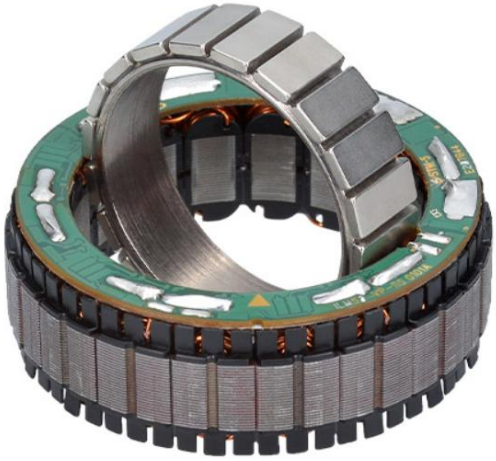
Motor Parameters ILM-E60x09



PERFORMANCE CHARACTERISTICS

(INTERCONNECTION STAR-SERIAL)

Power P	[W]	232
Rated torque T_r	[Nm]	0.55
Peak torque T_{max} @ 20% linearity deviation	[Nm]	1.78
Rated voltage U_r	[V]	48
Rotation speed n_{max}*	[rpm]	4042
Rated current I_r (phase current amplitude)	[A]	5.7
Copper losses $P_{L,r}$ @ T_r and 20°C	[W]	15.1
Torque constant k_T @ 20°C	[mNm/A]	98
Motor constant k_M @ 20°C	[Nm/√W]	0.143
Terminal resistance R_{TT} @ 20°C	[mΩ]	627
Terminal inductance L_{TT}	[µH]	527
Rotor inertia J	[kgcm²]	0.128
Number of pole pairs	-	10
Max. efficiency η	%	--
Weight m	[g]	134
Temperature class (DIN EN 60085)		F

* 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]	4042	3031	2021	1213	1010	758
Delta-serial n_{max}* [rpm]	7001	5251	3500	2100	1750	1313
Star-parallel n_{max}* [rpm]	8084	6063	4042	2425	2021	1516

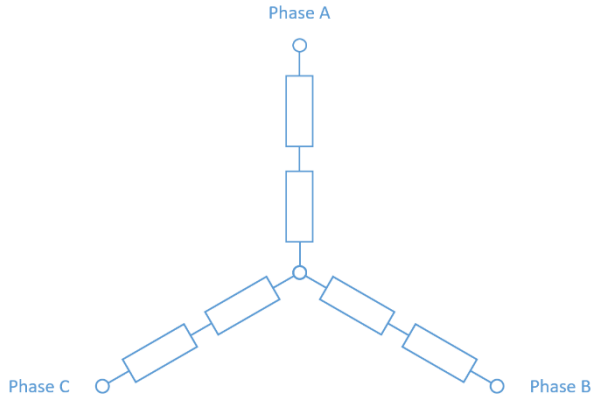
* Theoretical no-load rotation speeds at indicated voltage. Mechanical limits apply and must not be exceeded. Variations can arise from operation with different inverters.

CHARACTERISTICS INTERCONNECTION VARIANTS

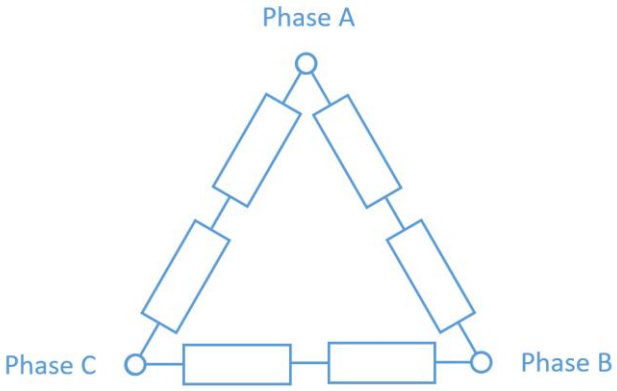
Interconnection	U_r [V]	I_r [A]	k_T [mNm/A]	R_{TT} [mΩ]	L_{TT} [µH]
Star-serial	48	5.67	98	627	527
Delta-serial	28	9.83	57	209	176
Star-parallel	24	11.35	49	157	132

AVAILABLE INTERCONNECTION VARIANTS

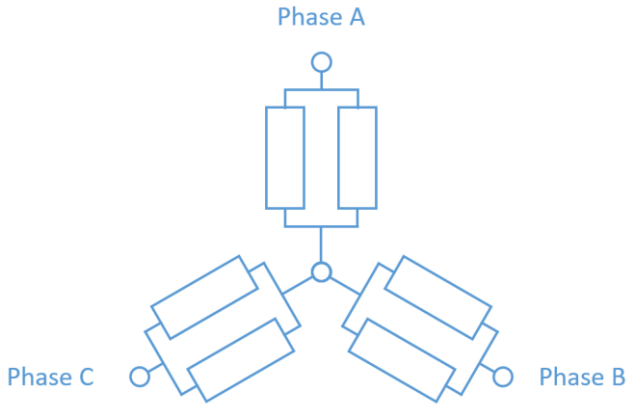
Star-serial



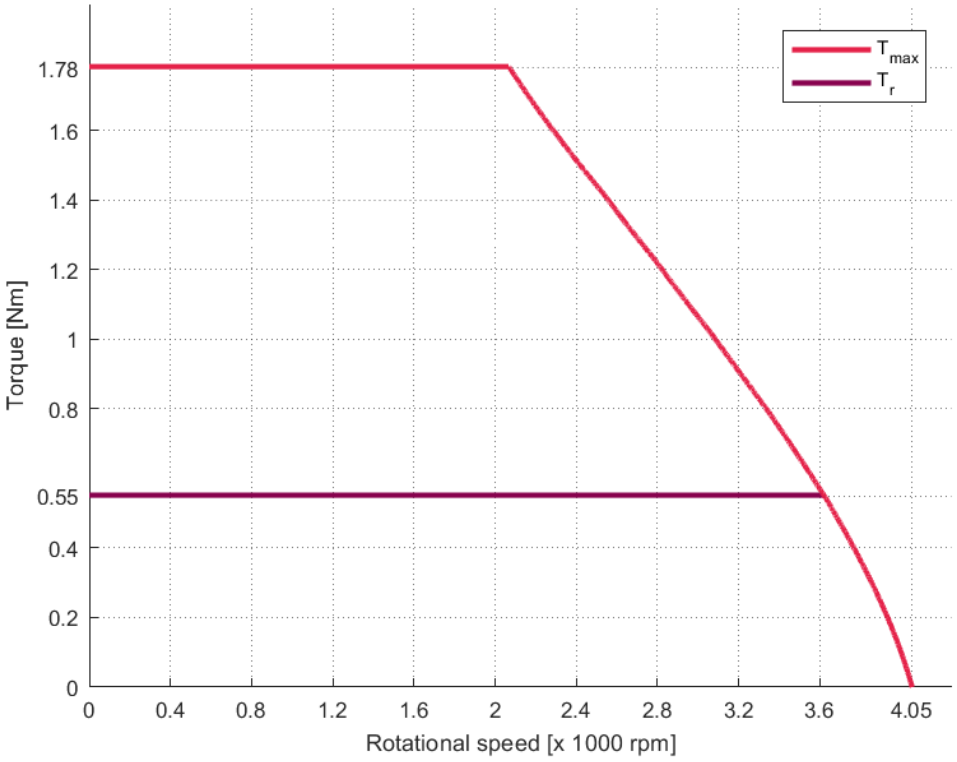
Delta-serial



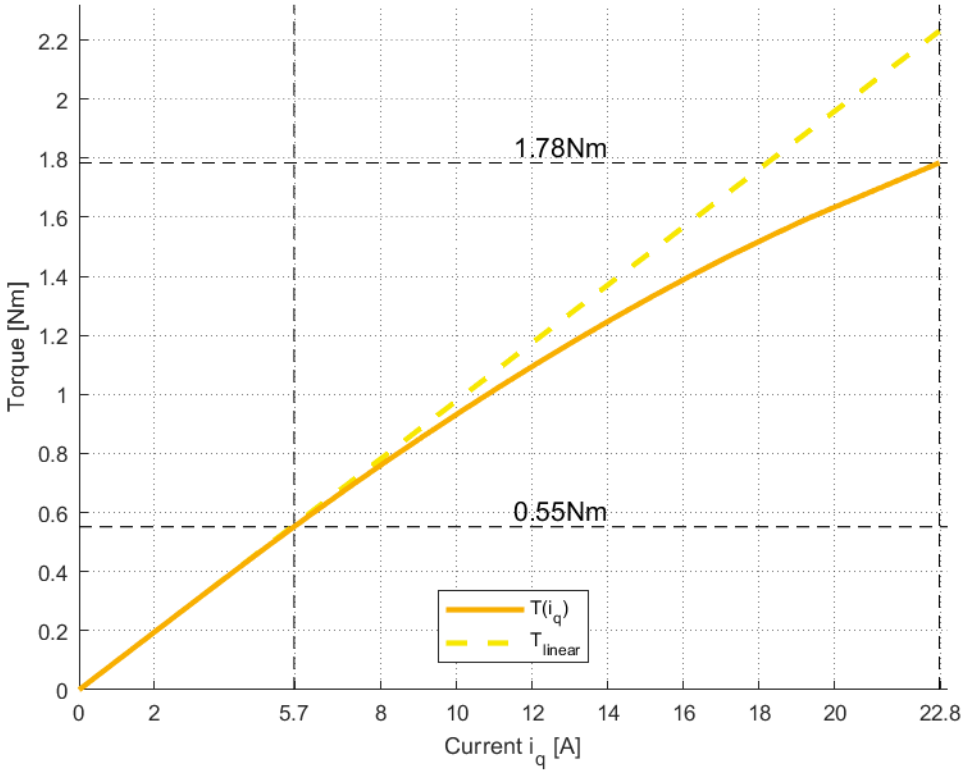
Star-parallel



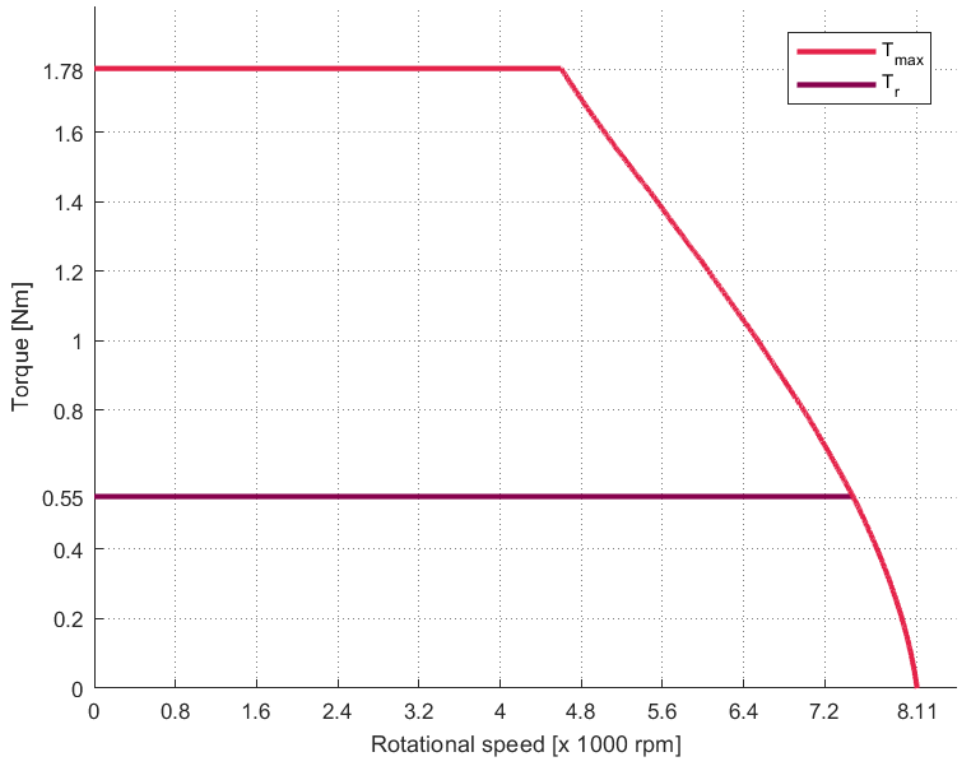
T/N-DIAGRAM ILM-E60X09 STAR-SERIAL @ 22 °C



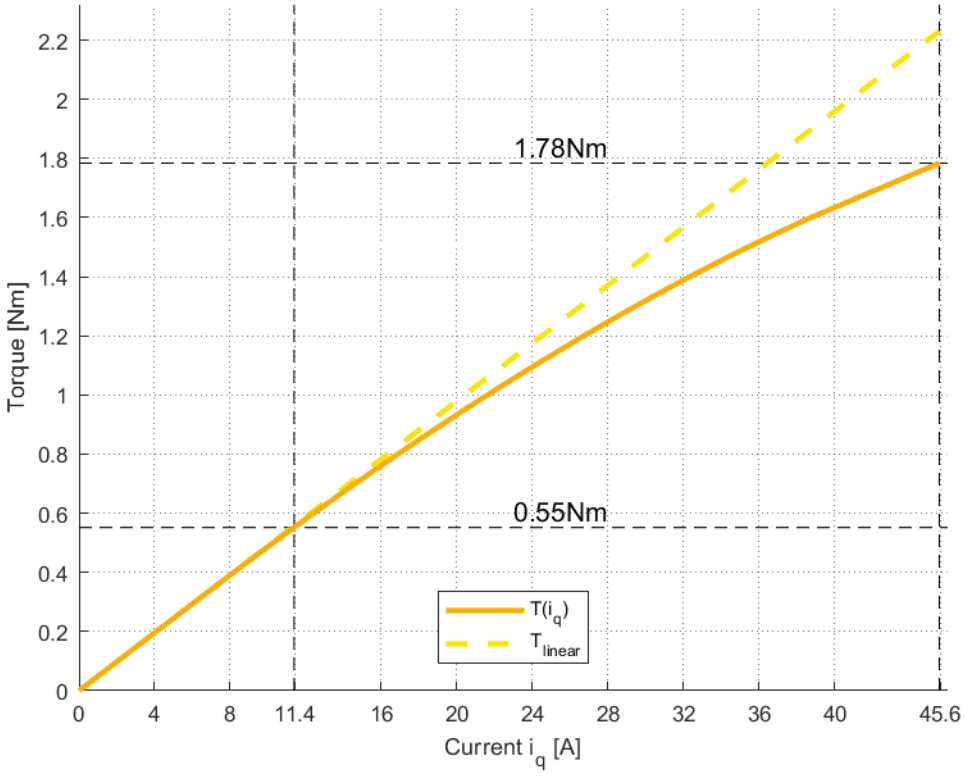
T/I-DIAGRAM ILM-E60X09 STAR-SERIAL @ 22 °C



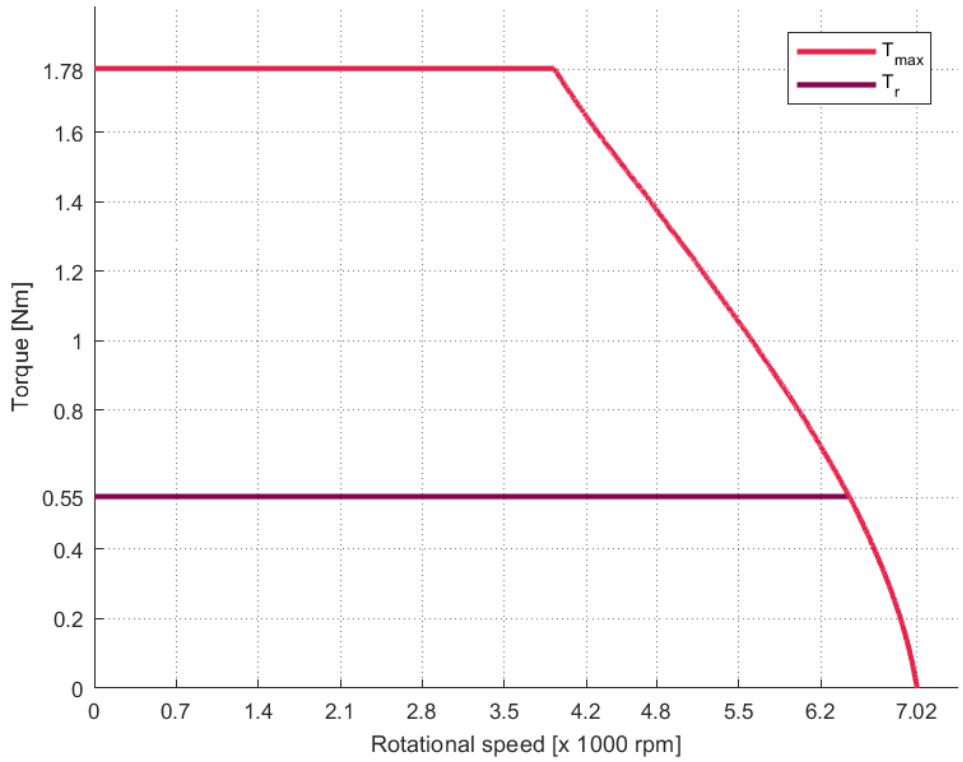
T/N-DIAGRAM ILM-E60X09 STAR-PARALLEL @ 22 °C



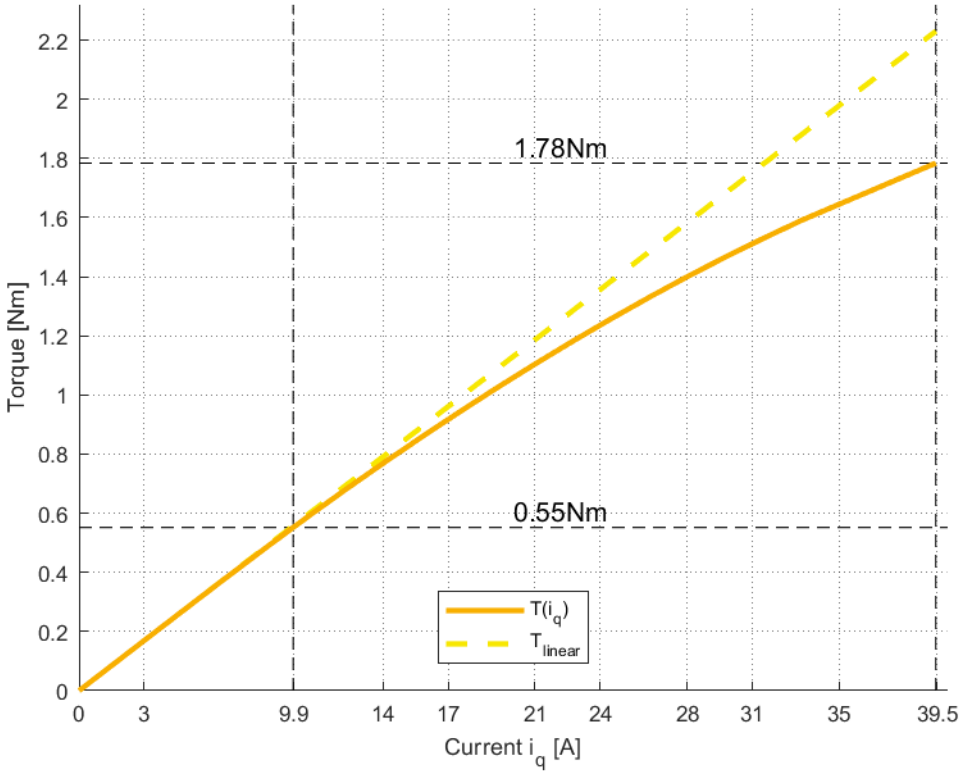
T/I-DIAGRAM ILM-E60X09 STAR-PARALLEL @ 22 °C



T/N-DIAGRAM ILM-E60X09 DELTA-SERIAL @ 22 °C



T/I-DIAGRAM ILM-E60X09 DELTA-SERIAL @ 22 °C



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