

SINGLE SPEED SOFT-START

Simple Adjustment

The single-speed control allows setting of the motor (ACCEL) voltage and the (TIME RAMP) to reach the full motor torque.



APPLICATIONS INCLUDE:

Overhead crane, bridge & trolley, monorails, motorized jib cranes, palletizers, conveyors, textile machinery, machine tools, overhead doors, etc. Saves belts and gears. For panel mounting with appropriate contactors, fusing, etc.

DUAL SPEED SOFT-START

Simple Adjustment

The dual-speed control allows the setting of motor starting torque (ACCEL), transitional torque between the two speeds (DECEL) and the (TIME) setting to reach full motor torque voltage.



UNIQUE PATENTED SYSTEM "senses" motor transitions, via the contactor coils, to apply the appropriate voltages for the smoothest operating two speed, two winding motors possible or one winding consequent pole motors.

BT Series reduced torque controls are applied where smooth-move-stepless 3-phase a.c. "cushioned" motor starting is advantageous for reversing or non-reversing systems. (single or multiple motors.)

Smooth-Soft starting, reversing, high to low speed, low to high speed, forward in high speed to reverse in low speed, etc., with standard 3-phase-two-speed a.c. induction motors. Timers and switching in of resistor ballasts are now a thing of the past! Smooths out past rough transition between speeds!

FOR 3-PHASE A.C. MOTORS

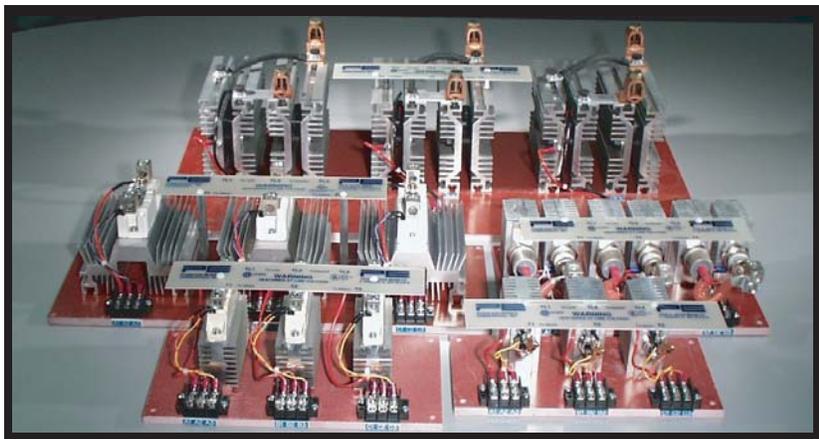
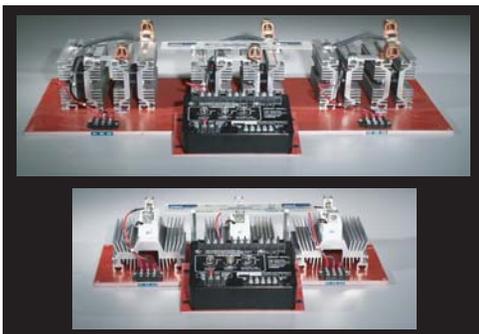
1-100 HP

575, 460, 385-415, 208-230 VAC
50 or 60 Hz

Many models are MULTI-VAC units for simplicity of stocking

PATENTED ARC-ELIMINATION!

This feature eliminates all destructive electrical arcing on the "make and break" (open and close) of power contactors on both single and two speed systems. Contactor wear is virtually eliminated! Allows for high reliability plug reversing, high frequency of starts and stops, etc.



POWER SECTIONS OF THE BT-SERIES SOFT-START

BT SERIES SOFT-START MOTOR CONTROLS

TECHNICAL SPECIFICATIONS...

Control Signal VAC: 115vac/vdc is standard +/- 20%. Other vac/vdc are available - note when ordering - no operation will occur without proper signal voltage from the contactor coils.

Operating temperature: 14° to 131° F (-10° to 55° C). Avoid or shield against radiant heat source. Do not block heatsink fins for proper air flow.

Approvals: U.L. Listed Industrial Control Equipment 1L14, File E134267 **C-U.L.** approval for all Canadian Provinces. Motor overload protection should be used.

Motor types - Use with 2-winding a.c. induction motors. Can be used with 1-winding motor (consequent pole), call factory. For smaller horse power units - see Smooth Move 1 or 2.

Specification for bids: Reduced Torque Control Soft Start for a.c. motors. It should have an integral phenolic enclosure surrounding all electrical printed circuit boards, and have an electrically isolated heatsink. Connections should consist of 3-phase inputs and outputs. Immediate shutdown function after control signal is removed is required. 2-speed units include 5 terminals for sensing off of the contactor coils Forward, Reverse, High, Low, and Common control signal voltages. Three potentiometer controls for Time, Torque, and Decel rate from High to Low speed are necessary. 1-speed units include 2 terminals for sensing off the contactor coils Forward and Reverse control signal voltages. Includes 2-potentiometer controls for Time, and Torque setting.

SIZE	HP 460VAC	HP 208-230 VAC	SINGLE SPEED	DUAL SPEED
C	7.5	4	BT746-1D	BT746-2D
D	10	5	BT1046-1D	BT1046-2D
D	15	7.5	BT1546-1D	BT1546-2D
E	30	--	BT3046-1A	BT3046-2A
E	--	15	BT1523-1A	BT1523-2A
F	50	--	BT5046-1A	BT5046-2A
F	--	25	BT2523-1A	BT2523-2A
G	75	--	BT7546-1A	BT7546-2A
G	--	40	BT4023-1A	BT4023-2A
SIZE	HP 575 VAC	HP 460 VAC	SINGLE SPEED	DUAL SPEED
C	7.5	7.5	BT757-1D	BT757-2D
D	15	15	BT1557-1D	BT1557-2D
E	30	--	BT3057-1A	BT3057-2A
E	--	30	BT3046-1A	BT3046-2A
F	50	--	BT5057-1A	BT5057-2A
F	--	50	BT5046-1A	BT5046-2A
G	75	--	BT7557-1A	BT7557-2A
G	--	75	BT7546-1A	BT7546-2A
SIZE	HP 380-415 VAC	HP 208-230 VAC	SINGLE SPEED	DUAL SPEED
C	7.5	4	BT738-1D5	BT738-2D5
D	10	5	BT1038-1D5	BT1038-2D5
D	15	7.5	BT1538-1D5	BT1538-2D5
E	30	--	BT3038-1A5	BT3038-2A5
E	--	15	BT1523-1A5	BT1523-2A5
F	50	--	BT5038-1A5	BT5038-2A5
F	--	25	BT2538-1A5	BT2523-2A5
G	75	--	BT7538-1A5	BT7528-2A5
G	--	40	BT4023-1A5	BT4023-2A5

115 VAC contactor coil control signal is standard. Unit will NOT OPERATE without proper control signal. Other inputs are available (24, 48, 230, vac or vdc etc.) Specify when ordering !

MODELS A, B, C & D ARE ALL MULTI-VOLTAGE UNITS (D) TYPES - SIZES E, F & G ARE SINGLE VAC. THE "A" SUFFIX REPRESENTS AVAILABILITY IN SINGLE VOLTAGE, "D" REPRESENTS DUAL VOLTAGE MODELS WITH A "A5" OR "D5" SUFFIX ARE 50 Hz UNITS, 50 Hz IS AVAILABLE FOR EVERY UNIT.

M u l t i - V A C	60Hz 50Hz AVAILABLE	HP U.S.A.	HP	ONE-SPEED		TWO-SPEED Transitional Torque Control	
	SIZE	460VAC	208-230VAC	MODEL	LIST PRICE	MODEL	LIST PRICE
All VAC ±10%	aa	2	1	See NEW		See NEW	
	a	1.5	1	Smooth-Move® 1 Models		Smooth-Move® 2 Models	
	b	3	1.5	(see note 1)		(see note 1)	
	b	5	3				
	c	7.5	4	BT746-1D	650	BT746-2D	700
	d	10	5	BT1046-1D	733	BT1046-2D	809
	d	15	7.5	BT1546-1D	786	BT1546-2D	857
	e	30	-	BT3046-1A	1053	BT3046-2A	1131
	e	-	15	BT1523-1A	1053	BT1523-2A	1131
	f	50	-	BT5046-1A	1415	BT5046-2A	1493
f	-	25	BT2523-1A	1415	BT2523-2A	1493	
g	75	-	BT7546-1A	2141	BT7546-2A	2325	
g	-	40	BT4023-1A	2141	BT4023-2A	2325	

M u l t i - V A C	60Hz 50Hz AVAILABLE	HP CANADA/U.S.A.	HP	ONE-SPEED		TWO-SPEED Transitional Torque Control	
	SIZE	575VAC	460VAC	MODEL	LIST PRICE	MODEL	LIST PRICE
All VAC ±10%	aa	2	2	See NEW		See NEW	
	a	2	2	Smooth-Move® 1 Models		Smooth-Move® 2 Models	
	b	5	5	(see note 1)		(see note 1)	
	c	7.5	7.5	BT757-1D	689	BT757-2D	725
	d	15	15	BT1557-1D	825	BT1557-2D	900
	e	30	-	BT3057-1A	1132	BT3057-2A	1210
	e	-	30	BT3046-1A	1053	BT3046-2A	1131
	f	50	-	BT5057-1A	1525	BT5057-2A	1603
	f	-	50	BT5046-1A	1415	BT5046-2A	1493
	g	75	-	BT7557-1A	2241	BT7557-2A	2425
g	-	75	BT7546-1A	2141	BT7546-2A	2325	

M u l t i - V A C	50/60Hz	HP INTERNATIONAL	HP	ONE-SPEED		TWO-SPEED Transitional Torque Control	
	SIZE	380-415VAC	208-230VAC	MODEL	LIST PRICE	MODEL	LIST PRICE
All VAC ±10%	aa	1.5	1	See NEW		See NEW	
	a	1.5	1	Smooth-Move® 1 Models		Smooth-Move® 2 Models	
	b	3	1.5	(see note 1)		(see note 1)	
	b	5	3				
	c	7.5	4	BT738-1D	660	BT738-2D	710
	d	10	5	BT1038-1D	740	BT1038-2D	820
	d	15	7.5	BT1538-1D	810	BT1538-2D	870
	e	30	-	BT3038-1A5	1053	BT3038-2A5	1131
	e	-	15	BT1523-1A5	1053	BT1523-2A5	1131
	f	50	-	BT5038-1A5	1415	BT5038-2A5	1493
f	-	25	BT2523-1A5	1415	BT2523-2A5	1493	
g	75	-	BT7538-1A5	2141	BT7538-2A5	2325	
g	-	40	BT4023-1A5	2141	BT4023-2A5	2325	

115 VAC contactor coil control signal input is standard. Unit will NOT OPERATE without proper control signal. Other inputs are available (24,48,230, vac or vdc etc.) Specify when ordering - Add \$25 to List price.

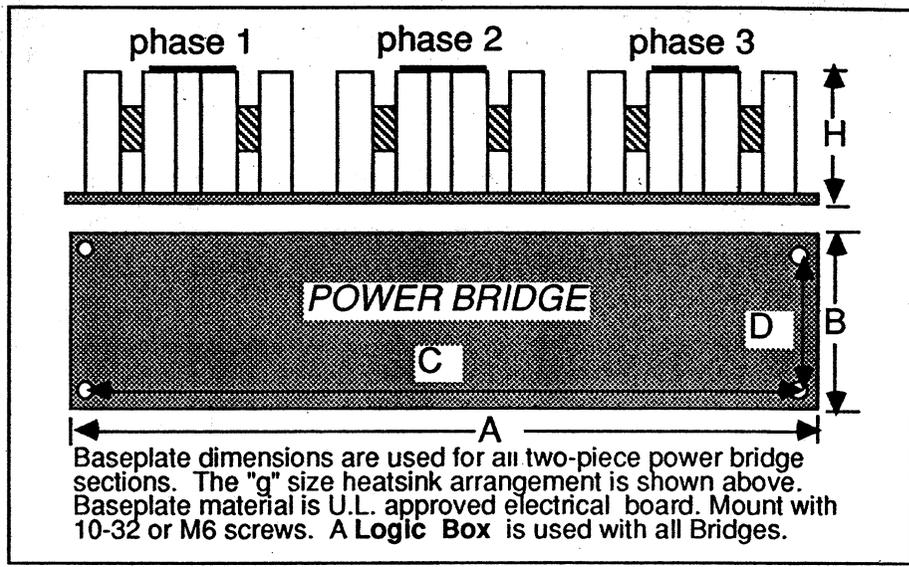
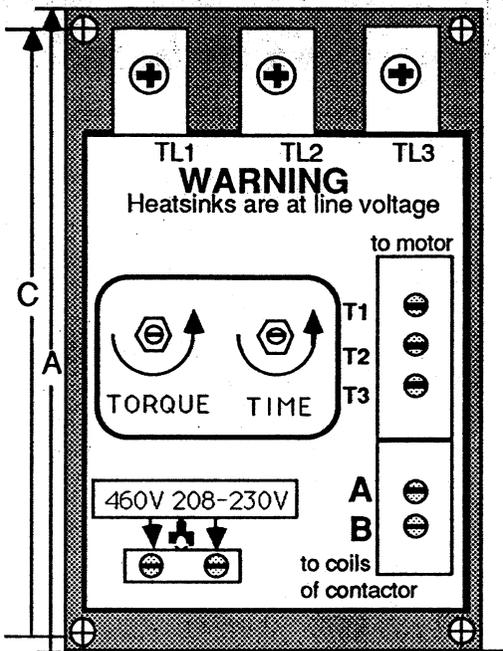
- Smooth-Move® series miniaturized controls (see literature) for new designs. Smooth-Move® 1 & 2 models have Automatic Universal VAC input and rated by motor total full load amps. Base plates to fit previous BT-Series™ units are available - add \$20 to list price and note old model #.
- MODEL SIZES aa,a,b are replaced by "S" and "L" sizes of Smooth-Move® - see reverse for physical dimensions.
- MODELS aa,a,b,c & d are all MULTI-VOLTAGE UNITS (D types) - sizes e,f & g are single VAC. Call for larger Horsepowers.

Specifications are subject to change without notice.

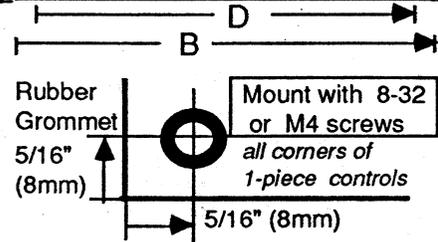
MADE IN USA

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#940830



Baseplate dimensions are used for all two-piece power bridge sections. The "g" size heatsink arrangement is shown above. Baseplate material is U.L. approved electrical board. Mount with 10-32 or M6 screws. A Logic Box is used with all Bridges.



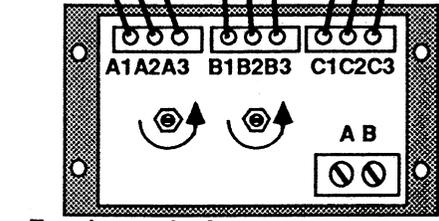
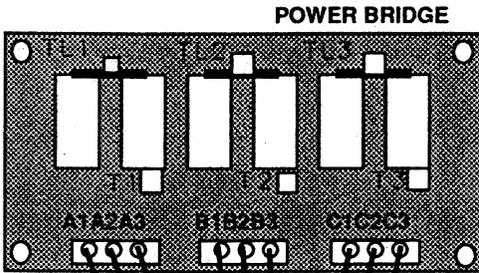
For sizes a,b - Single - piece units (Power Bridge & Logic are in one package). Single-speed is shown.

For sizes S,L - see Smooth-Move 1[®] information. (Grommet spacing does not apply).

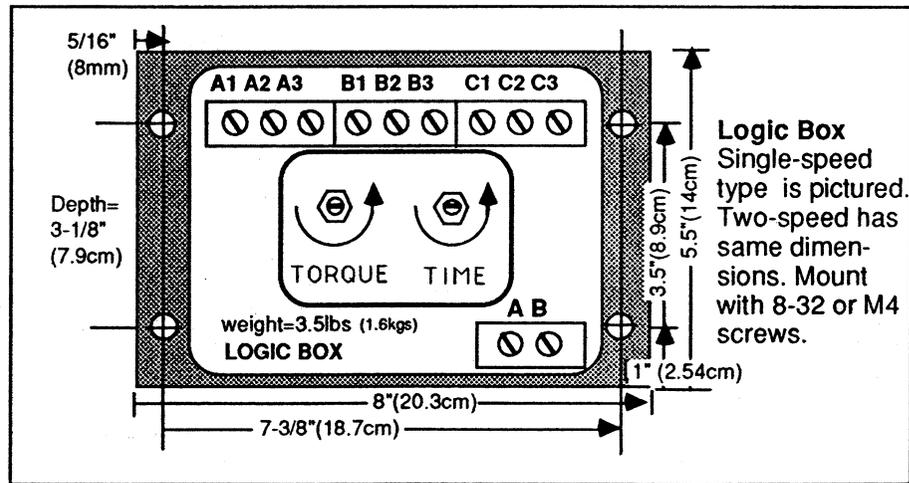
A.C. Torque Control Dimensions

Size	A OUTSIDE DIM. in(cm)	B in(cm)	C MOUNT CENTERS in(cm)	D in(cm)	depth in(cm)	weight lb.(kg)
*s	4 (10.16)	3-3/4 (9.53)	3-1/4 (8.25)	3-3/8 (8.57)	3-3/8 (9.5)	1 (.45)
*L	5 (12.7)	5 (12.7)	4 (10.16)	4-3/4 (12.06)	3-5/8 (9.21)	2 (.90)
*a	8 (20.3)	5-1/2 (14)	7-3/8 (18.7)	5 (12.7)	3-1/8 (7.9)	3 (1.4)
*b	8-3/4 (22.3)	6-1/2 (16.5)	8 (20.3)	5-3/4 (14.6)	3-1/8 (7.9)	3-1/2 (1.6)
c	11 (27.9)	5 (12.7)	10-1/4 (26.0)	4-1/4 (10.8)	3-3/4 (9.5)	4 (1.8)
d	12 (30.5)	6 (15.2)	11-1/4 (28.6)	5-1/4 (13.3)	3-3/4 (9.5)	7-1/2 (3.4)
e	12 (30.5)	7 (17.8)	11-1/4 (28.6)	6-1/4 (15.9)	3-3/4 (9.5)	9 (4.1)
f	20 (50.8)	7 (17.8)	19-1/2 (49.5)	6-1/2 (16.5)	5-1/8 (13)	19 (8.6)
g	28 (71.1)	12 (30.5)	27-1/2 (69.9)	11-1/4 (28.6)	5-1/4 (13.3)	29.5 (13.4)

*" Denotes single-piece construction. Sizes "c" through "g" are two-piece this chart only shows power bridge dimensions (see Logic Box below).



For sizes c,d,e,f,g
Power bridge & Logic Box Interconnection diagram.
 (Heatsink arrangement on Power Bridge is the type found on "c,d,e & f" sizes for one or two-speed.)



Logic Box Single-speed type is pictured. Two-speed has same dimensions. Mount with 8-32 or M4 screws.