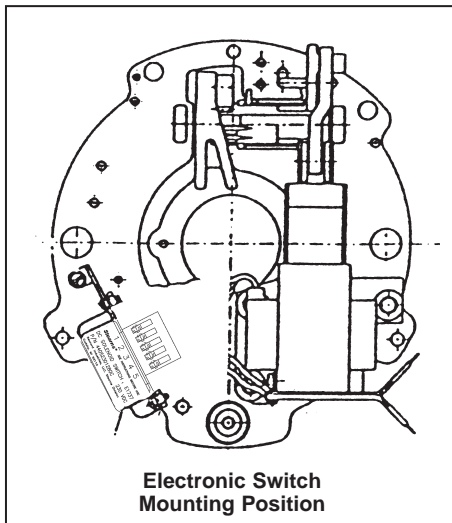


Figure 4

Coil Kits - Electronic Switch Kits

Description	Part Number	Torque (lb-ft)			
		1.5 - 10		15 - 25*	
55,X00 and 57,500 Series		1.5 & 3	6 & 10	15 & 20	25
56,X00 Series					
No. 4+ coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6412-43 5-96-6416-43 5-96-6417-43	1 1 1		
No. K4+ coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6412-23 5-96-6416-23 5-96-6417-23		1 1 1	
No. M4+ coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6462-23 5-96-6466-23 5-96-6467-23			1 1 1
No. P4+ coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6442-43 5-96-6446-43 5-96-6447-43			1 1 1
Electronic DC switch kit	24/28 Vdc 115 Vdc 230 Vdc	5-57-5712-15 5-57-5716-15 5-57-5717-15	1 1 1	1 1 1	1 1 1
87,X00 Series			6 & 10	15, 25 & 50	35, 75 & 105
No. 5 coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6512-33 5-96-6516-33 5-96-6517-33	1 1 1		
No. 6 coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6612-33 5-96-6616-33 5-96-6617-33		1 1 1	
No. 8 coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6812-33 5-96-6816-33 5-96-6817-33			1 1 1
Electronic DC switch kit	24/28 Vdc 115 Vdc 230 Vdc	5-57-5712-07 5-57-5716-07 5-57-5717-07	1 1 1	1 1 1	1 1 1
81,000; 82,000 and 86,000 Series					
No. 9 coil assembly	24/28 Vdc 115 Vdc 230 Vdc	5-96-6912-33 5-96-6916-33 5-96-6917-33		---	
Electronic DC switch kit	115 Vdc 230 Vdc	5-57-5716-02 5-57-5717-02		---	

