

Tecnotion presents its full range of TL-motors

Since their introduction in 1999 the range of Tecnotion's TL-linear motors is rapidly growing. Engineers from all over Europe prefer the TL-motors to optimise the linear movements in precision equipment and production processes. The TL-motors stand out for their compact construction, lightweight, low attraction force, fast acceleration, high speed and micron operational accuracy. They are available as stand-alone products and as integral parts of complete linear drive systems.



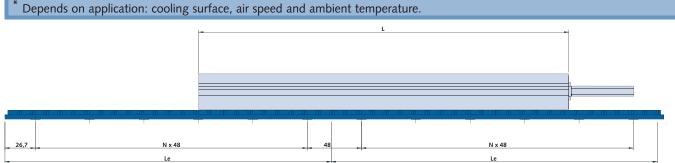
Specifications Coils/Current Symbol TL 6 TL 12 TL 15 Unit TL 18 **TL 24** Ν S Ν S Ν Ν S Motortype, max voltage ph-ph 3-phase synchronous Ironcore, 600 Veff Ultimate Force @25°C 450 900 1125 10°C/s Fp Ν 1350 1800 13 13 26 13 33 20 26 **Ultimate Current** lp Arms 6.5 41 52 6°C/s @25°C 400 800 Peak Force Fp Ν 1000 1200 1600 Peak Current lp 5.0 10 10 20 10 25 15 31 20 40 Arms Continuous Force watercooled coils @100°C Ν 210 420 525 630 840 Fcw 9.0 2.3 4.5 4.5 9.1 4.7 11.4 6.8 14.0 18 Continuous Current watercooled lcw Arms Continuous Force aircooled coils @100°C 100..200 200..400 250..500 300..600 400..800 Fca Ν Max. Continuous Power Loss all coils Pc W 155 310 370 453 620 Maximum speed @560V Vmax m/s 5 10 5 10 5 10 5 10 5 10 Κ 93 112 93 93 Motor Force Constant N/Arms 46 93 46 46 44.9 46 I < 0.6 lpBack FMF Bemf V / m/s76 38 76 38 91 38 76 37 76 38 N^2/W S 370 740 **Motor Constant** coils @25°C 970 1140 1480 Magnet Pitch NN 24 24 24 24 24 mm τ Resistance per phase coils @25°C Rf 7.8 2.0 3.9 1.0 4.3 0.75 2.5 0.59 1.9 0.48 Ω Lf 30 7.5 35 6.5 19 15 3.7 Induction per phase I < 0.6 lpmΗ 60 15 4 coils @25°C 7.5 7.5 Electrical time constant 7.5 7.5 7.5 τе ms Thermal Resistance Rth °C/W 0.48 0.24 0.20 0.16 0.12 Thermal Time Constant minimum τ th 77 77 77 77 77 Fa Ν 1700 Motor Attraction Force 900 2000 2850 3400 Length of Coil unit 146 244 290 336 468 mm Weight of Coil unit Mc 1.5 2.6 3.2 3.8 5.1 kg Weight of Cables 180 180 180 180 300 m gr/m Watercooling flow @25°C Фw I/min 0.7 1.4 1.8 2.2 2.9 Watercooling pressuredrop 2 2 2 1 ΔPw bar 3 PTC $1k\Omega$ and KTY 21 **Temperature Sensor**

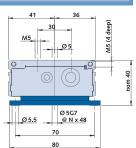
This leaflet gives you the TL's vital technical data. For additional information, please contact

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| Dimensions Magnetplates | | |
|--------------------------------------|----------|--------|
| Le | 192 mm | 288 mm |
| N | 3 | 5 |
| M5 bolts | 8x | 12x |
| Mass | 3.8 kg/m | |
| Magnetplates can be butted together. | | |





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