

	Parameter	Remarks	Symbol	Unit	QTL-A 385-85	QTL-A 385-105
Performance	Winding type				I	I
	Motor type max. voltage ph-ph	3-phase synchronous		$V_{ac rms} (V_{dc})$	3-phase synchronous frameless Torque. 480Vac rms (680Vdc)	
	Ultimate torque @ 20°C/s increase	magnet @ 25°C	T_u	Nm	1026	1368
	Peak torque @ 6°C/s increase	magnet @ 25°C	T_p	Nm	833	1111
	Continuous torque	coil @ 100°C	T_c	Nm	407	560
	Stall torque	coil @ 100°C	T_s	Nm	288	396
	Maximum speed ⁽¹⁾	@ T_c @ 680 Vdc	n_{max}	rpm	231	164
	Motor torque constant	up to I_c	K_t	Nm/A _{rms}	25.9	34.6
	Motor constant	coils @ 25°C	K_m	(Nm) ² /W	105.4	149.9
	Electrical	Ultimate current	magnet @ 25°C	I_u	A _{rms}	44.0
Peak current		magnet @ 25°C	I_p	A _{rms}	33.8	33.8
Maximum continuous current ⁽²⁾		coils @ 100°C	I_c	A _{rms}	15.7	16.2
Stall current ⁽²⁾		coils @ 100°C	I_s	A _{rms}	11.1	11.5
Back EMF phase-phase _{peak}			K_e	V/krpm	2217	2956
Back EMF phase-phase _{RMS}			K_e	V/krpm	1567	2090
Coil resistance per phase		coils @ 25°C ex. cable	R	Ω	2.13	2.66
Coil induction per phase		$I < 0.6 I_p$	L	mH	11.6	15.2
Electrical time constant			τ_e	ms	5.4	5.7
Poles			N_{mgn}	nr	50	50
Thermal	Continuous power loss	coils @ 100°C	P_c	W	2044	2724
	Thermal resistance ⁽³⁾	coils to mount. sfc.	R_{th}	°C/W	0.039	0.029
	Thermal time constant		τ_{th}	s	48	45
	Water cooling flow	for $\Delta T=3K$	Φ_w	l/min	9.8	13.0
	Temperature cut-off / sensor				PTC 1kΩ (3x) / PT1000 (3x)	
Mechanical	Stator OD		OD_s	mm	385	
	Rotor ID		ID_R	mm	280	
	Motor height		H_{motor}	mm	85	105
	Lamination stack height		H_{arm}	mm	60	80
	Rotor inertia		J_R	kg*m ²	0.146	0.195
	Stator mass	excluding cables	M_s	kg	12750	17000
	Rotor mass		M_R	kg	6675	8900
	Total mass	excluding cables	M_T	kg	19425	25900
	Cable mass	all cables	m	g	500	
	Cable type (power)	length 2 m	d	mm (AWG)	10.6 (13)	
Cable type (sensor)	length 2 m	d	mm (AWG)	8.9 (22)		



QTL 385 series, with a height of 85 mm

All specifications ±0.0%

1. Actual values depend on bus voltage. Please check the T/n diagram in our manual or online simulation tool.
2. These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current. If these values differ in your application, please check our simulation tool or manual.
3. Rth based on given water flow and pressure.