



Power Controller to 50-80A G 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 50-80A/pole @ 40° C (100% duty cycle)
- Zero cross switching standard
- Relays & fan: UL, CSA, VDE, CE
- Available in 1,2 or 3 pole configuration
- Finger safe covers standard
- Phase angle & time proportional control optional

OUTPUT SPECIFICATIONS	AC Control			DC Control		
	HBC-90HAG	HBC-90HAG-2	HBC-90HAG-3	HBC-90HDG	HBC-90HDG-2	HBC-90HDG-3
Operating Voltage (47-63 Hz)	48-530	48-530	48-530	48-530	48-530	48-530
Load Current Range	.04-80	.04-50	.04-50	.04-80	.04-50	.04-50
Transient Overvoltage [Vpk]	1200	1200	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	1200	1200	1200	1200	1200	1200
Max. On-State Voltage Drop [Vpk]	1.7	1.7	1.7	1.7	1.7	1.7
Max. Turn-On	10mS	10mS	10mS	½ cycle	½ cycle	½ cycle
Max. Turn-Off Time	40mS	40mS	40mS	½ cycle	½ cycle	½ cycle
Max I²t for Fusing (8.3mS)	6000	6000	6000	6000	6000	6000
Max Off-State Leakage Current [mArms]	10	10	10	10	10	10
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5	0.5
INPUT SPECIFICATIONS						
Control Voltage Range	90-280Vrms			3-32Vdc		
Max. Turn-On Voltage	90Vrms (60Hz)			3.0		
Min. Turn-Off Voltage	10Vrms			1.0		
Nominal Input Impedance [Ohms]	60KOhms			See*		
Typical Input Current	2mA @ 120Vrms			2.0mAdc		
	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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- Phase angle & time proportional control optional

OUTPUT SPECIFICATIONS	AC Control			DC Control		
	HBC-690HAG	HBC-690HAG-2	HBC-690HAG-3	HBC-690HDG	HBC-690HDG-2	HBC-690HDG-3
Operating Voltage (47-63 Hz)	48-660	48-660	48-660	48-660	48-660	48-660
Load Current Range	.04-80	.04-50	.04-50	.04-80	.04-50	.04-50
Transient Overvoltage [Vpk]	1200	1200	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	1200	1200	1200	1200	1200	1200
Max. On-State Voltage Drop [Vpk]	1.7	1.7	1.7	1.7	1.7	1.7
Max. Turn-On	10mS	10mS	10mS	½ cycle	½ cycle	½ cycle
Max. Turn-Off Time	40mS	40mS	40mS	½ cycle	½ cycle	½ cycle
Max I²t for Fusing (8.3mS)	6000	6000	6000	6000	6000	6000
Max Off-State Leakage Current [mArms]	5	5	5	5	5	5
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5	0.5
INPUT SPECIFICATIONS						
Control Voltage Range	90-280Vrms			3-32Vdc		
Max. Turn-On Voltage	90Vrms (60Hz)			3.0		
Min. Turn-Off Voltage	10Vrms			1.0		
Nominal Input Impedance [Ohms]	60KOhms			See*		
Typical Input Current	2mA @ 120Vrms			2.0mAdc		
	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)
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-FD Front DIN mount
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OUTPUT SPECIFICATIONS	AC Control			DC Control		
	HBC-125HAG	HBC-125HAG-2	HBC-125HAG-3	HBC-125HDG	HBC-125HDG-2	HBC-125HDG-3
Operating Voltage (47-63 Hz)	48-530	48-530	48-530	48-530	48-530	48-530
Load Current Range	.15-100	.15-60	.15-50	.15-100	.15-60	.15-50
Transient Overvoltage [Vpk]	1200	1200	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	1750	1750	1750	1750	1750	1750
Max. On-State Voltage Drop [Vpk]	1.7	1.7	1.7	1.7	1.7	1.7
Max. Turn-On	10mS	10mS	10mS	½ cycle	½ cycle	½ cycle
Max. Turn-Off Time	40mS	40mS	40mS	½ cycle	½ cycle	½ cycle
Max I ² t for Fusing (8.3mS)	12700	12700	12700	12700	12700	12700
Max Off-State Leakage Current [mArms]	10	10	10	10	10	10
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5	0.5
INPUT SPECIFICATIONS						
Control Voltage Range	90-280Vrms			3-32Vdc		
Max. Turn-On Voltage	90Vrms (60Hz)			3.0		
Min. Turn-Off Voltage	10Vrms			1.0		
Nominal Input Impedance [Ohms]	60KOhms			See*		
Typical Input Current	2mA @ 120Vrms			2.0mAdc		
	4mA @ 240Vrms					

* Input circuitry incorporates active current limiter

INPUT OPTIONS (DC Controls only)

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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)

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OUTPUT SPECIFICATIONS	AC Control			DC Control		
	HBC-6125HAG	HBC-6125HAG-2	HBC-6125HAG-3	HBC-6125HDG	HBC-6125HDG-2	HBC-6125HDG-3
Operating Voltage (47-63 Hz)	48-660	48-660	48-660	48-660	48-660	48-660
Load Current Range	.15-100	.15-60	.15-50	.15-100	.15-60	.15-50
Transient Overvoltage [Vpk]	1200	1200	1200	1200	1200	1200
Max. Surge Current, (16.6ms) [Apk]	1750	1750	1750	1750	1750	1750
Max. On-State Voltage Drop [Vpk]	1.7	1.7	1.7	1.7	1.7	1.7
Max. Turn-On	10mS	10mS	10mS	½ cycle	½ cycle	½ cycle
Max. Turn-Off Time	40mS	40mS	40mS	½ cycle	½ cycle	½ cycle
Max I ² t for Fusing (8.3mS)	12700	12700	12700	12700	12700	12700
Max Off-State Leakage Current [mArms]	5	5	5	5	5	5
Power Factor (Min.) with Max. Load	0.5	0.5	0.5	0.5	0.5	0.5
INPUT SPECIFICATIONS						
Control Voltage Range	90-280Vrms			3-32Vdc		
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