

Brushless Servo Amplifiers

The I²T BA Series Amplifiers are stand-alone drives for three-phase DC brushless and single-phase DC brush motors. This versatile amplifier can run in velocity mode or torque mode using a self-commutating, low ripple, six-step algorithm. The BA amplifier is based on a 20 kHz IGBT for reliable operation in a compact package. It is completely self-contained requiring only AC line power, and the amplifier is fully protected and isolated to avoid system noise contamination. When operated from an I²T IFC servo control module, the amplifier can use the hall channel from the motor encoder for commutating the servomotor. If a resolver is used for the servomotor feedback, the IFC 022 can commutate the motor with exceptional velocity control at low speeds. A ± 10 Vdc signal from the IFC module is used to control the BA Series Amplifier. The BA series amplifiers come in six models to match your application power requirements.



Specifications

Model	Units	BA10	BA20	BA30	BA50	BA75	BA100
Output Voltage	Vdc	40 - 320			320		
Peak Output Current (2 sec)	A peak	10	20	30	50	75	100
Continuous Output Current	A peak	5	10	15	25	37	50
Peak Output Power	Watts	2720	5440	8160	13600	20400	27200
Continuous Output Power	Watts	1360	2720	4080	6800	10064	13600
Power Amplifier Bandwidth	kHz	2					
PWM Switching Frequency	kHz	20					
Minimum Load Inductance	mH	0.8 at 160 Vdc			0.8		
Operating Temperature	Deg C	0 to 50					
Storage Temperature	Deg C	-30 to 85					
Weight	lb (kg)	2.5 (1,1)			8.5 (3,5)	12.5 (5,7)	
Maximum Shunt Regulator Dissipation	Watts	N.A.	40	40	100 10A Ext.	100 10A Ext.	100 10A Ext.
Brushless Operation	Torque (current) Velocity, Dual Phase						
Brush-Type Operation	Torque, Velocity						
Power Inputs	* 56	AC1, AC2: Single Phase AC Line Input for - 230 Vac, 50 - 60 Hz			230 Vac, 50 - 60 Hz, 3 Phase		
Protection Features	* Over Supply * Under Voltage	Output Short Circuit Phase-to-Phase and Phase-to-Ground; Peak Over Current, RMS Current; DC Bus Over Voltage; Over Temp; Control or Power Stage Bias Power					
Overall Dimensions	in. (mm) H x W x D	7.35 x 2.75 x 4.5 (186,7 x 69,9 x 114,5)			9.50 x 3.65 x 6.97 (241,3 x 92,7 x 177,0) (Heat sink & Fan add 3.27" (83,1 mm) for BA75 and BA100 only)		