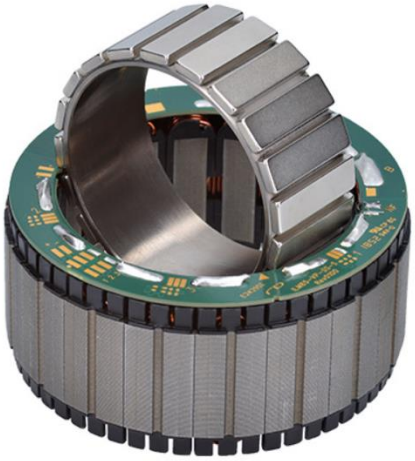
Motor Parameters ILM-E85x26



PERFORMANCE CHARACTERISTICS

(INTERCONNECTION STAR-SERIAL)

Power P	[W]	436
Rated torque T_r	[Nm]	2.84
Peak torque T_{max} @ 20% linearity deviation	[Nm]	9.2
Rated voltage U_r	[V]	48
Rotation speed n_{max}*	[rpm]	1464
Rated current I_r (phase current amplitude)	[A]	10.6
Copper losses $P_{L,r}$ @ T_r and 20°C	[W]	29.6
Torque constant k_T @ 20°C	[mNm/A]	271
Motor constant k_M @ 20°C	[Nm/√W]	0.528
Terminal resistance R_{TT} @ 20°C	[mΩ]	351
Terminal inductance L_{TT}	[µH]	1042
Rotor inertia J	[kgcm²]	1.286
Number of pole pairs	-	10
Max. efficiency η	%	93
Weight m	[g]	712
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]	1464	1098	732	439	366	275
Delta-serial n_{max}* [rpm]	2536	1902	1268	761	634	475
Star-parallel n_{max}* [rpm]	2928	2196	1464	878	732	549

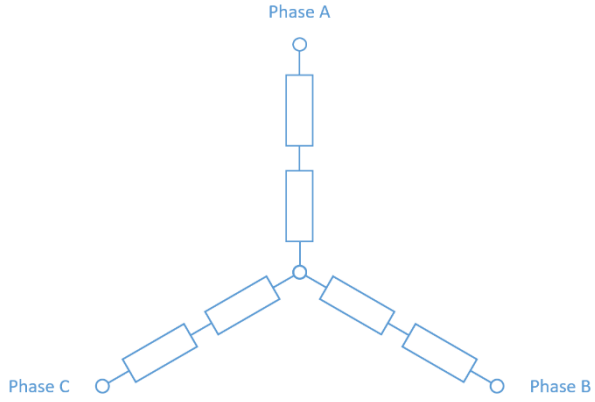
* Theoretical no-load rotation speeds at indicated voltage. Mechanical limits apply and must not be exceeded. Variations can arise from operation with different inverters.
** $n_{max, mech}$ = 7,900 rpm must not be exceeded.

CHARACTERISTICS INTERCONNECTION VARIANTS

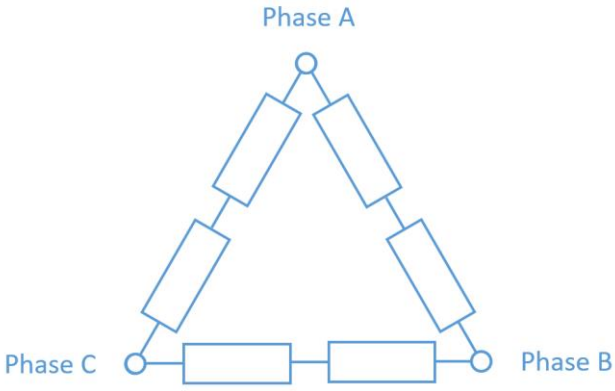
Interconnection	U_r [V]	I_r [A]	k_T [mNm/A]	R_{TT} [mΩ]	L_{TT} [µH]
Star-serial	48	10.6	271	351	1042
Delta-serial	28	18.4	156	117	347
Star-parallel	24	21.2	136	88	261

AVAILABLE INTERCONNECTION VARIANTS

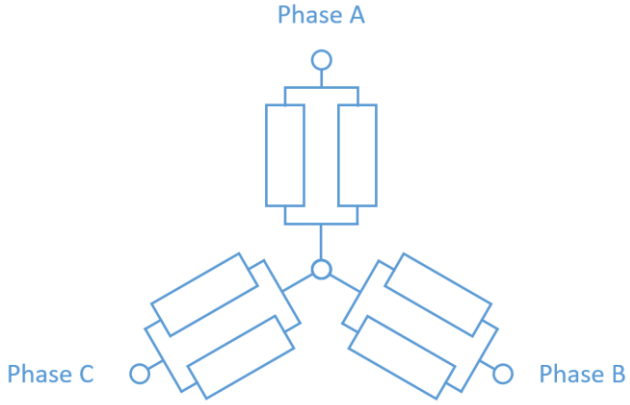
Star-serial



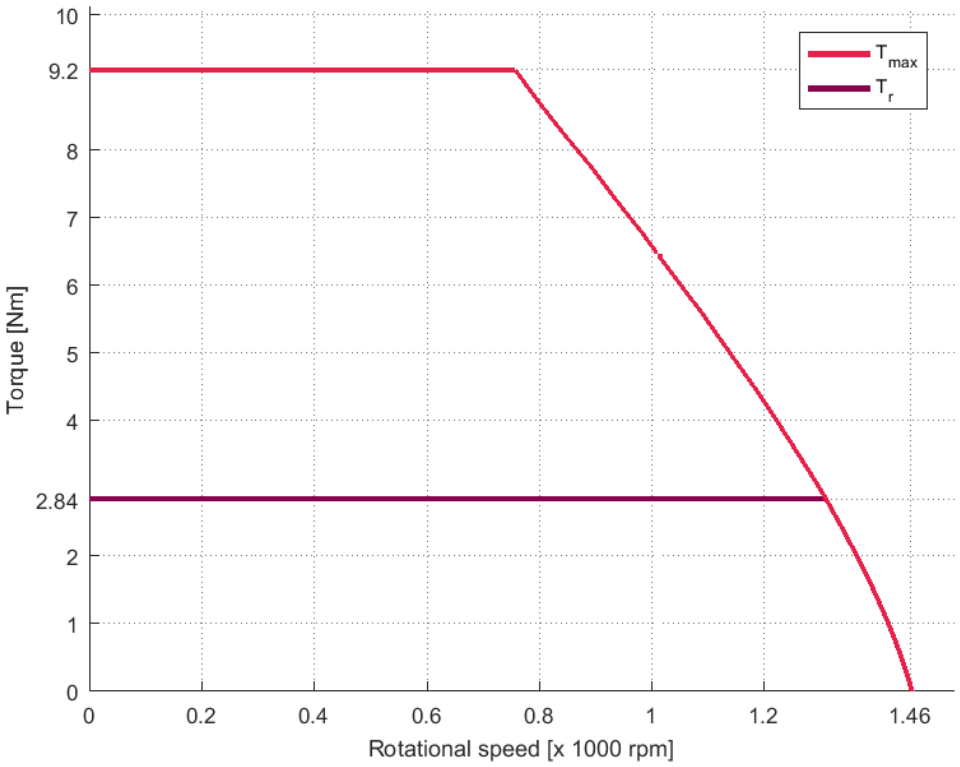
Delta-serial



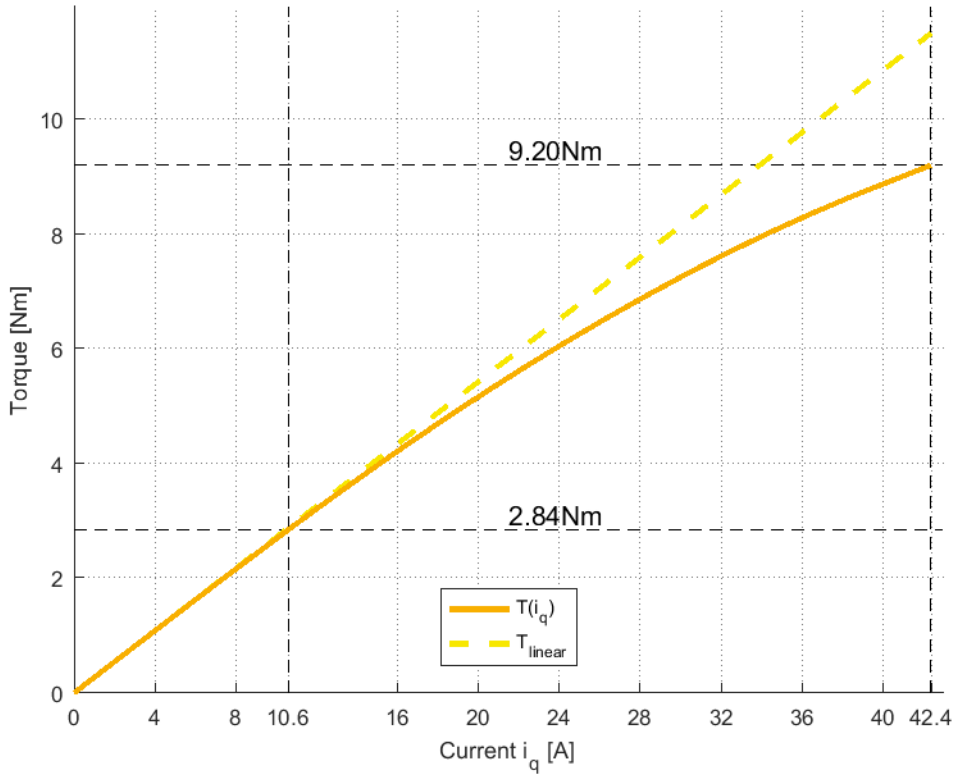
Star-parallel



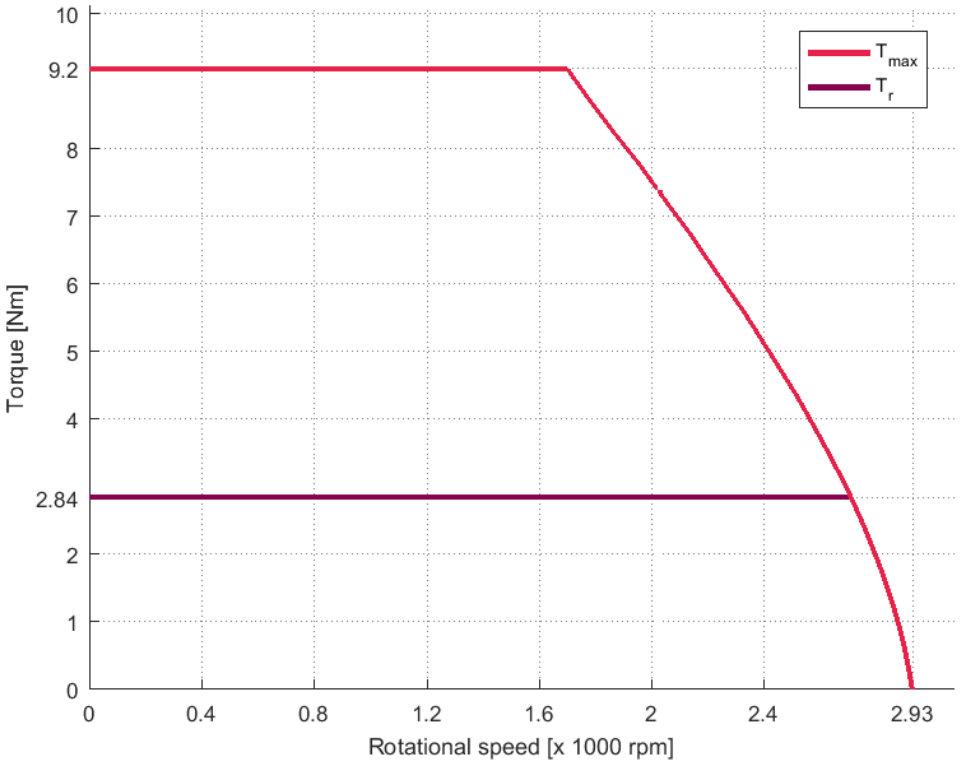
T/N-DIAGRAM ILM-E85X26 STAR-SERIAL @ 22 °C



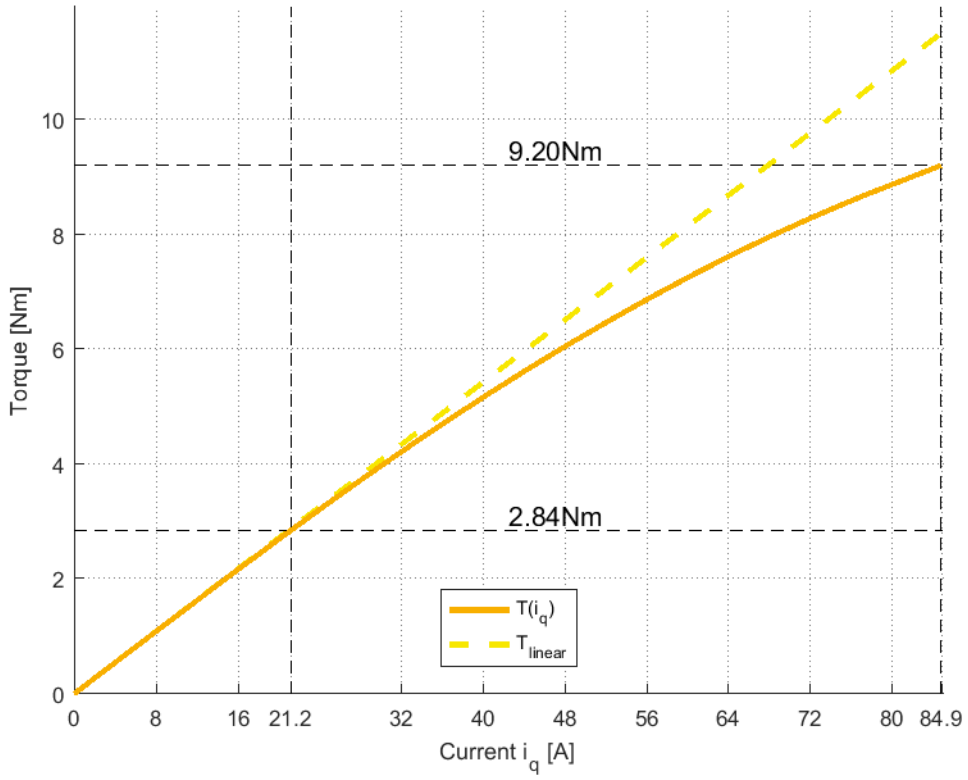
T/I-DIAGRAM ILM-E85X26 STAR-SERIAL @ 22 °C



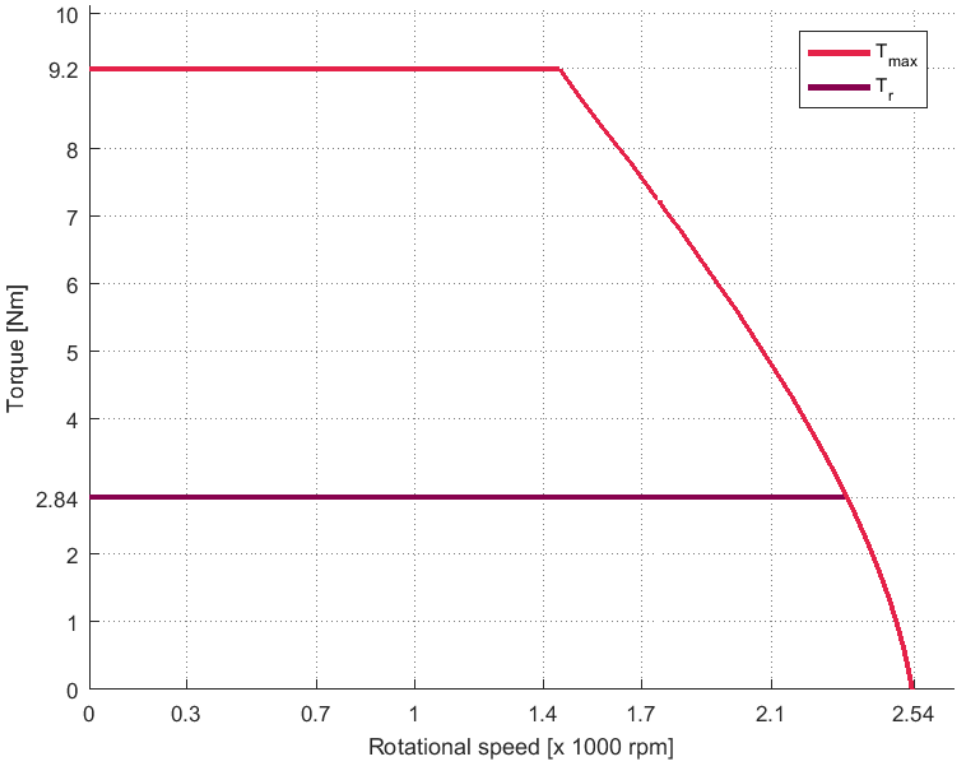
T/N-DIAGRAM ILM-E85x26 STAR-PARALLEL @ 22 °C



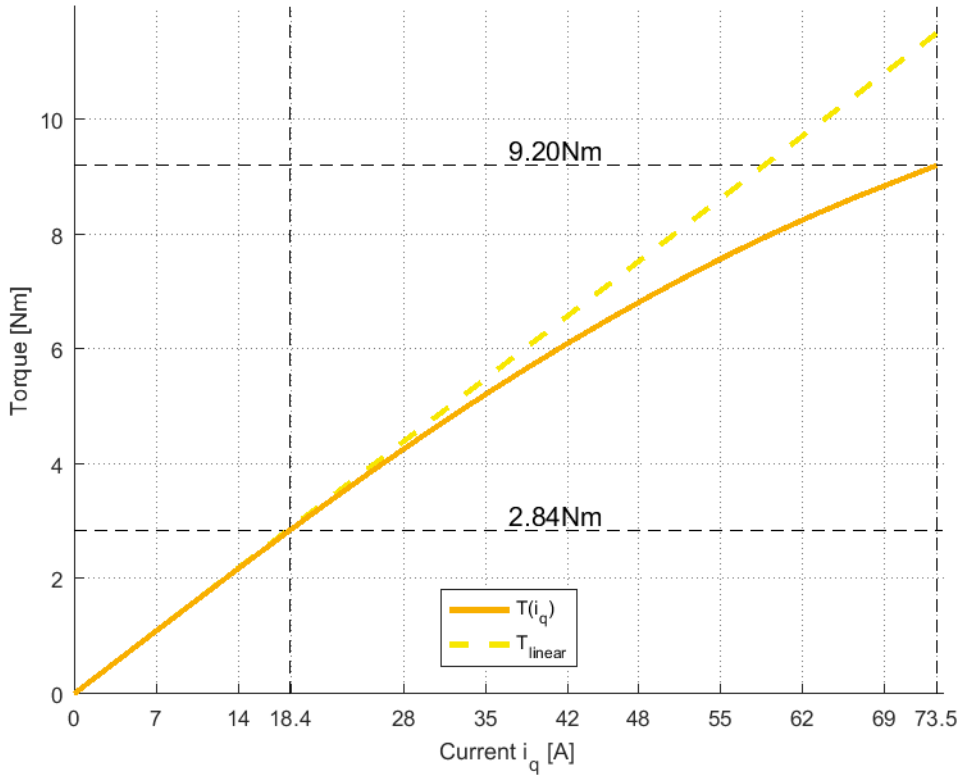
T/I-DIAGRAM ILM-E85X26 STAR-PARALLEL @ 22 °C



T/N-DIAGRAM ILM-E85x26 DELTA-SERIAL @ 22 °C



T/I-DIAGRAM ILM-E85X26 DELTA-SERIAL @ 22 °C



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