

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

* Depends on application: cooling surface, air speed and ambient temperature.

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.

