

Motor Parameters ILM115x25



PERFORMANCE CHARACTERISTICS

(INTERCONNECTION STAR-SERIAL)

Power P	[W]	570
Rated torque T_r	[Nm]	3.9
Peak torque T_{max} @ 20% linearity deviation	[Nm]	12.7
Rated voltage U_r	[V]	48
Rotation speed n_{max}^*	[rpm]	1400
Rated current I_r (phase current amplitude)	[A]	14.1
Copper losses $P_{L,r}$ @ T_r and 20°C	[W]	20.9
Torque constant k_T @ 20°C	[mNm/A]	281
Motor constant k_M @ 20°C	[Nm/√W]	0.87
Terminal resistance R_{TT} @ 20°C	[mΩ]	140
Terminal inductance L_{TT}	[μH]	600
Rotor inertia J	[kgcm ²]	3.93
Number of pole pairs	-	15
Max. efficiency η	%	93
Weight m	[g]	1070

* Theoretical no-load rotation speeds at rated voltage U_r . Variations can arise from operation with different inverters.
Higher rotation speeds or change of the voltage level can be achieved by varying the interconnection scheme.

MAXIMAL ROTATION SPEEDS

DC link voltage [V]	48	36	24	14	12	9
star-serial $n_{\max}^*$ [rpm]	1400	1050	700	420	350	260
delta-serial $n_{\max}^*$ [rpm]	2400	1800	1200	720	600	450

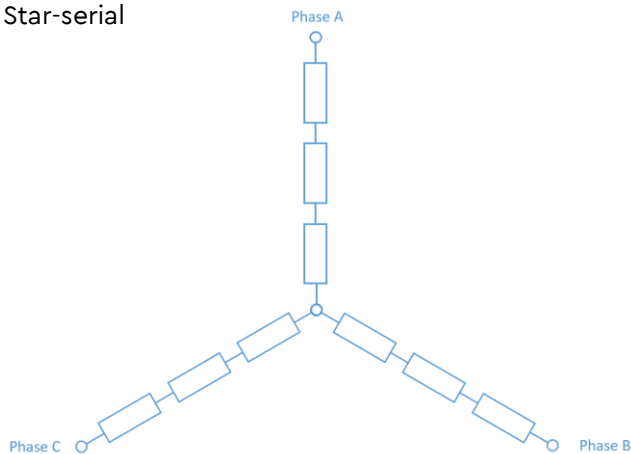
* Theoretical no-load rotation speeds at indicated voltage. Mechanical limits apply and must not be exceeded.
Variations can arise from operation with different inverters.

CHARACTERISTICS INTERCONNECTION VARIANTS

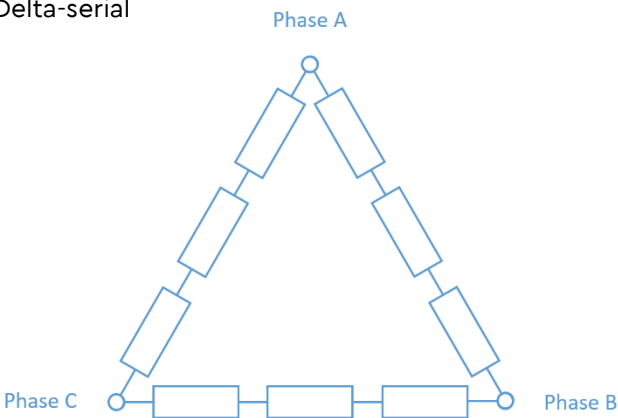
Interconnection	U_r [V]	I_r [A]	k_T [mNm/A]	R_{TT} [mΩ]	L_{TT} [μH]
star-serial	48	14	281	140	600
delta-serial	28	24	162	47	200

AVAILABLE INTERCONNECTION VARIANTS

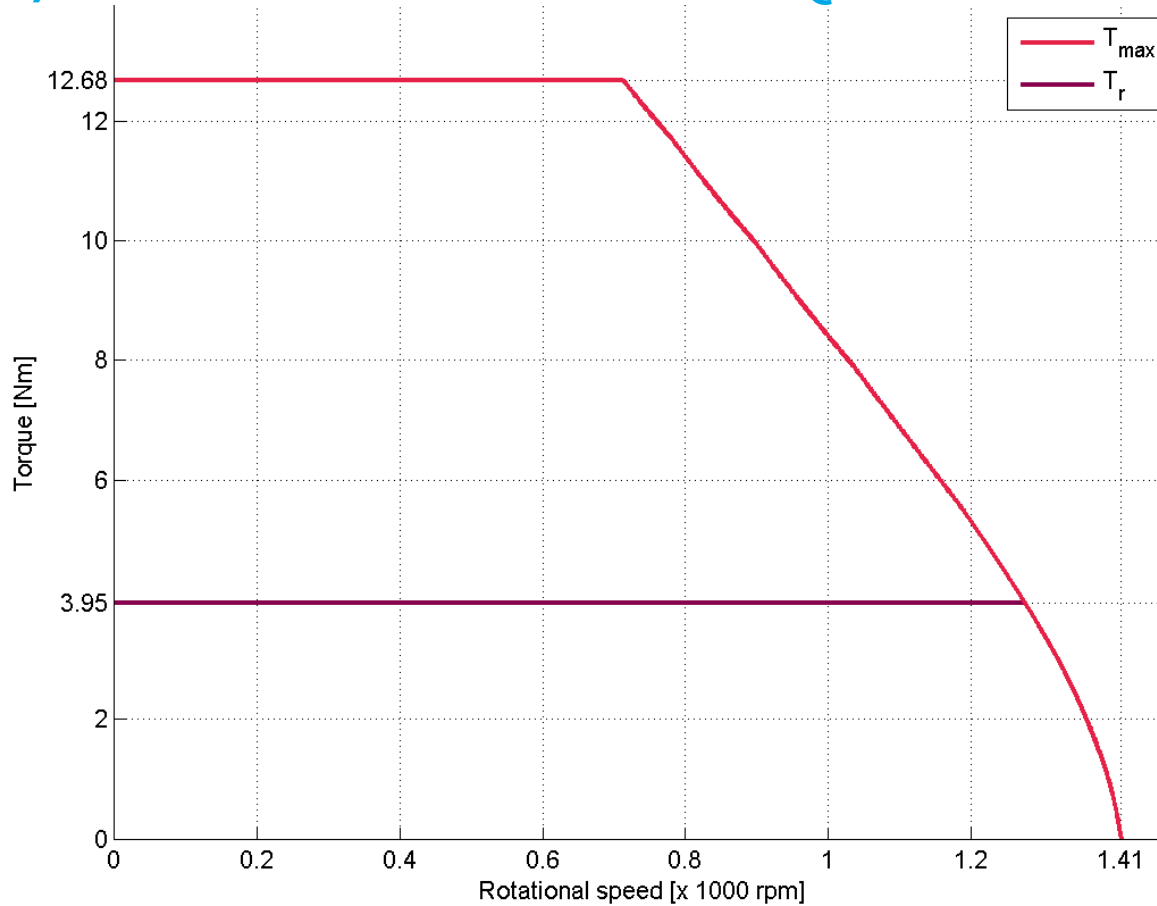
Star-serial



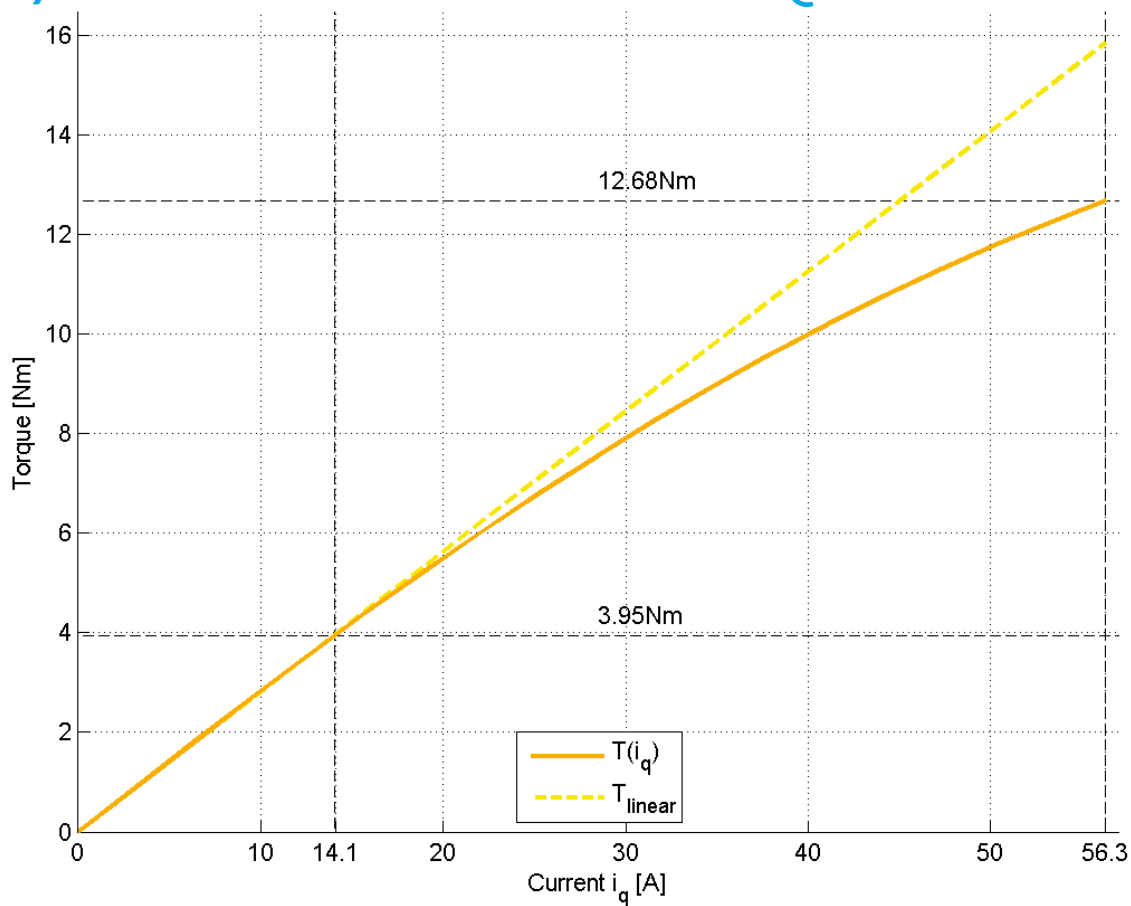
Delta-serial



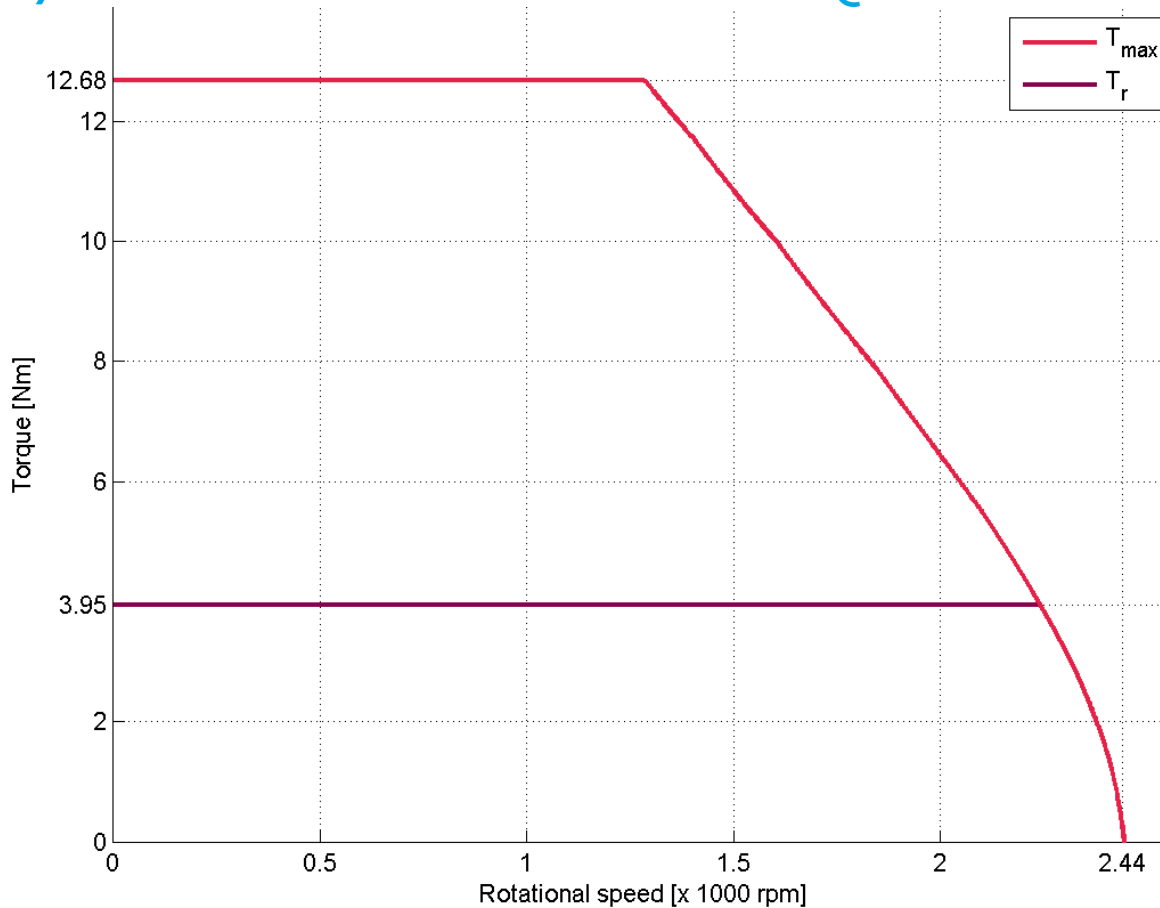
T/N-DIAGRAM ILM115X25 STAR-SERIAL @ 22 °C



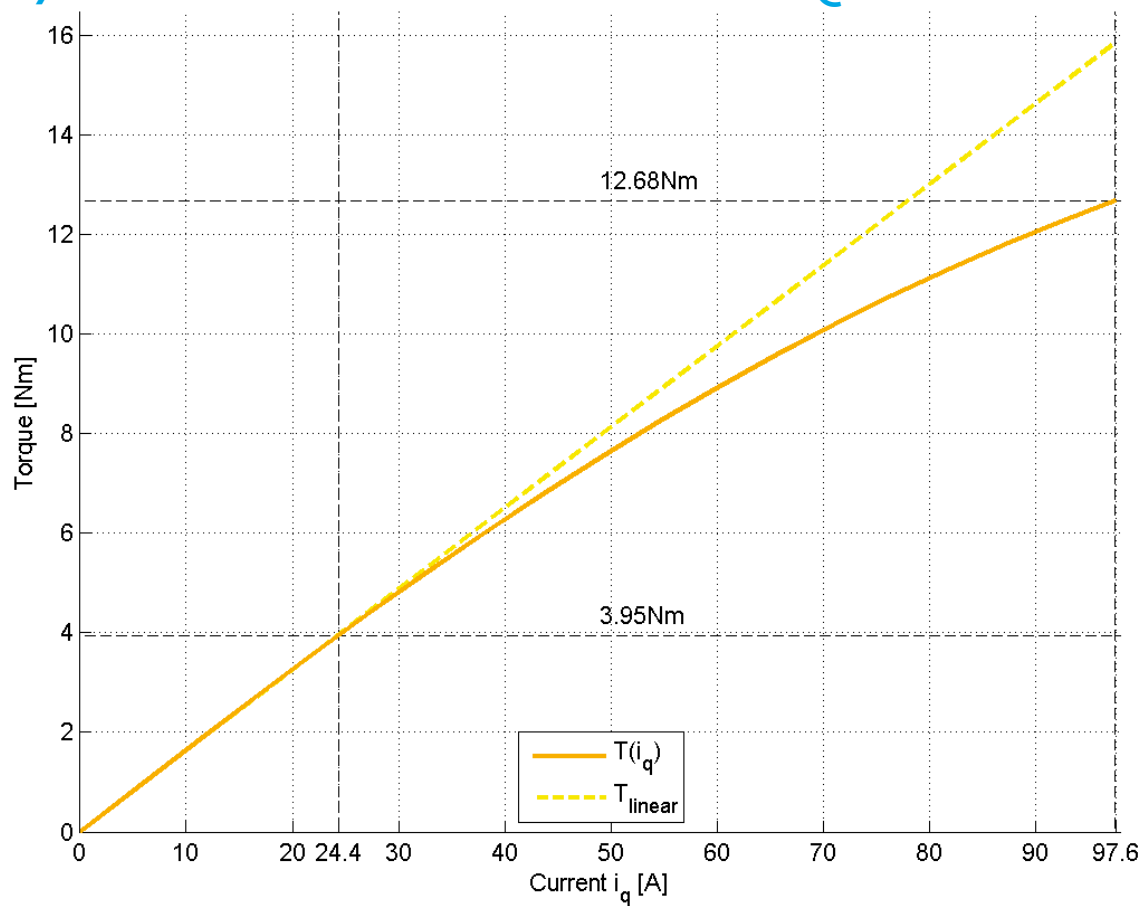
T/I-DIAGRAM ILM115X25 STAR-SERIAL @ 22 °C



T/N-DIAGRAM ILM115X25 DELTA-SERIAL @ 22 °C



T/I-DIAGRAM ILM115X25 DELTA-SERIAL @ 22 °C



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