

IDC's B8961 (1-axis) and B8962 (2-axes) Brushless Servo Smart Drives are user friendly systems that offer you many compelling features and benefits. Consider these systems when your motion control application requires:

- A well integrated motion controller, digital servo drive, operator interface, power supply, 30 I/O, and built in Opto I/O rack
- CE, UL, and US compliant
- A sophisticated servo controller capable of controlling position, velocity, and force/torque simultaneously. This capability makes the B8961/2 an ideal solution for clamping, pressing, drilling, and automated fastening applications
- A simple Machine Controller
- Interrupts
- Configurable I/O
- Linear Interpolation, and Registration
- Coordinated motion between two axis
- Go Immediate Mode. This mode of operation allows the controller to multitask between motion control and I/O operations. Immediate Mode also allows each axis to move completely independently of the other axis
- 1-99 axes of immediate control via host RS-232C communication
- Optional analog I/O for:
 - Reading an analog input proportional to temperature, distance, pressure, or force
 - Setting an analog output to control position of another axis of motion (for use with a D2500, H3501/4501, or B8501 analog position controls)

Compatible Actuators:
EC2-B, EC3-B, EC4-B, EC5-B, N2-B,
NV-BN, R2A-BN, R3-B, R4-B, LM, LD
Positioning Tables



Optional Keypad

- Both a programming and a operator interface
- Menu-driven setup, tuning, Help Function, Diagnostic Screens, Trace Mode-easy set up, troubleshooting and program debugging
- Easy to read 40 character display
- Keypad is protected to Nema 4 (IP65) when panel mounted

Drive Performance

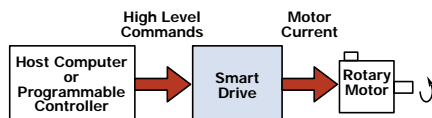
- The B8961 and B8962 features the same outstanding dynamic performance and reliability as our DSP based B8001 digital brushless servo drive, described on page H-11

Motion Control

- 6K memory for up to 199 user programs (30K, 400 programs optional)
- User scaling of position, velocity, and acceleration
- Descriptive variables, math and conditional branching
- High Speed interrupt driven inputs-registration
- B8962-linear interpolated vector moves
- IDCMotion™ Windows Application Developer software included. See page H-26.

Opto Compatible I/O

- Accepts OPTO-22 (G4) digital modules and Grayhill (G5) analog and temperature modules
- 100% solid state, opto-isolation to 4000 volts
- 8 positions, all bidirectional
- Specify (intermix) Opto I/O modules: for AC, DC, analog, and temperature signals





Specifications

B8961/2
Smart Drive

Servo
Systems

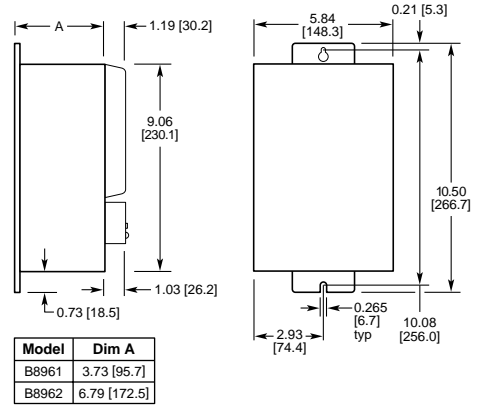
Common Specifications

Input Power	90-240 VAC single phase, 50/60 Hz. 1150 VA Max @115 VAC, 2300 VA max @230 VAC. (B8962: X 2).
Motor Output Current Capability Protection	5A continuous, 10A peak Protected against phase-to-phase shorts and shorts to ground. Fused. See page H-40 for details.
Power Dump Capacity Encoder Input Type	Differential quadrature incremental encoder, with or without index
Maximum Rate Power	2MHz (post-quadrature) +5V @ 200 mA power encoder
Diagnostic Output Format	0 to 5V analog signal (centered at 2.5V)
Variables	Configurable as actual, and commanded velocity; position error; velocity error; actual, and commanded torque—programmable scaling
Serial Interface	RS-232C, 3 wire implementation (Tx, Rx, & Com), 9600 Baud, 8 data bits, 1 stop bit, no parity.
Environmental Operating Temperature	Shutdown occurs if heat-sink exceeds 55°C (131°). This temperature is a function of motor current, regen and ambient temperature. Some applications may require FK fan kit. See page H-39.
Humidity	0% to 90% non-condensing
Additional B8961 & B8962 Specifications	
Motion Position Range	±0-2,147,483,647 steps. Absolute and incremental.
Acceleration Range System Resolution	0.01 to 999.99 rev/sec/sec 8,000 counts per revolution (IDC supplied motors)
OPTO-compatible I/O	8 Positions support OPTO-22 (G4) digital, Grayhill (G5) analog and temperature modules
Analog Opto Module Resolution Bandwidth	12 bits 62.5 Hz
Inputs 8 programmable, Limits, Home	Optically isolated, 24 VDC compatible (via pull up terminal—disconnect jumper to 12 VDC), 12 mA sinking current required.
Incremental Encoder	Optically isolated, differential 5 VDC, 2 MHz max (post-quadrature). 5VDC, 200mA power available.
Outputs 8 Programmable	Open collector, sink current 100 mA max. Total of 350 mA for all I/O.

Mounting Dimensions

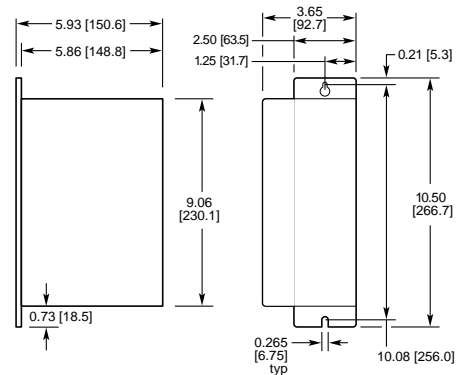
(B8961 and B8962)

Minimum Depth Mounting in [mm]



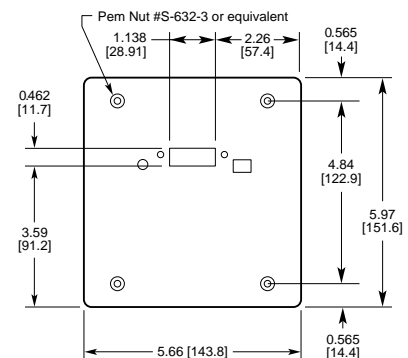
Minimum Width Mounting in [mm]

(B8961 only, front panel and opto modules removed)



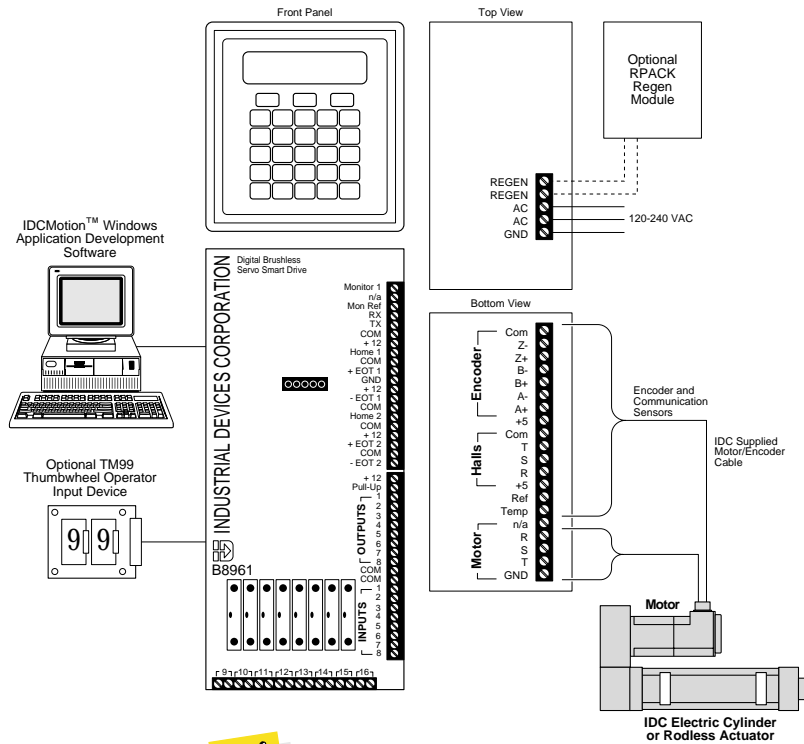
Remote Mounting

Front Panel (rear view) in [mm]





Operation



How To Order

Model	Description	Code	I/O Module Description	Option	Description	
		1 2 3 4 5 6 7 8				
		Position				
B8961	1-axis unit, with FP220 front panel	A	DC/AC In, 10-32 VDC, 12-32 VAC	-LMIR	For operation with an IDC Linear Motor	
B8962	2-axis unit, with FP220 front panel	B	DC In, TTL			
B8961NP	1-axis unit, no front panel	C	DC In, 35-60 VDC			
B8962NP	2-axis unit, no front panel	D	AC In, 90-140 VAC	-FK1	Fan Kit, 115 VAC See page H-39.	
		E	AC In, 180-240 VAC	-FK2	Fan Kit, 230 VAC See page H-39.	
		F	DC Out, 5-60 VDC, 3 Amps			
		G	AC Out, 12-140 VAC, 3 Amps			
		H	AC Out, 24-280 VAC, 3 Amps			
		I	Input test switch	-30K	30K user program memory	
		J	Analog In, 0-10 VDC			
		K	Analog In, 4-20 mA			
		L	Analog Out, 0-10 VDC			
		M	Analog Out, 4-20 mA			
		N	J Thermocouple In, 0-700°C			
		O	K Thermocouple In, -100-924°C			
		P	RTD In, 100 Ohm			
		X	Empty			
Accessories						
	RPACK-1, 115 VAC Operation		External regenerative power dissipation module. See page H-40.			
	RPACK-2, 230 VAC Operation		External regenerative power dissipation module. See page H-40.			
	FP220		Operator interface, front panel. See page H-41.			
	TM99		Thumbwheel input module. See page H-42.			



To confirm your selection, review the checklist on page H-6.

