

Fincor Non-Regen Drives

Non-regenerative drives are typically used on applications which primarily motor in one direction and stopping is achieved through friction or infrequent use of a dynamic braking resistor. These drives may provide speed or torque control from a potentiometer or unidirectional (0-10 VDC or 4-20 mA) control signal. Reversing requires a switch or contact closure to initiate the change. Upon the reversing signal, the drive will allow the motor to coast to a stop (or perform a control stop under a decel ramp with control stop option) or utilize a dynamic braking resistor to pull it to a stop before switching the motor leads with a contactor and starting the motor in the opposite direction.



Panel Mount

Enclosed

Open Chassis



2123



2121 & 2122

Fincor Series 2120/2130

Fincor Series 2100 drives feature compact size and lowest pricing in chassis, NEMA 1 Panel, NEMA 1, or NEMA 12 enclosures. Chassis units are dimensionally interchangeable with many competitive units. They are ideal for the OEM or panel builder who builds a custom system by integrating the drive into an enclosure with special logic or auxiliary control devices. Enclosed units utilize the enclosure as an integral heatsink and are offered as complete self-contained packages ready for wall or machine mounting.

- 1/6 to 3 hp (115 -230V)
- Budget Priced
- Speed Control
- Current Limit
- UL Listed (Enclosed) or UL Recognized (chassis, NEMA 1 Panel)

RATINGS: 1/12 TO 3 hp (120-240 VAC)

Series 2100 Non-Regenerative DC Drives									
Model	Motor HP ⁵	Input		Output				RUN-STOP	RUN-STOP, Reverse
		AC Volts	Amps	DC Volts		Amps		Order Code	Order Code
				Arm	Field	Arm	Field		
Chassis ^{1,3}	1/6-1/2	120	8.7	90	50/100	5.4	1.0	2121	
	1/6-1/2	120	8.7	90	50/100	5.4	1.0	2122	
	1/2-1.0	240	8.8	180	100/200	5.5	1.0	2122 ²	
	1/6-1.0	120	15	90	50/100	10.5	1.0		
	1/2-2.0	240	15.8	180	100/200	11.6	1.0	2123	
	1/6-1.0	120	15	90	50/100	10.5	1.0		
Panel Assembly ⁴	1/6-1/2	120	8.7	90	50/100	5.4	1.0	2131P1	2131P2
	1/2-1.0	240	8.8	180	100/200	5.5	1.0		
NEMA 1 Enclosed	1/6-1/2	120	8.7	90	50/100	5.4	1.0	2131P1E	2131P2E
	1/2-1.0	240	8.8	180	100/200	5.5	1.0		
NEMA 12 Enclosed	1/6-1/2	120	8.7	90	50/100	5.4	1.0	2132P1E	2132P2E
	1/2-1.0	240	8.8	180	100/200	5.5	1.0		

(1) Model 2120 units are furnished with a potentiometer rated 5K ohms, 1/2 watt for separate mounting.

(2) Requires either option 1761 for 1 hp on 115 VAC and 2 hp on 230 VAC or option 1760 for 3/4 hp on 115 VAC and 1.5 hp on 230 VAC

(3) Armature contactor Run-Stop-DB, and contactor reversing and dynamic braking are provided by Options 1001E and 1004E.

(4) Panel assembly models do not include an enclosure. They are intended for mounting on a door or other panel surface through an aperture cut into the users NEMA 1 or NEMA 12 enclosure.

(5) Units may be easily recalibrated using trimpots for any standard rating within the hp range.

Fincor Series 2120/2130

DIMENSIONS

SPECIFICATIONS:

Operating Conditions

Horsepower	1/6 thru 3 hp , Trim Pot Selectable
Line Voltage	115-230VAC ±10%, Bi Voltage Input
Rated Frequency	50/60Hz ±2%
Enclosure	Chassis, NEMA 1 Panel, NEMA 1, NEMA 12
Ambient Temperature	0 – 40°C (32°F - 104°F) (<i>Enclosed</i>) 0 – 55°C (32°F - 131°F) (<i>Chassis</i>)
Altitude	1000m (3,300 ft)
Relative Humidity	95% Non condensing
Overload Capacity	150% for 1 minute (UL Listed Motor Overload Protection) (120% Timing Threshold)

Standard Features

Regulator Function	Speed Regulated
Power Conversion	2 SCR plus Freewheeling Diode
Field Supply	Full Wave
Protection	MOV Voltage Transient Suppression High Interrupting Capacity Line Fuse
Speed Regulation	Armature or DC Tach Feedback

Control

Control Logic Power	Common for Maintained Switch
Speed Potentiometer	5K Ohms, ½ Watt
Input Reference	0 – 10Vdc
Speed Regulation	2% with Armature Feedback (95% Load Change) 1% with Tachometer Feedback

Adjustments

Maximum Speed	60% – 100% of Motor Base Speed
Minimum Speed	0% – 40% of Motor Base Speed
Current Limit	0 – 150% of Full Load
IR Compensation	0 – 100% Boost
Acceleration/Deceleration	0-4 Seconds

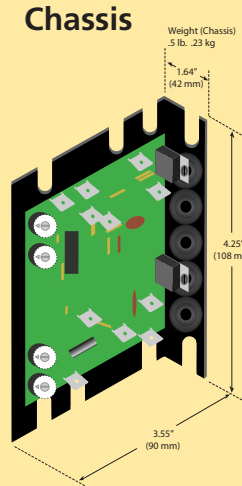
Efficiency

Controller (only)	98%
With Motor (typical)	85%

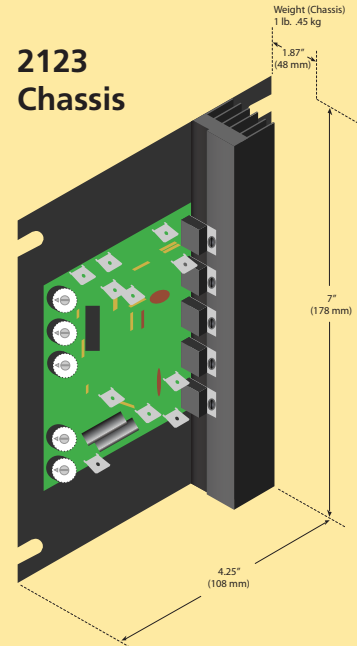
Approvals & Listings

UL and cUL

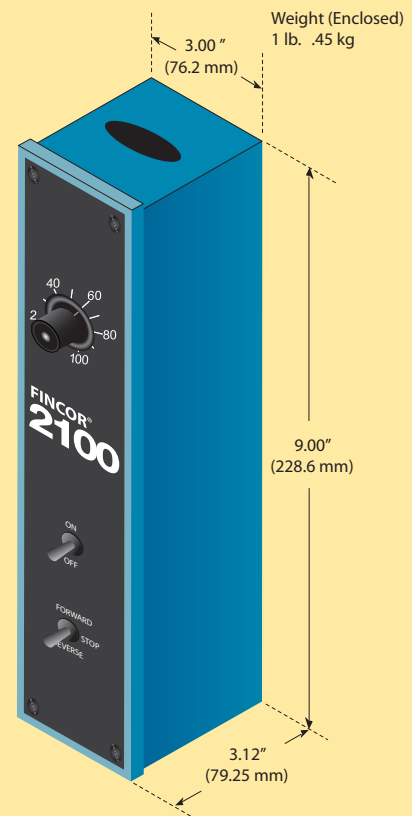
2121 & 2122 Chassis



2123 Chassis



2130 Enclosed*



*2130 Panel mount has the same dimensions but has no enclosure.

Fincor 2100

Series 2100 Allowable Option Combinations				
Option Groups	Use with Model	Order Code		Option Description
		Fact. Install	Fld. Install	
C) Power Options - Choice of one within this group.	2120	1001E	106409501	Armature Contactor, 2-Pole with Dynamic Braking
	2120	1004E	106409601	Armature Contactor, Reversing, with Dynamic Braking
D) Input Signal Option	2120	1749A	106409401	Follower, External Signal
G) External Option	2120	1721	2067109	Knob and Dial Plate Kit
H) Miscellaneous Options — Choice of any or all within this group.	2120	1719	2067114	Fuse Block Kit
	2120	1730A	106409701	Barrier Terminal Board (115VAC)
	2120	1730B	106409702	Barrier Terminal Board (230VAC)
	2120	1731	2067118	Dual Connector Terminal Adapter (for 2120 Tacho F/B)
	2120	1760	2067106	Heat Sink Kit (Flat)
	2120	1761	2067098	Heat Sink Kit (Radial)

Series 2100 Detailed Option Descriptions	
Option	Description
1001E	Armature Contactor, 2-Pole with Dynamic Braking — The basic Series 2120 chassis controller is designed for Run-Stop unidirectional operation without an armature contactor. This option provides a two-pole armature contactor which is necessary whenever the application requires a positive disconnection of the rectified armature power source from the motor on a stop command. Action of the contactor is sequenced with the SCR regulator to ensure that the DC power circuit is “phased-off” before the contactor is opened. This results in “Dry switching” for improved contactor longevity. This option also includes dynamic braking which provides exponential rate braking of the DC motor armature. Included is a DB resistor with an anti-plug circuit to prevent restarting the controller until the braking cycle is complete, thereby preventing a potentially damaging electrical surge and mechanical stress. This option permits motor Start/Stop operation by pushbuttons or external logic in 115 or 230 VAC applications. The DB resistor is rated for stopping a typical load, when the external machine inertia does not exceed that of the motor armature, as shown in the table.
1004E	Armature Contactor, Reversing, with Dynamic Braking — This option is the same as Option 1001E except two double pole contactors are provided for reversing the DC motor armature rated 1 hp at 90 VDC armature or 3 hp at 180 VDC maximum. Anti-plug protection is provided to prevent armature reversal until a safe minimum speed is attained. The direction of motor rotation is controlled by external RUN/FORWARD-REVERSE pushbuttons, switches or logic. Braking times are same as option 1001E above.
1719	Fuse Block Kit — Kit includes a fuse block, lead wire with spade connectors, and mounting screw. The option provides external line fuse protection for Series 2120 chassis controllers (fuse not included).
1721	Knob and Dial Plate Kit — This option provides a knob and a dial face graduated 0-100% for use with the potentiometer provided with Series 2120 units.
1730A	Barrier Terminal Board — 115VAC Kit includes screw terminals for all external wiring, one line fuse holder, and an LED power on indicator in an assembly that plugs piggy-back onto chassis model units. (fuse not included).
1730B	Barrier Terminal Board — 230VAC Kit includes screw terminals for all external wiring, one line fuse holder, and an LED power on indicator in an assembly that plugs piggy-back onto chassis model units. (fuse not included).
1731	Dual Connector Terminal Adapter — This option provides a two (male) into one (female) push-on terminal to facilitate connection of Series 2120 units for tachometer feedback and/or inhibit.
1749A	Follower, External signal — This option is intended as a low cost alternative which offers greater accuracy and flexibility. Option 1749A is capable of operating from the following isolated or nonisolated signals: 4-20 DC ma, 0-10 VDC. This option includes a scaling potentiometer for offset adjustment. Dimensions 1.5” (38) X 3.38” (86) X .75” (19).
1760	Heatsink Kit (Flat) — This option consists of an extruded aluminum heatsink and hardware to mount a Model 2122 controller. This heatsink is intended for use only with Model 2122 where its greater heat dissipation permits increasing the units original rated horsepower. Option includes special white silicone grease compound to improve heat transfer. Dimensions: 4.4375” (113) X 6.75” (171) X .875” (22).
1761	Heatsink Kit (Radial) — This option consists of a unique space saving radial design heatsink and hardware to mount to a Model 2122 controller. This heatsink is intended for use only with Model 2122 where it’s greater heat dissipation permits a greater horsepower rating than when using the 1760 Flat Heatsink Kit. Option includes special white silicon grease compound to improve heat transfer. Dimensions: 2” (51) X 1.375” (35) X 4.25” (108).