

PRODUCT PROFILE

TL-Series (TLY) Servo Motors

Powerful Servo Motors with a compact size

Advantages

TL-Series Motor Feedback

- Tight position control with 17-bit resolution
- Absolute Encoder Capability
 - Eliminates the need for a homing routine, making startup faster and easier
 - Single-turn high resolution feedback is standard. Multi-turn (+/- 32768 revolutions) high resolution feedback with battery backup is available
 - Ability to control high load-to-motor rotor inertia ratios while maintaining a stable system.
 - On-board memory retains motor identity
 - Serial communication automatically reports identity to the drive for reduced commissioning time
- 2000 line incremental encoder available for cost sensitive applications.

Superior Torque to Size Ratio

More power in a smaller package –
46, 70, 90 and 100 mm frame sizes

Integral 24 volt brake option

These compact, low inertia motors offer a full range of features for ease of use and application flexibility.



Overview

If your cost-sensitive application demands servo motors that are compact yet powerful, with multiple feedback options, you'll want to take a look at the Allen-Bradley TL-Series (TLY) Motors.

The TL-Series Motors represent a significant solution for designers needing low inertia, high performance servo motors. The 230 volt TL-Series Motors combine a compact size with a high torque density afforded by their superior stator design. The result is a package that provides substantial power in a small footprint. But the space-saving design doesn't prevent the TL-Series Motors from offering a range of features for ease of use and application flexibility. Those features include a high resolution absolute encoder, which eliminates the need for a homing sequence on power-up, or a 2000-line incremental encoder for cost-sensitive applications.

These TL-Series (TLY) Motors offer the same features and functionality as the time-proven TL-Series Motors. In addition, they offer sturdy connectors with an attached one meter cable, grounding and shielding enhancements as well as RoHS compliance. These motors have a standard IP43 seal. Shaft seal kits available to provide motor surface-only IP65 rating.

SPECIFICATIONS

Catalog Number	Rated Speed rpm	Rated Output kW	Rotor Inertia* kg-m ² (lb-in.-s ²)	Continuous Stall Torque Nm (lb-in.)	Peak Stall Torque Nm (lb-in.)	Continuous Stall Current Amperes (0-peak)	Peak Stall Current Amperes (0-peak)	Motor Weight kg (lb)
TLY-A110T	6000	0.041	0.000001 (0.0000089)	0.096 (0.85)	0.22 (1.94)	0.55	1.50	0.3 (0.66)
TLY-A120T	6000	0.086	0.000002 (0.000018)	0.181 (1.60)	0.36 (3.20)	1.03	2.50	0.4 (0.88)
TLY-A130T	6000	0.14	0.000003 (0.000027)	0.325 (2.88)	0.76 (6.70)	1.85	4.90	0.5 (1.10)
TLY-A220T	6000	0.35	0.000018 (0.00016)	0.836 (7.40)	1.48 (13.1)	3.65	7.90	0.9 (1.98)
TLY-A230T	6000	0.44	0.000034 (0.0003)	1.300 (11.50)	3.05 (27.0)	5.50	15.5	1.3 (2.87)
TLY-A2530P	5000	0.69	0.000098 (0.00087)	2.600 (23.00)	5.20 (46.0)	10.00	21.0	2.2 (4.85)
TLY-A2540P	5000	0.86	0.00011 (0.00096)	2.940 (26.00)	7.10 (63.0)	10.00	24.8	2.5 (5.51)
TLY-A310M	4500	TBD	TBD	3.73 TBD	TBD	TBD	TBD	TBD

* Rotor inertia may vary slightly depending upon feedback and brake option.

The specifications above are for 230volt motors. 115 volt models will be available in fall of 2007.

Typical Applications

Applications that need compact, low inertia motors would benefit from the use of TL-Series Motors. Typical applications include:

- Semiconductor
- Electronic Assembly
- Assembly Machines
- Material Handling

CE Information

The TL-Series Motors are:

- CE marked for all applicable directives

Environmental

Operating temperature: 0 - 40 °C (32 - 104° F)

Humidity: 20 - 85% relative humidity, non-condensing

For additional product information, refer to the Motion Control Selection Guide, pub GMC-SG001x or our web site: www.ab.com/motion



The TL-Series (TLY) Servo Motors offer all the benefits of the time-proven TL-Series Motors plus a variety of new advantages including:

- Durable new connectors
- Grounding and shielding enhancements
- Brake leads incorporated into the power connector (brake versions only)
- RoHS compliance

Team the TL-Series (TLY) motors with the Kinetix 2000 Servo Drive and the CompactLogix L43 Controller for an efficient, cost-effective integrated motion solution.

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