



Power Controller to 100A F7 Series

221 Weaver Street, Fall River, MA 02720

Tel# 508-676-7345 • 800-879-7918 • Fax# 508-676-7346
www.hbcontrols.com



- Solid State Relay assemblies rated to 100A/pole @ 40° C (100% duty cycle)
- Zero cross switching standard
- 90° C over-temp cutout switch standard
- Relays & fan: UL, CSA, VDE, CE
- Optional DIN rail mounted to front for power supplies or other small DIN mounted units
- Ball bearing fan standard; 50/60 Hz
- Fan options: B - 120VAC fan, C - 240VAC fan, I - 24VDC fan (Add letter of fan to end of part # EX: HBC-125AF73B – Denotes 3 phase, 3 pole, W/ 120VAC fan)

OUTPUT SPECIFICATIONS	AC Control		DC Control	
	HBC-125AF73	HBC-6125AF73	HBC-125DF73	HBC-6125DF73
	3 Phase / 3 Pole	3 Phase / 3 Pole	3 Phase / 3 Pole	3 Phase / 3 Pole
Operating Voltage (47-63 Hz)	48-530VAC	48-660VAC	48-530VAC	48-660VAC
Load Current Range	0.04-100A	0.04-100A	.04-100A	.04-100A
Transient Overvoltage [Vpk]	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	1750	1750	1750	1750
Max. On-State Voltage Drop [Vpk]	1.7	1.7	1.7	1.7
Max. Turn-On	10.0mS	10.0mS	1/2 cycle	1/2 cycle
Max. Turn-Off Time	40.0mS	40.0mS	1/2 cycle	1/2 cycle
Max I ² t for Fusing (8.3mS)	12700	12700	12700	12700
Max Off-State Leakage Current [mArms]	10	5	10	5
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5
INPUT SPECIFICATIONS				
Control Voltage Range	90-280Vrms (60Hz)		3-32Vdc	
Max. Turn-On Voltage	90Vrms		3.0Vdc	
Min. Turn-Off Voltage	10Vrms		1.0Vdc	
Nominal Input Impedance [Ohms]	60K		See *	
Typical Input Current	2mA @ 120Vrms		2.0mA *	
	4mA @ 240Vrms			

* Input circuitry incorporates active current limiter

INPUT OPTIONS (DC Controls only)

Change HBC Prefix To: (Ex: HBC-125DF73B = LPC-125DF73B)

TP Time proportioning controller (Burst Fire)
Input: 0-10VDC, 0-5VDC, 2-10VDC, 1-5VDC, 4-20mA
Potentiometer, 0-135Ω
(24VAC or DC Power Supply Required)

TPLP Loop powered time proportioning controller (Burst Fire)
Input: 4-20mA

LPC Linear phase angle controller
Input: 0-10VDC, 0-5VDC, 2-10VDC, 1-5VDC, 4-20mA,
Potentiometer, 0-135Ω
(24VAC Power Supply Required)

Options: -D DIN mount
-10 Random turn-on
-WH Wiring harness for multi-pole configurations
-E 24VAC Control (AC input only)
-Z LED input status indicator (DC input only)
-M MOV – External transient voltage suppression
-P Internal transient voltage suppression
-FD Front DIN mount
-CT Current transducer



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- Relays & fan: UL, CSA, VDE, CE
- Optional DIN rail mounted to front for power supplies or other small DIN mounted units
- Ball bearing fan standard; 50/60 Hz
- Fan options B-120VAC fan, C-240VAC fan, I-24VDC fan (Add letter of fan to end of part # EX: HBC-125AF73B – Denotes 3 phase, 3 pole, W/ 120VAC fan)

OUTPUT SPECIFICATIONS	AC Control		DC Control	
	HBC-90AF73	HBC-690AF73	HBC-90DF73	HBC-690DF73
	3 Phase / 3 Pole	3 Phase / 3 Pole	3 Phase / 3 Pole	3 Phase / 3 Pole
Operating Voltage (47-63 Hz)	48-530VAC	48-660VAC	48-530VAC	48-660VAC
Load Current Range	0.04-80A	0.04-80A	.04-80A	.04-80A
Transient Overvoltage [Vpk]	1200	1200	1200	1200
Max. Surge Current, (16.6ms)[Apk]	1200	1200	1200	1200
Max. On-State Voltage Drop [Vpk]	1.7	1.7	1.7	1.7
Max. Turn-On	10.0mS	10.0mS	1/2 cycle	1/2 cycle
Max. Turn-Off Time	40.0mS	40.0mS	1/2 cycle	1/2 cycle
Max I ² t for Fusing (8.3mS)	6000	6000	6000	6000
Max Off-State Leakage Current [mA _{rms}]	10	5	10	5
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5
INPUT SPECIFICATIONS				
Control Voltage Range	90-280Vrms (60Hz)		3-32Vdc	
Max. Turn-On Voltage	90Vrms		3.0Vdc	
Min. Turn-Off Voltage	10Vrms		1.0Vdc	
Nominal Input Impedance [Ohms]	60K		See *	
Typical Input Current	2mA @ 120Vrms		2.0mA *	
	4mA @ 240Vrms			

* Input circuitry incorporates active current limiter

INPUT OPTIONS (DC Controls only)

Change HBC Prefix To: (Ex: HBC-125DF73B = LPC-125DF73B)

- TP Time proportioning controller (Burst Fire)
Input: 0-10VDC, 0-5VDC, 2-10VDC, 1-5VDC, 4-20mA
Potentiometer, 0-135Ω
(24VAC or DC Power Supply Required)
- TPLP Loop powered time proportioning controller (Burst Fire)
Input: 4-20mA
- LPC Linear phase angle controller
Input: 0-10VDC, 0-5VDC, 2-10VDC, 1-5VDC, 4-20mA,
Potentiometer, 0-135Ω
(24VAC Power Supply Required)

- Options: -D DIN mount
-10 Random turn-on
-WH Wiring harness for multi-pole configurations
-E 24VAC Control (AC input only)
-Z LED input status indicator (DC input only)
-M MOV – External transient voltage suppression
-P Internal transient voltage suppression
-FD Front DIN mount
-CT Current Transducer

