

MODEL 3000 Controllers



Description

The Model 3000 Dynamatic Analog Controller is a complete controller on one printed circuit board. Input is 115 VAC, single phase, 50/60 Hz. Output is 5.5 Amp, 45 VDC and is available for use with Air-Cooled Drives rated .25 through 20 horsepower; or 4.3 Amp, 90 VDC which is available for use with Dynamatic Air-Cooled Drives rated .25 through 200 horsepower. The controller will provide either speed control or torque control, depending on the positioning of an on-board jumper. To accommodate a wide range of drive sizes and time constants the controller is manufactured in two separate versions to optimize performance: one for integral horsepower drives and the other for fractional horsepower drives. Not recommended for continuous low speed operation under 200 RPM.

Features & Benefits

- Provides soft starts with a linear acceleration circuit, adjustable from 1-30 seconds.
- Accurate speed control through closed loop control, which keeps drive output speed within 0.5% for load changes from 0-100%.
- On-board, selectable speed or torque voltage control allows application versatility.
- Stopping brake circuit is adjustable from 0-45 VDC.
- Optional small wall mount enclosure is complete with easy-to-understand operator's elements.
- Short circuit and ground fault protection by fused input isolates controller components from short circuits.
- Transient suppression by input suppressor prevents controller damage due to transient spikes.
- Compatible with existing wiring and plant power with a low installation cost.
- Controller and operator's station can be mounted up to 500 feet from the drive when proper wire size and type are used. Can be used in hard-to-get-at locations.



Model 3000 Controllers Specifications

| 3000 Controller | Units used with 45 VDC, 5.5 Amp | Fractional HP Drives AS-14 - 25 Drives AT-140 – 250 Drives |
|-----------------|--|--|
| | 90 VDC, 4.3 Amp | AS-14 - 27 Drives AT-140 - 440 Drives |
| | Horsepower range | .25 - 20 HP - 45 VDC .75 - 200 HP - 90 VDC |
| | Input power, maximum | 115 VAC +/- 10%, 1 phase, 50/60 Hz, 575 VA |
| | Output power, maximum | 45 VDC, 5.5 A, 248 watts, or 90 VDC, 4.3 A, 387 watts |
| | Speed regulation, no load to full load change | 0.5% Standard |
| | Enclosures | NEMA 1- Standard, panel mount -Optional |
| | Built-in modifications | Linear acceleration, adjustable braking, torque control |
| | Field modifications | Not available |
| | Controller protective features | Input fuses, low line voltage, line transients, isolated signal circuits, output over-current. |
| | Line regulation for +/-10% input line voltage change | +/-1.0% |
| | Thermal drift per degree C | +/-0.05% |
| | Minimum regulated speed range | 50 RPM |
| | Maximum ambient | 113° F (45° C) enclosed 149° F (65° C) panel mount |
| | Operator devices (on controller cover) | Start push button, Stop push button, adjustable speed potentiometer -Standard |
| | | |



Model 3000 Ordering Information

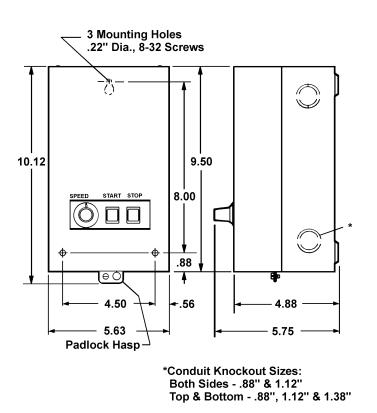
The Model 3000 Controller includes a single printed circuit board, rated for a 115 VAC, 1 phase, 50/60 Hz input and a 45-volt, 5.5 Amp, 248 watt or 90-volt, 4.3 Amp, 387-watt output with or without operator's elements (Start and Stop push buttons and Run Speed potentiometer). Separate configurations are available for fractional horsepower models (FAS) and integral horsepower models (AS & AT). If the mechanical unit includes a spring set brake a larger controller must be used (4000, 4050, Mark III or EC-2000).

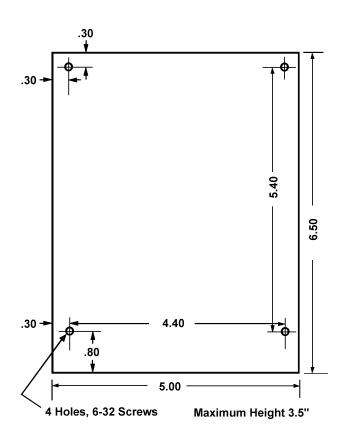
Model 3000 Selection Table

| Description | 45 VDC Part Number | 90 VDC Part Number |
|---|-----------------------|-----------------------|
| Model AS & AT NEMA 1 enclosure with operator elements | 15-000595-0001 | 15-000889-0001 |
| Model AS & AT, Panel mount with operator elements | 15-000588-0001 | |
| Model AS & AT, Panel mount without operator elements | 15-000588-0002 | 15-000888-0001 |
| Model FD, NEMA 1 enclosure with operator elements | 15-000595-0003 | |
| Model FD, Panel mount with operator elements | 15-000588-0003 | |
| Model FD, Panel mount without operator elements | 15-000588-0004 | |



Model 3000 Enclosure Outline Drawings





MODEL 3000 - NEMA 1 ENCLOSURE

PANEL MOUNT

Approximate Shipping Weights for the Model 3000 Controller:

NEMA 1 5 lbs. Panel Mount 3 lbs.

DIMENSIONS ARE IN INCHES