TRUST™ AUTOMATION, INC.

Motion & Motor Control Solutions

TA333 LINEAR DRIVE

FOR BRUSHLESS SERVO MOTORS

BENEFITS

True Class-AB power stage
Zero crossover distortion
Digital on-the-fly gain control (DTS)
Minimizes Hall Sensors torque ripple
Integrated microprocessor for system health reporting through a serial interface
Very low electrical noise
Sinusoidal or trapezoidal operation

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 ±100V

EQUIVALENT MOTOR VOLTAGE
±32V to ±184V*

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
1.0 A/V to 2.5 A/V

BANDWIDTH
5.0 kHz **

*dependent upon motor load
**into ~ 1mH load

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)

CONNECTIONS

COMMAND SIGNALS (J3)
10-Pin quick connect

MOTOR SIGNALS (J5)
4-Pin Terminal block, plug

HALL SIGNALS (J4)
5-Pin quick connect

AUXILIARY 24V SUPPLY (J1)
3-Pin Terminal block, plug

SERIAL MONITOR (J2)
6-Pin, Plug

MOTOR POWER (J6)
4-Pin Terminal block, plug

(mating connectors supplied with drive)
(serial monitor cable J2 sold separately)

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

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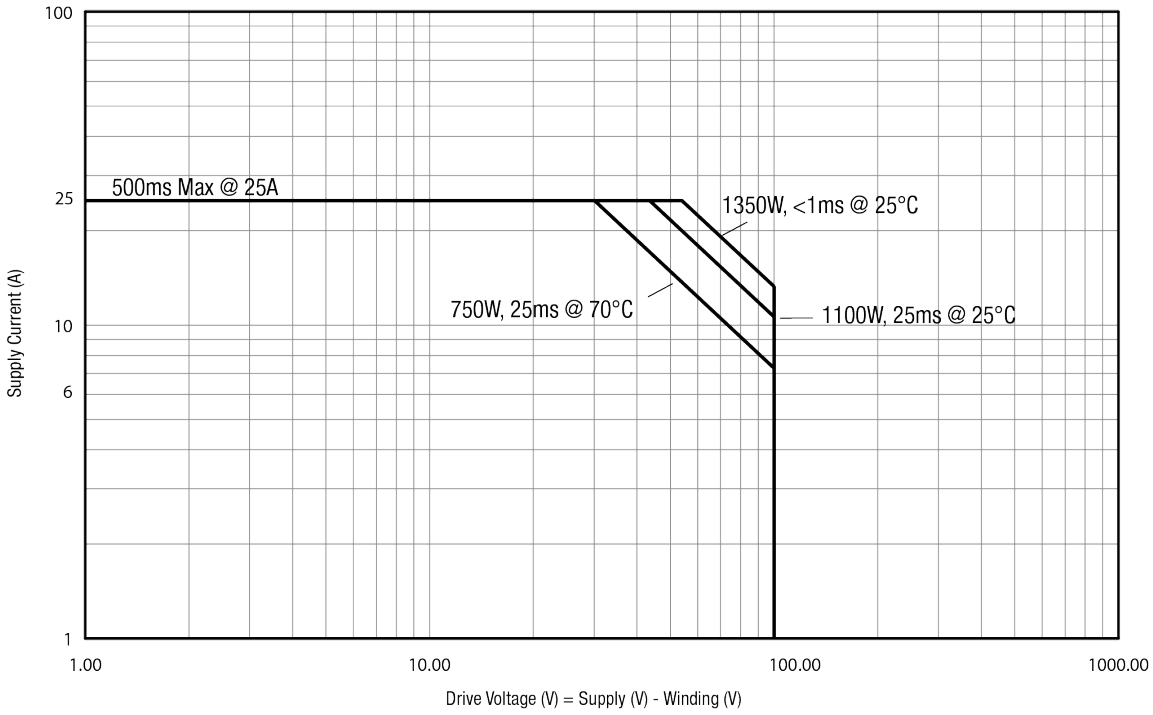
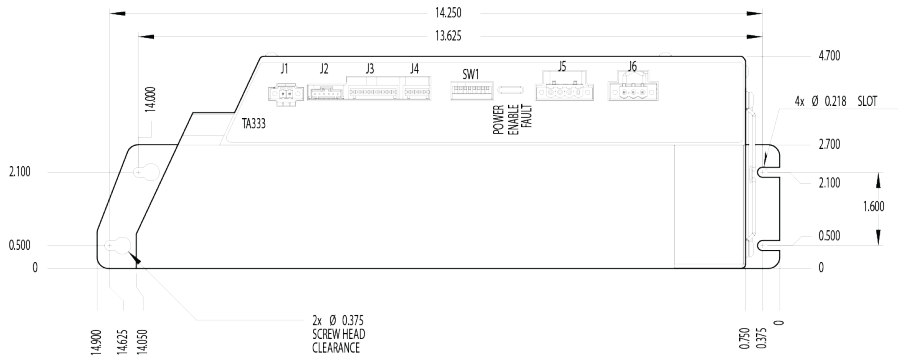
CONSISTENT LINEAR VOLTAGE OUTPUT WITH NO VOLTAGE DEADBAND AROUND ZERO POINT

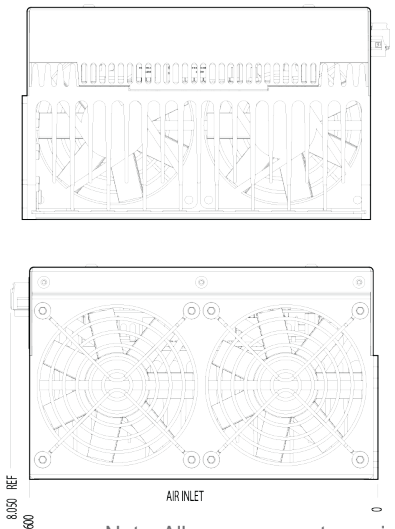
The Trust Automation TA333 Linear Drive is a fourth generation drive in Trust Automation's continually expanding product line. This linear three-phase servo motor drive is a true class AB amplifier and is the most up to date technology in the industry for sinusoidal motor control. The TA333 provides an optional external 24V input to maintain serial communications without main power. The TA333 is a highly configurable device with four common configuration modes. The TA333 will drive one brushless motor using external sinusoidal commutation. It can also use Hall Effect sensor feedback for smooth internally commutated trapezoidal operation. The TA333 also supports one or two brush or voice coil type motors as well as driving a traditional two coil stepper motor under sinusoidal control.

SAFE OPERATING AREA



MECHANICAL DRAWING





Note: All measurements are in inches