

24 VDC INTEGRAmotors and Gearmotors

Compact, High-performance All-In-One Brushless DC Drive Solutions

By combining a low-voltage brushless DC speed control with a gearmotor, we simplified installation, minimized EMI, and reduced overall system cost.

- **Analog Input:** SR controls provide a simple control solution with easy-to-use features.
- **Digital Input:** FV controls feature PWM interface and a built in optical encoder.
- **Maintenance Free:** no brushes to replace, no carbon dust.
- **Parallel shaft, right angle or hollow shaft integral gearheads available:** Output speeds range from 0.3-500 rpm, and rated torque of up to 100 lb-in. (11.3 Nm). All gearmotors are lubricated for life.



Type 22B/SR/FV Motor

Type 22B/SR/FV-D and 22B/SR/FV-Z Parallel Shaft Gearmotor

Type 22B/SR/FV-3N Right Angle Gearmotor

Type 22B/SR/FV-3F/H Hollow Shaft



Typical Applications

Ideal for medical equipment, packaging machines, conveyor systems, printing and photo finishing machinery, factory automation, and remote location applications. OEM versions of the INTEGRAmotor gearmotors can also be supplied with food-grade gearhead lubricants.

Type 22B/SR and 22B/FV INTEGRAmotor™

Motor Output			Torque Constant (oz-in./A)	Voltage Constant (V/krpm)	Winding		Rotor Inertia (oz-in.-sec. ²)	Control Input			Product Type	Model Number	
Speed Range (rpm)		Torque (oz-in.)			Res. (Ohms)	Induct. (mH)		HP	Volts (VDC)	Continuous Amps		Type SR Analog Interface	Type FV Digital Interface ¹
Type SR	Type FV												
22B INTEGRAmotor													
200-2500	75-2500	25	47	35	40	70	0.004	1/16	24	3.3	22B2BEBL/**	3802	N3702
		50	50	37	15	40	0.007	1/8		4.4	22B4BEBL/**	3804	3704

Gearmotors

Motor Output				Control Input			Product Type	Model Number	
Speed Range (rpm)		Torque	Gear Ratio	HP	Volts (VDC)	Continuous Amps		Type SR	Type FV
Type SR	Type FV	(lb-in.)						Analog Interface	Digital Interface¹
Parallel Shaft Gearmotor (up to 40 lb-in, 4.5 Nm)									
0.7-8	0.3-8	40	300	1/16	24	3.3	22B2BEBL/**-D5	N3837	N3737
1-14	0.4-14	40	180				22B2BEBL/**-D4	3836	N3736
2-28	0.8-28	40	90				22B2BEBL/**-D4	N3835	N3735
3-42	1.3-42	40	60				22B2BEBL/**-D3	N3834	N3734
7-83	2.5-83	29	30				22B2BEBL/**-D3	3829	N3729
11-139	4.2-139	17	18				22B2BEBL/**-D3	N3828	N3728
17-208	6.3-208	12	12				22B2BEBL/**-D3	3827	N3727
33-417	13-417	5.8	6				22B2BEBL/**-D3	3826	N3726
Parallel Shaft Gearmotor (up to 100 lb-in, 11.3 Nm)									
0.7-8	0.3-8	100	300	1/16	24	3.3	22B2BEBL/**-Z4	N3864	N3764
1-14	0.4-14	100	180	1/16			22B2BEBL/**-Z4	3863	N3723
2-28	0.8-28	97	90	1/16			22B2BEBL/**-Z4	N3862	N3762
3-42	1.3-42	95	60	1/11			22B3BEBL/**-Z3	N3861	N3761
7-83	2.5-83	52	30	1/11			22B3BEBL/**-Z3	3860	N3760
11-139	4.2-139	31	18	1/11			22B3BEBL/**-Z2	N3859	N3759
17-208	6.3-208	20	12	1/11			22B3BEBL/**-Z2	N3858	N3758
33-417	13-417	10	6	1/11			22B3BEBL/**-Z2	3857	N3757
Right Angle Gearmotor (up to 37 lb-in, 4.2 Nm)									
3-42	1.3-42	37	60	1/8	24	5.9	22B4BEBL/**-3N	N3865	N3765
5-62	2-62	37	40					3866	N3766
10-125	4-125	35	20					N3867	N3767
20-250	7.5-250	22	10					3868	N3768
40-500	15-500	11	5					N3869	N3769
Hollow Shaft Gearmotor (up to 37 lb-in, 4.2 Nm)									
3-42	1.3-42	37	60	1/8	24	5.9	22B4BEBL/**-3F/H	N8865	N8765
5-62	2-62	37	40					N8866	N8766
10-125	4-125	35	20					N8867	N8767
20-250	7.5-250	22	10					N8868	N8768
40-500	15-500	11	5					N8869	N8769

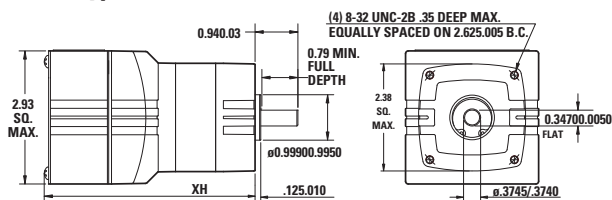
¹ Type FV INTEGRAmotors require a PWM signal from a motion controller or PLC to operate. ** INTEGRAmotor can be ordered with either analog (/SR) or digital (/FV) interface option. "N" model numbers require lead time.



24 VDC INTEGRAmotors and Gearmotors

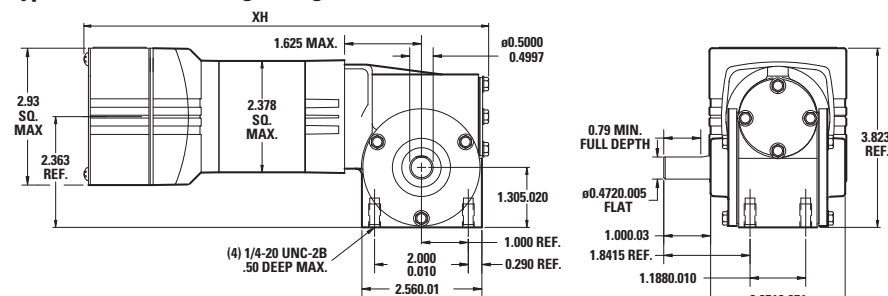
Dimensions (inches)

Type 22B/SR/FV Motor



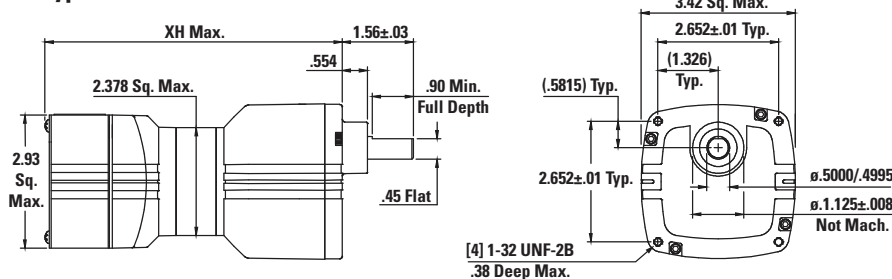
XH (inch)	Weight (lbs.)	Product Type
5.7	3.5	22B4
4.7	2.5	22B2
8.8	5.6	22B4-3N

Type 22B/SR/FV-3N Right Angle Gearmotor (hollow shaft dimensions are similar)



IP-00, Ambient +25°C

Type 22B/SR/FV-D Parallel Shaft Gearmotor



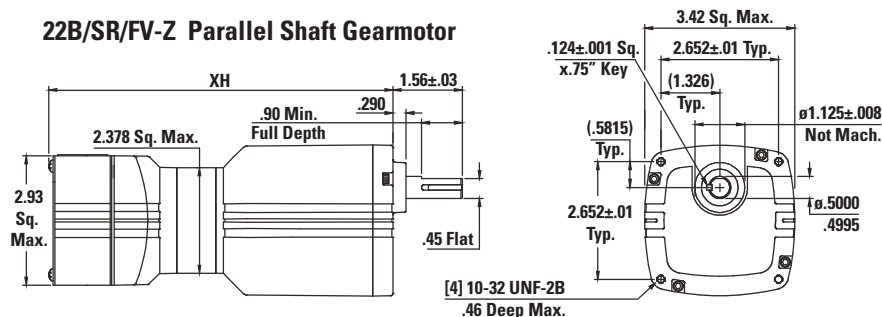
22B/SR-D and 22B/FV-D

XH (inch)	Weight (lbs.)	Product Type
6.7	4.0	22B2-D

22B/SR-Z and 22B/FV-Z

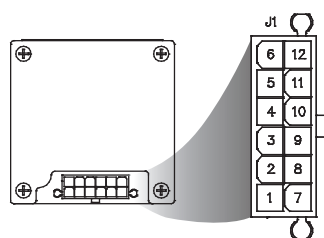
XH (inch)	Weight (lbs.)	Product Type
7.9	5.0	22B2-Z4
8.4	5.5	22B3-Z3
7.4	5.5	22B3-Z2

22B/SR/FV-Z Parallel Shaft Gearmotor



Electrical Connections For 22B/SR and 22B/FV INTEGRAmotors

Rear View of INTEGRAmotor



Mating Connector Housing
is Molex P/N 39-01-2125

Pin No.	SR Models (Analog Input)	FV Models (Digital Input)
1	24 V Common (Motor supply return)	24 V Common (Motor supply return)
2	Forward/Reverse (Direction)	Forward/Reverse (Direction)
3	Enable (Motor winding power – active low)	Enable (Motor winding power – active low)
4	Fault output (Active low)	Encoder Channel A
5	Direction Output	Drain / Shield
6	5 VDC Common (Logic supply return)	5 VDC Common (Logic supply return)
7	+24 VDC (Motor power)	+24 VDC (Motor power)
8	Tach output (12 PPR)	Fault output (High or pulsing output indicates current limit, undervoltage condition, or incorrect motor sensor states)
9	Voltage Input (Speed)	PWM Input (18-22 kHz, variable duty cycle input to control motor voltage/speed).
10	+5 V (Use for speed pot only)	Encoder Channel B
11	Brake (Active low)	Brake (High input activates dynamic braking)
12	Common	+5 VDC (Logic Power)

Mating Receptacle is Molex P/N 39-00-0047 (loose piece) for 22 – 28 AWG wire. NOTE: Use Molex Hand Tool P/N 57026-5000 to crimp the receptacles to the wires.

07481049 Rev.B