TA330 LINEAR DRIVE
FOR BRUSHLESS SERVO MOTORS

Consistent Linear Voltage Output with no Voltage Deadband around Zero Point

The Trust Automation TA330 Linear Drive is a fourth generation product in Trust Automation Inc.'s growing Linear Servo Amplifier product line. This drive allows OEMs to integrate the latest technology available for sinusoidal motor control. Linear sinusoidal commutation of three phase brushless servo motors eliminates the familiar cogging and torque ripple problems commonly found in most trapezoidal digital drives. For ultra low noise applications, (i.e. transducers, sensors, etc.), the TA330 provides an optional external 24V Input which replaces the internal bias switching supply, further reducing electrical noise. The TA330 is a highly configurable device with three common configuration modes. The TA330 will drive one single phase DC brushed motor in bridged mode, one three phase DC brushless motor using Hall Effect sensor feedback or one three phase AC brushless motor using external sinusoidal commutation.

FEATURES

- Very low electrical noise
- Minimizes Hall sensor torque ripple
- Zero crossover distortion
- Integral forced air cooling
- Sinusoidal or trapezoidal mode
- Digital on-the-fly gain control (DTS)

APPLICATIONS

- High and very high resolution staging
- Linear motor stages
- High inertia mismatched stages
- Low inductance motors

TECHNICAL SPECIFICATIONS

Electrical

Supply Voltage
Bipolar: ±24V to ±75V

Equivalent Motor Voltage
Drive Input V – 8V

Auxiliary 24V Supply
24V ±5% @ 1A max

Maximum Output Current
See SOA chart

Fault
TTL Level 0 or 1

/Enable
TTL Level 0 or 1

Command Input
±10V (±12V Max)

Torque Gain
0.6 A/V to 1.8 A/V

Bandwidth
5.0 kHz

Mechanical

Length: 14.90 in (37.85 cm)

Width: 7.69 in (19.53 cm)

Height: 4.70 in (11.94 cm)

Weight: 13.5 lbs. (6.12 kg)

Environmental

Maximum Altitude: 6,560ft (2000M)

Temperature (ambient)
Normal operation: 5° C to +40° C
Storage: -40° C to +70° C
Heatsink: +70° C Maximum

Heat Dissipation: See SOA Chart

Airflow: Internal fans, variable speed, thermally controlled

Humidity
Operating: 10% to 70%, non-condensing
Storage: 10% to 95%, non-condensing

Pollution Degree 2

Connections

Command Signals (J3)
10-Pin Quick Connect

Motor Signals (J5)
4-Pin Plug, Terminal Block

Hall Sensors (J4)
5-Pin Quick Connect

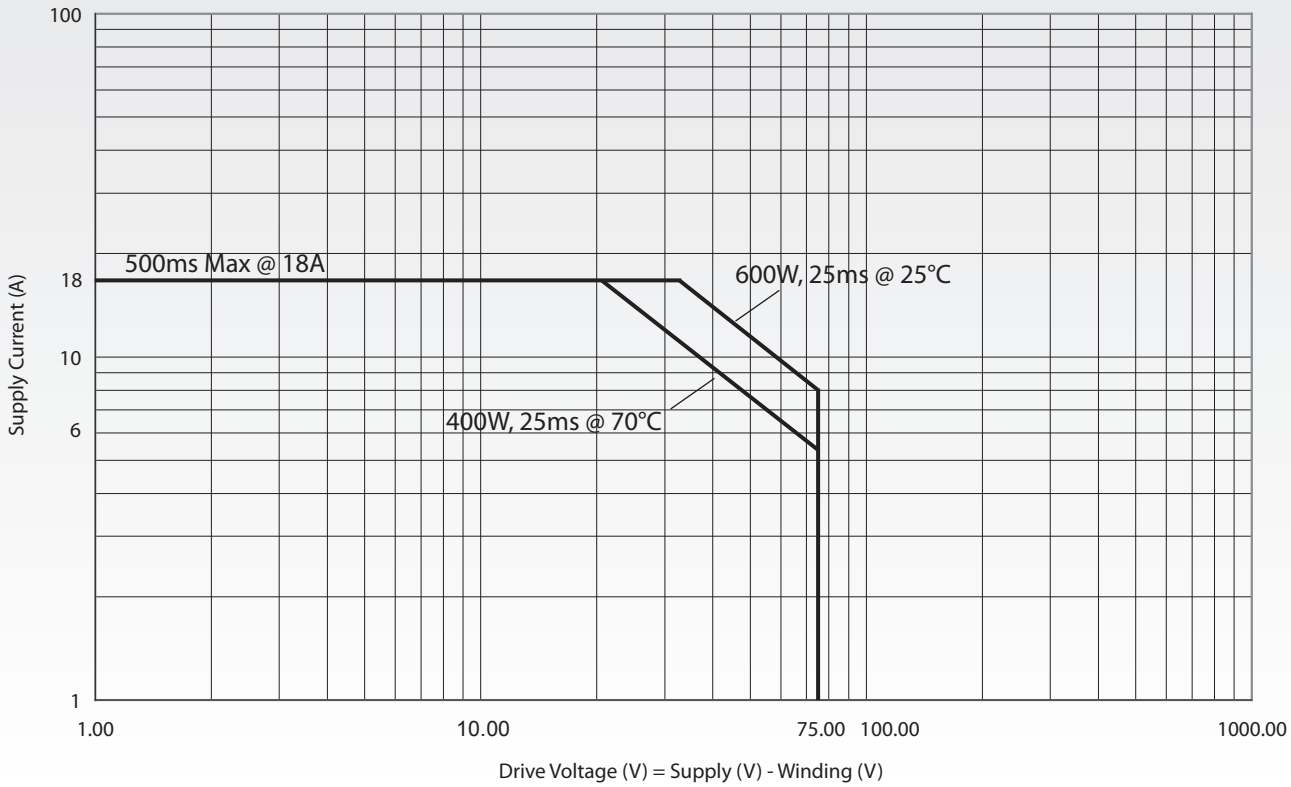
Auxiliary 24V Supply (J1)
3-Pin Plug, Terminal Block

Serial Monitor (J2)
6-Pin, Plug

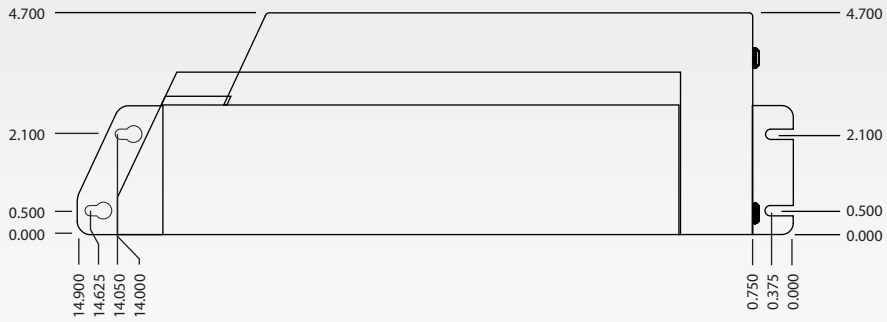
Motor Power (J6)
4-Pin Plug, Terminal Block

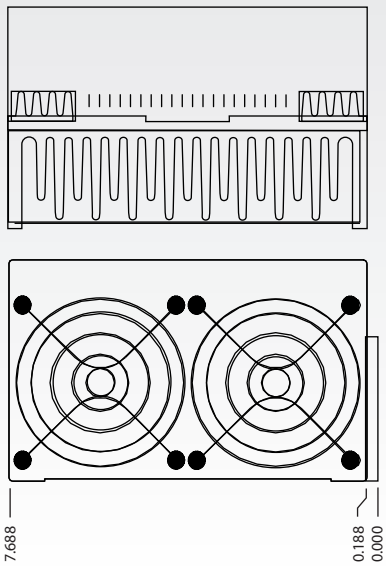
(Mating connectors (J1, J3, J4, J5, J6) supplied with drive)
(Serial Monitor Cable J2 sold separately)

SAFE OPERATING AREA



MECHANICAL DRAWING





Note: All measurements are in inches.