



LEESON Speedmaster® DC controls are general purpose drives designed for use with permanent magnet type direct current motors. NEMA 1 enclosed drives are suitable for most industrial applications, with the NEMA 4X enclosures best suited for washdown or outdoor installations or for extremely dusty applications. Chassis only units are available for building into equipment, machinery or existing enclosures. Most controls have a dual voltage switch allowing the control to be used on 115 or 230 volt, single phase, 50/60 Hertz service. However, the proper voltage motor should be selected for use with the power supply input, i.e., 90 volt DC motors for 115 volt input or 180 volt motors for 230 volt input service. Installation and adjustment instructions are included.

SCR/Thyristor drives are available in unidirectional and electro-mechanical type reversing styles for NEMA frame ratings and sub-fractional HP sizes. All SCR/Thyristor drives have Shunt Field Supply Terminals and can be used with Shunt Wound DC Motors.

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Regenerative, four quadrant controls in NEMA 4X or chassis style available for applications requiring more precise motion control. These controls will produce both motoring and braking torque regulation for NEMA frame 1/4 HP through 2 HP motors.

Pulse Width Modulated (PWM) controls are available in NEMA 1 and chassis style units for subfractional HP frame motors from 1/40 through 1/4 HP. Due to their improved form factor, these PWM controls will result in quieter operation, lower operating temperatures, longer brush life, and greater motor overload capacity than for the same motor on an SCR type control.

FOR NEMA FRAME MOTORS & GEARMOTORS
SCR CONTROLS • ENCLOSED • SINGLE PHASE 50/60 HZ

Description	Catalog Number	List Price	Output Current Amps	115V HP Range	230V HP Range	App. Wgt. (lbs.)	Disc. Sym.
NEMA 1 General Purpose							
—Non-Reversing	174307	\$305	10	1/8 to 1 ^(H)	1/4 to 2 ^(H)	5	A
—Reversing with dynamic braking	174308	416	10	1/8 to 1 ^(H)	1/4 to 2 ^(H)	5	A
—Heat Sink	174316	72	—	—	—	1	A
NEMA 4X Washdown—Dust-Tight							
—Non-Reversing, Plastic Enclosure	174102	414	10	1/4 to 1	1/4 to 2	6	A
—Non-Reversing, Plastic Enclosure with Signal Follower	174103	603	10	1/4 to 1	1/4 to 2	7	A
—Reversing, Plastic Enclosure*	174107	562	10	1/4 to 1	1/4 to 2	7	A
NEMA 4							
—Non-Reversing 3HP	174709	796	15	—	3	8	A

SCR CONTROLS • OPEN CHASSIS

Description	Catalog Number	List Price	Output Current Amps	115V HP Range	230V HP Range	App. Wgt. (lbs.)	Disc. Sym.
Chassis with Speed Pot-Non Reversing	174311	\$167	10	1/8 to 1 ^(J)	1/4 to 2 ^(J)	1	A
Chassis Heat Sink ^(J)	174314	48	—	—	—	1	A

REGENERATIVE SCR DRIVES • FOUR QUADRANT • FULL WAVE

Description	Catalog Number	List Price	Output Current Amps	115V HP Range	230V HP Range	App. Wgt. (lbs.)	Disc. Sym.
NEMA 4X Washdown ✓	175720	\$870	10	1/4 to 1 ^(K)	1/2 to 2 ^(K)	8	A
Open Chassis with Speed Pot ✓	175721	560	10	1/4 to 1 ^(K)	1/2 to 2 ^(K)	2	A
Chassis Heat Sink ^(K)	175722	94	—	—	—	2	A

FOR SUBFRACTIONAL HP MOTORS & GEARMOTORS
PWM & SCR CONTROLS • ENCLOSED • SINGLE PHASE 50/60 HZ

Description	Catalog Number	List Price	Output Current Amps	115V HP Range	230V HP Range	App. Wgt. (lbs.)	Disc. Sym.
NEMA 1 General Purpose							
—SCR Non-Reversing	M1740005	\$292	3	1/40 to 1/8	1/40 to 1/4	5	A
—SCR Reversing With Dynamic Braking	M1740006	395	3	1/40 to 1/8	1/40 to 1/4	5	A
—PWM Non-Reversing	M1740008	238	3	1/40 to 1/8	1/40 to 1/4	2	A

PWM & SCR CONTROLS • OPEN CHASSIS

Description	Catalog Number	List Price	Output Current Amps	115V HP Range	230V HP Range	App. Wgt. (lbs.)	Disc. Sym.
Open Chassis SCR Type							
—Chassis with Speed Pot-Non Reversing	M1740007	\$163	1.5	1/40 to 1/8	1/40 to 1/4	1	A
Open Chassis PWM Type							
—Chassis with Speed Pot-Non Reversing	M1740009	201	2.0	1/40 to 1/8	—	1	A

* Drive does not have dynamic braking. Motor shaft must be at zero speed before reversing.
^(H) Heat sink #174316 is required for NEMA 1 type 3/4 and 1HP 115V and 1½ and 2HP 230V
^(J) Chassis Heat Sink #174314 required for 3/4 and 1HP 115V and 1½ and 2HP 230V
^(K) Chassis Heat sink #175722 required for 1HP and above.
 ✓ Regenerative drives are reversible and have regenerative braking.