



DUAL MODE • DUAL SPEED CONTROL

- Dual Motor, Dual Voltage Control
- SCR Control designed to run two DC motors at the same time in either Independent mode or Slave/Master mode
- Open Chassis Design
- Dual voltage, 115-230 VAC input with jumper selectable 90/180 VDC output
- Jumper selectable speed and torque mode
- Two trim pots each for the minimum speed, maximum speed, IR compensation, current limit and acceleration/deceleration
- Comes standard with two potentiometers



HP	Input Voltage	Output Amps	Output Voltage	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)
1 HP @ 90 VDC 2 HP @ 180 VDC	115/230	10*⊕	0-90/0-180	174422	A	3

⊕ Heat sink 174314 is required if one side provides more than 5A or the output of both sides is more than 6.5A.



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.

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

SCR CONTROLS • OPEN CHASSIS

Description	Catalog Number	Output Current Amps	HP Range		App. Wgt. (lbs.)	Disc. Sym.
			115V	230V		
Chassis with Speed Pot-Non Reversing	174311	10	1/8 to 1 ^(H)	1/4 to 2 ^(H)	1	A
Chassis Heat Sink ^(H)	174314	–	–	–	1	A

REGENERATIVE SCR DRIVES • FOUR QUADRANT • FULL WAVE

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

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

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

PWM & SCR CONTROLS • OPEN CHASSIS

Description	Catalog Number	Output Current Amps	HP Range		App. Wgt. (lbs.)	Disc. Sym.
			115V	230V		
Open Chassis SCR Type						
– Chassis with Speed Pot-Non Reversing	M1740007	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	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 1 1/2 and 2HP 230V when the amp draw of the motor exceeds 5 amps.
^(J) Chassis Heat Sink #174314 required for 3/4 and 1HP 115V and 1 1/2 and 2HP 230V when the amp draw of the motor exceeds 5 amps.
^(K) Chassis Heat sink #175722 required for 1HP and above when the amp draw of the motor exceeds 5 amps.
 ✓ Regenerative drives are reversible and have regenerative braking.