

Line Regenerative DC Controls and Accessories



**1/4 thru 3 Hp
5 Hp**

**115/230 VAC
230 VAC**

**Single Phase 50/60 Hz.
Single Phase 50/60 Hz.**

Applications: Frequent start/stop/reverse applications or where controlled braking is required.

Features: Single phase line regenerative open chassis control to operate permanent magnet or wound field DC motors. These line regen controls are ideal for applications with overhauling loads. In torque mode, it can be used for tensioning applications. Several accessory boards are available to further customize the control. Includes 5k speed potentiometer. Jumper selectable current settings.

Hp Range	Catalog Number	Description Input Voltage / Max. Hp	List Price	Mult. Sym.	Ap'x. Shpg. Wgt.	Input Voltage
Line Regen SCR						
1/8-2 (a)	BC204	120V 1 Hp, 230V 2 Hp, Standard Model	366	E9	3	115/230
	BC204-BPSI	BC204 with BC215 Bi-polar Signal Isolator factory installed	472	E9	3	
1/4-2	BC200	120V 1 Hp, 230V 2 Hp	683	E9	4	115/230
1/4-3	BC201	120V 1-1/2 Hp, 230V 3 Hp	811	E9	1	115/230
5	BC203	230V 5Hp	1,021	E9	10	230
NEMA 4X Washdown Duty Line Regen SCR						
1/8-2	BC254	120V - 1Hp, 230V - 2Hp Standard Model	653	E9	5	115/230
	BC254-FBR	BC254 with Power On/Off switch instead of Start/Stop switch, and BC253. Forward-Brake-Reverse switch factory installed	685	E9	5	115/230

NOTE: (a) 1 Hp at 115 volts and 2 Hp at 230 volts requires BC143 heatsink kit.

Line Regenerative DC Control Accessories

Catalog Number	Description	List Price	Mult. Sym.	Ap'x. Shpg. Wgt.
Accessories for BC200, BC201 and BC203				
BC212	Bipolar signal isolator board	209	E9	1
Accessories for BC204				
BC143	External Heatsink Kit	69	E9	2
BC215	Bipolar signal isolator board	97	E9	3
BC216	Multispeed board for BC204	74	E9	1
BC218	DIN rail mounting kit	34	E9	1
Accessories for BC254				
BC245	Bipolar signal isolator for BC254	206	E9	1
BC253	Forward-Stop-Brake-Reverse Switch for BC254	26	E9	1
BC258	Auto-manual Switch for BC254	58	E9	1
BC259	AC Line Switch for BC254	26	E9	5

Farm Duty Motors

Definite Purpose Motors

Unit Handling Motors

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

DC Motors and Controls

Soft Starters & Dynamic Brakes

NEMA Enclosed DC Control Specifications

Features	Catalog Number											
	BC138		BC139		BC140 or BC140-FBR		BC154		BC160		BCWD140	
Enclosure	NEMA 1		NEMA 1		NEMA 1		NEMA 4X		NEMA 4X		NEMA 4X Washdown	
Control Type	NEMA K		NEMA K		NEMA K		NEMA K		NEMA K		NEMA K	
AC Line Input	115		230		115 230		115 230		230		115 230	
DC Armature Voltage Nominal	90		180		90 180		90 180		180		90 180	
Shunt Field Power Supply												
Voltage - DC	50/100		100/200		50/100 100/200		50/100 100/200		100/200		50/100 100/200	
Rated Horsepower Range	1/100 - 1/3		1/50-3/4		1/100-1 1/50-2		1/50-1 1/25-2		3		1/50-1 1/25-2	
External Heat Sink (BC143) Required	No		No		1 Hp 2Hp		Not Required		Not Required		Not Required	
Speed Range (Motor May Be 20: 1 Constant Torque)	50:1		50:1		50:1		50:1		50:1		50:1	
Adjustable Acceleration Time	Yes		Yes		Yes		Yes		Yes		Yes	
Adjustable Deceleration Time	Yes		Yes		Yes		Yes		Yes		Yes	
Minimum Speed Adjustable	Yes		Yes		Yes		Yes		Yes		Yes	
Maximum Speed Adjustable	Yes		Yes		Yes		Yes		Yes		Yes	
Current Limit Adjustable	Yes		Yes		Yes		Yes		Yes		Yes	
Adjustable Current Limit and Trip Out Type	No		No		No		Timed or Non-Timed		Timed or Non-Timed		Timed or Non-Timed	
Control Of Speed or Torque	Speed		Speed		Speed		Speed or Torque		Speed or Torque		Speed or Torque	
IR Compensation Adjustable	Yes		Yes		Yes		Yes		Yes		Yes	
Tachometer Feedback Input	No		No		No		Yes		Yes		Yes	
Plug-In Horsepower Resistor ®	Required		Required		Required		N/A		N/A		N/A	
UL & cUL Listing, CE	Yes		Yes		Yes		Yes		Yes		Yes	
AC Line Fuse	Included		Included		Included		External		External		External	
DC Armature Fuse	Included with Hp Resistor		Included with Hp Resistor		Included with Hp Resistor		Not Supplied with Control		External		Not Supplied with Control	
Options												
AC Line Switch	Standard		Standard		Standard		Opt - BC159		No		Standard	
Forward/Brake/Reverse Switch												
Mechanical	No		No		Opt-BC144		Opt-BC156		No		Standard	
Electronic	No		No		No		Opt-BC153		No		Opt-BC153	
Run/Jog Switch	No		No		No		Opt-BC157		Opt-BC157		Standard	
Input Signal							Internal		Internal		External	
Following Mode Capability							Mount		Mount		Mount	
Current (1-5, 4-20, 20-50mA)	No		No		Opt-BC145		Opt-BC145		Opt-BC145		Opt-BC145	
Voltage (0-25,0-120, VDC)							Opt-BC145		Opt-BC145		Opt-BC145	
Electrical Connection To Control Barrier Terminal Block	Standard		Standard		Standard		Standard		Standard		Standard	
Current Sensing Relay/Overload Protector	No		No		Opt - BC146		Standard		Standard		Standard	
AC Line Filter for CE	Opt-BC24-LF		Opt-BC24-LF		Opt-BC24-LF		Opt-BC24-LF		Opt-BC24-LF		Opt-BC24-LF	

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Chassis Mount DC Control Specifications

Features	Catalog Number									
	BC141	BC142	BC142-6		BC155	BC204		BC200	BC201	BC203
Enclosure	Chassis	Chassis	Chassis		Chassis	Chassis		Chassis	Chassis	Chassis
Control Type	NEMA K	NEMA K	NEMA K		NEMA K	Regenerative		Regenerative	Regenerative	Regenerative
AC Line Input	115	230	115	230	230	115	230	115	230	230
DC Armature Voltage Nominal	90	180	90	180	180	90	180	90	180	180
Shunt Field Power Supply Voltage - DC	50/100	100/200	50/100		50/100	50/100		50/100	100/200	100/200
Rated Horsepower Range	1/100-1.5	1/50-3	1/100-1 1/2		5	1/8-1	1/4-1	1/4-1-1/2	1/2-2	5
External Heat Sink (BC143) Required	1 Hp-Up	2 Hp-Up	1/2 Hp-Up		Not Required	90V-1Hp		Not Required	Not Required	Not Required
Speed Range (Motor may be 20:1 Constant Torque)	50:1	50:1	50:1		50:1	50:1		50:1	50:1	50:1
Adjustable Acceleration	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Adjustable Deceleration	Yes	Yes	Yes		Yes	Fwd & Rev		Fwd & Rev	Fwd & Rev	Fwd & Rev
Min. Speed Adjustable	Yes	Yes	Yes		Yes	No		No	No	No
Max. Speed Adjustable	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Adjustable Current Limit and Tripout Type	Non Timed	Non Timed	Non Timed		Non Timed	Non Timed		Non Timed	Non Timed	Non Timed
Control of Speed or Torque	Speed	Speed	Speed		Speed	Speed or Torque		Speed or Torque	Speed or Torque	Speed
IR Compensation Adjustment	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Tachometer Feedback Input	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Plug-in Horsepower Resistor®	Required	Required	Required		N/A	N/A		N/A	N/A	N/A
UL & cUL Listing, CE	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
AC Line Fuse	Included	Included	Included		External	Included		Included	Included	External
DC Armature Fuse	Included with Hp Resistor	Included with Hp Resistor	Included with Hp Resistor		Included with Hp Resistor	External		N/A	N/A	External
Options										
Input Signal										
Following Mode Capability						No				
Current (1-5, 4-20, 20-50 mA)	Opt-BC145	Opt-BC145	Opt-BC145		Opt-BC145	No		No	No	No
Voltage (0-25, 0-120, VDC)	Opt-BC145	Opt-BC145	Opt-BC145		Std 0-10 VDC	Opt BC215		Std 0-±10 VDC	Std 0-±10 VDC	Std 0-±10VDC
0-25, 0-120, VDC)	No	No	No		No	with BC214		Opt-BC212	Opt-BC212	Opt-BC212
Electrical Connection To Control										
Push-On Quick Connects	Standard	Standard	Standard		No	Standard		No	No	No
Barrier Terminal Block	Opt-BC147	Opt-BC147	Opt-BC147		Standard	N/A		Standard	Standard	Standard
Current Sensing Relay/ Overload Protector	Opt-BC146	Opt-BC146	Opt-BC146		Opt-BC146	N/A		Standard	Standard	Standard
Regenerative Accel / Decel Board	No	No	No		No	No		Opt - BC211	Opt - BC211	Opt - BC211
AC Line Filter for CE	Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF		Opt-BC24-LF	Opt-BC24-LF		Opt-BC24-LF	Opt-BC24-LF	Opt-BC24-LF

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