Motor Parameters ILM38x06

PERFORMANCE CHARACTERISTICS

(INTERCONNECTION STAR-SERIAL)

Power P	[W]	110
Rated torque T_r	[Nm]	0.099
Peak torque T_{max} @ 20% linearity deviation	[Nm]	0.33
Rated voltage U_r	[V]	24
Rotation speed n_{max}*	[rpm]	10575
Rated current I_r (phase current amplitude)	[A]	5.4
Copper losses $P_{L,r}$ @ T_r and 20°C	[W]	7.7
Torque constant k_T @ 20°C	[mNm/A]	18.9
Motor constant k_M @ 20°C	[Nm/√W]	0.0366
Terminal resistance R_{TT} @ 20°C	[mΩ]	350
Terminal inductance L_{TT}	[µH]	280
Rotor inertia J	[kgcm²]	0.0101
Number of pole pairs	-	7
Max. efficiency η	%	88
Weight m	[g]	53

* 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]	21150**	15862**	10575	6345	5287	3966
star-parallel n_{max}* [rpm]	42300**	31725**	21150**	12690	10575	7931

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

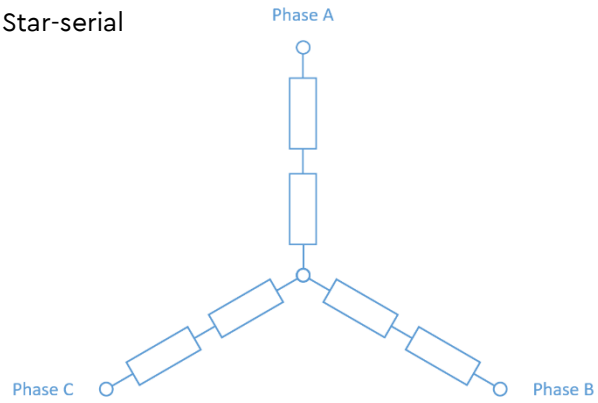
** $n_{max,mech}$ = 15000 rpm must not be exceeded.

CHARACTERISTICS INTERCONNECTION VARIANTS

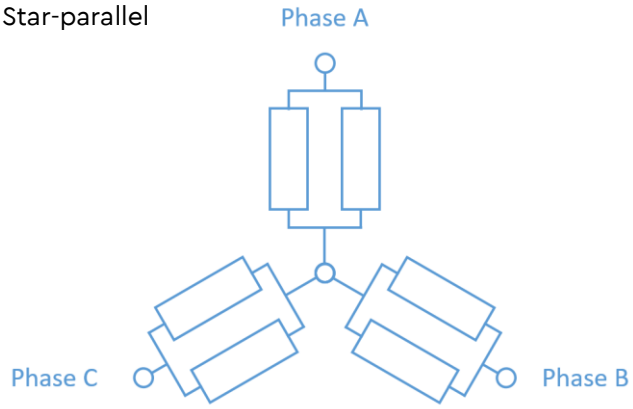
Interconnection	U_r [V]	I_r [A]	k_T [mNm/A]	R_{TT} [mΩ]	L_{TT} [µH]
star-serial	24	5.4	19	350	280
star-parallel	12	10.8	9.5	88	70

AVAILABLE INTERCONNECTION VARIANTS

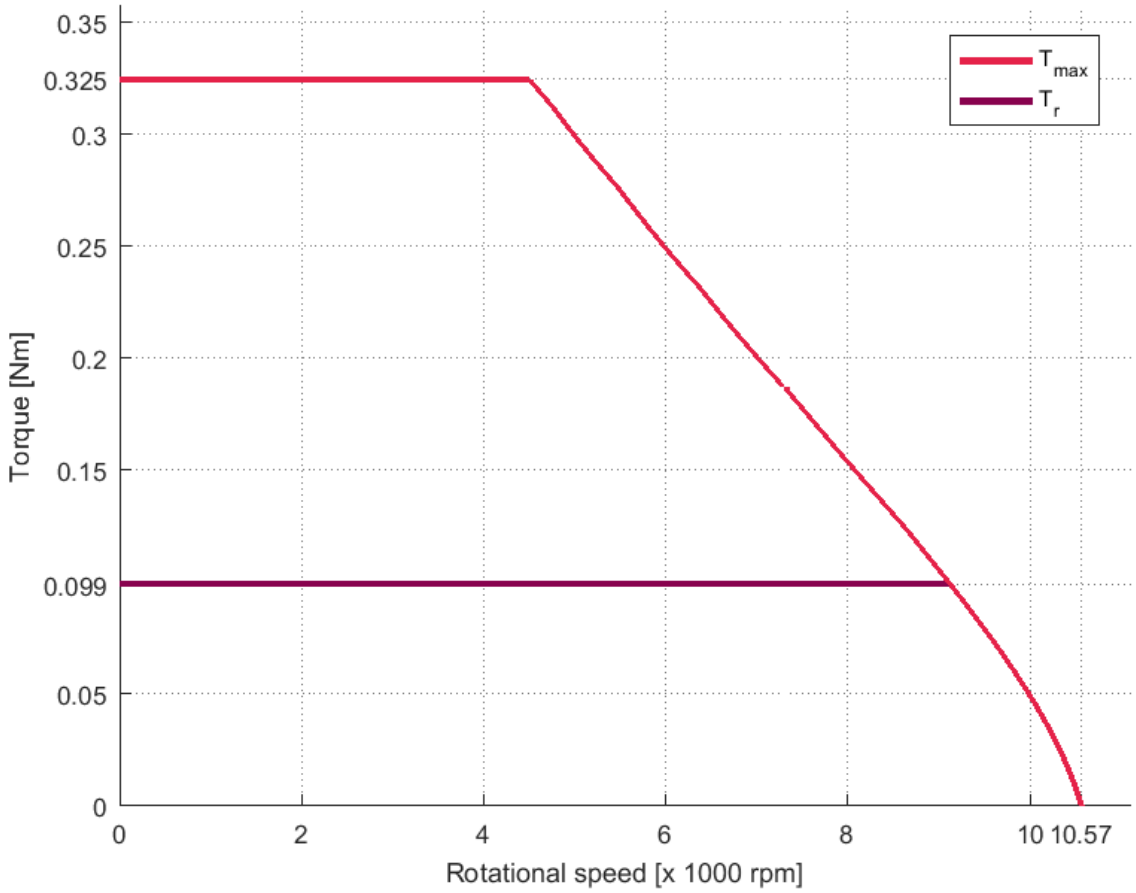
Star-serial



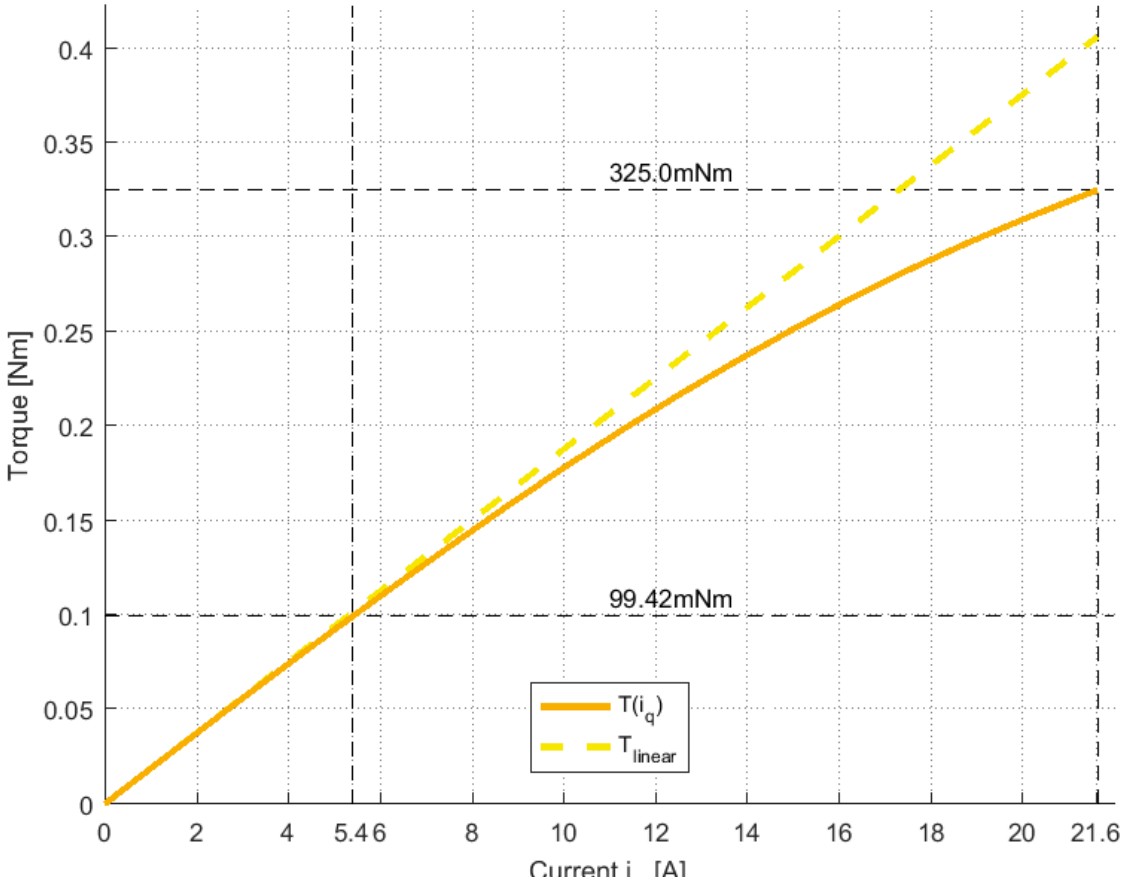
Star-parallel



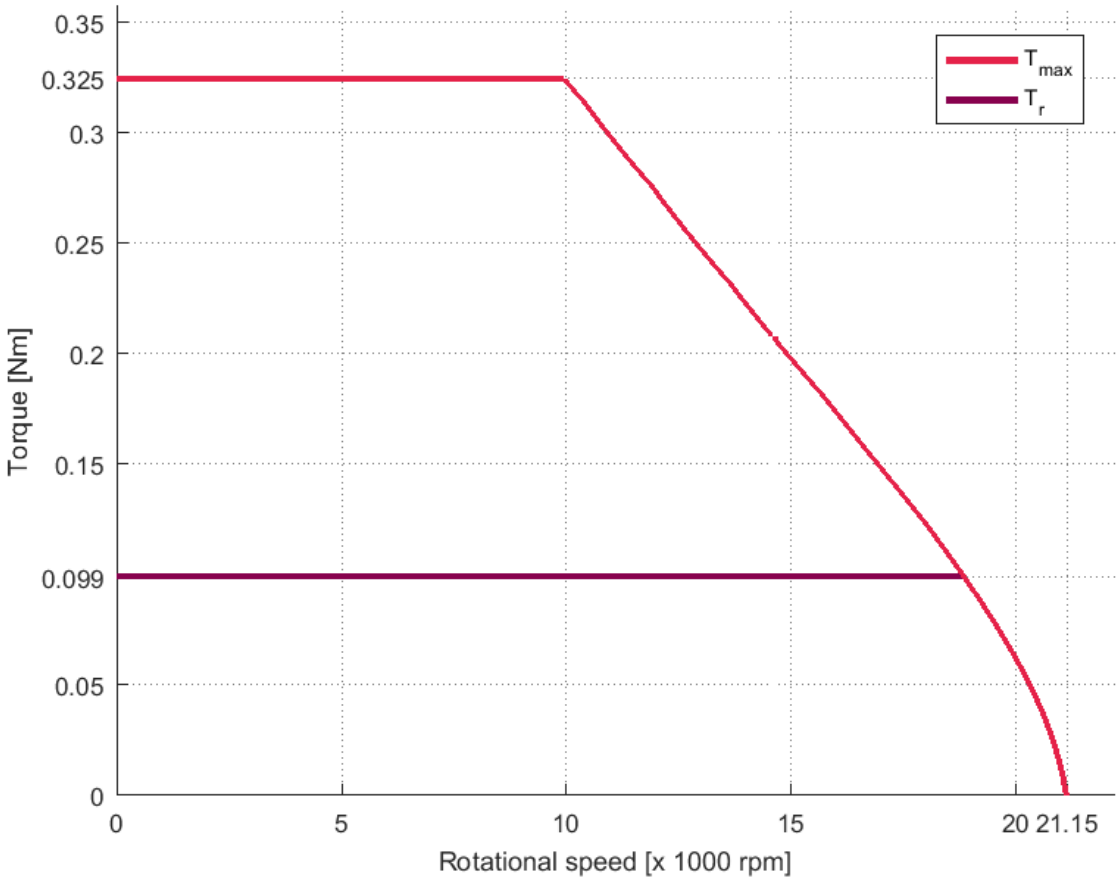
T/N-DIAGRAM ILM38X06 STAR-SERIAL @ 22 °C



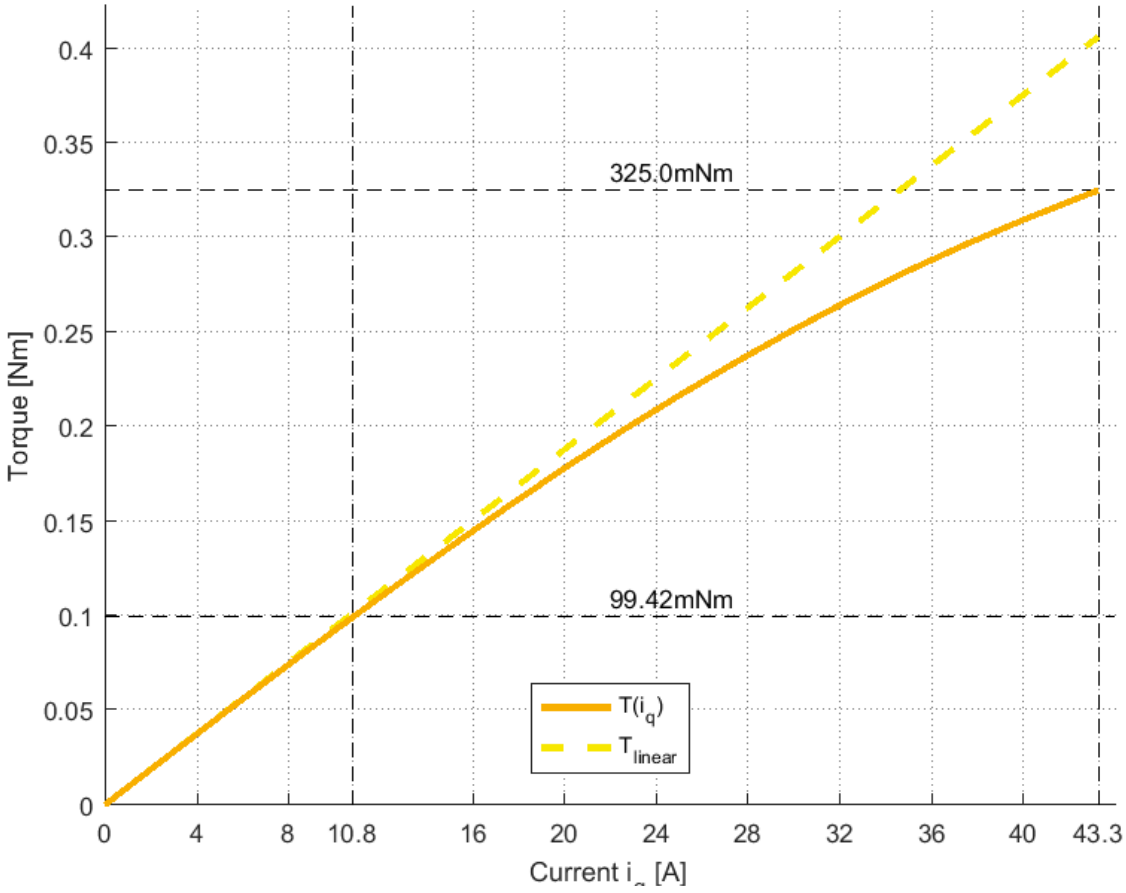
T/I-DIAGRAM ILM38X06 STAR-SERIAL @ 22 °C



T/N-DIAGRAM ILM38X06 STAR-PARALLEL @ 22 °C



T/I-DIAGRAM ILM38X06 STAR-PARALLEL @ 22 °C



FOR FURTHER INQUIRIES, PLEASE CONTACT:

TQ-SYSTEMS GMBH
GUT DELLING, MÜHLSTRAßE 2
82229 SEEFELD
DEUTSCHLAND

TEL. +49 8153 9308-0
FAX +49 8153 4223

E-MAIL INFO@TQ-ROBODRIVE.COM
INTERNET WWW.TQ-GROUP.COM