

8LSN4

Technical data

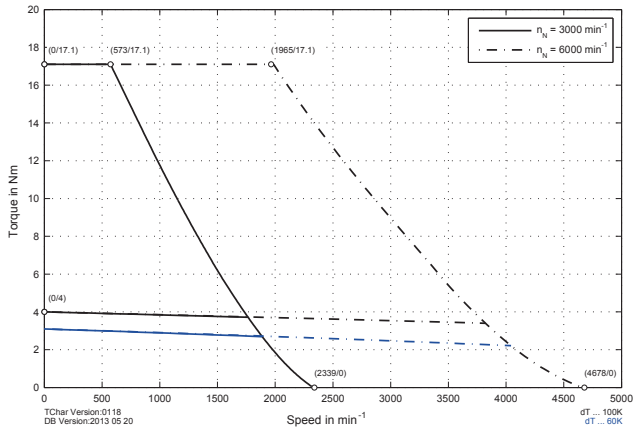
	8LSN43.ee030fpgg-0	8LSN43.ee060fpgg-0	8LSN44.ee030fpgg-0	8LSN44.ee060fpgg-0	8LSN45.ee030fpgg-0	8LSN45.ee060fpgg-0	8LSN46.ee030fpgg-0	8LSN46.ee060fpgg-0
Motor								
Nominal speed n_N [rpm]	3000	6000	3000	6000	3000	6000	3000	6000
Number of pole pairs	3							
Nominal torque M_N [Nm]	3.5	3	5.3	4.6	7.1	6.2	8.8	7.7
Nominal power P_N [W]	1100	1885	1665	2890	2231	3896	2765	4838
Nominal current I_N [A]	2.15	3.68	3.26	5.65	4.36	7.62	5.4	9.46
Stall torque M_0 [Nm]	4	4	6	6	8	8	10	10
Stall current I_0 [A]	2.5	4.9	3.7	7.4	4.9	9.8	6.1	12.3
Maximum torque M_{max} [Nm]	17.1	17.1	24.4	24.4	33.1	33.1	40.5	40.5
Maximum current I_{max} [A]	13.13	26.26	18.73	37.47	25.41	50.83	31.09	62.19
Maximum speed n_{max} [rpm]	7200							
Torque constant K_T [Nm/A]	1.63	0.81	1.63	0.81	1.63	0.81	1.63	0.81
Voltage constant K_E [V/1000 rpm]	98.4	49.2	98.4	49.2	98.4	49.2	98.4	49.2
Stator resistance R_{2ph} [Ω]	11.1	2.5	5.5	1.28	3.7	0.9	2.7	0.68
Stator inductance L_{2ph} [mH]	48.7	11.1	28.5	6.8	22.5	5.3	16.9	4.23
Electrical time constant t_{el} [ms]	4.39	4.44	5.18	5.31	6.08	5.89	6.26	6.22
Thermal time constant t_{them} [min]	25	25	30	30	30	30	35	35
Moment of inertia J [kgcm ²]	4.99	4.99	7.35	7.35	9.63	9.63	11.74	11.74
Weight without brake m [kg]	6.4	6.4	7.8	7.8	9.2	9.2	10.5	10.5
Holding brakes								
Holding torque of the brake M_{br} [Nm]	8							
Weight of brake [kg]	0.46							
Moment of inertia for the brake J_{br} [kgcm ²]	0.54							
Recommendations								
ACOPOS servo drive 8Vxxxx.00-x1	1045	1090	1045	1090	1090	1180	1090	1180
ACOPOS multi inverter module 8BVI...	0028	0055	0055	0110	0055	0110	0055	0110
Cross section for B&R motor cables [mm ²]	1.5	1.5	1.5	1.5	1.5	4	1.5	4
Connector type	SpeedTec							

NOTE – Servo drive: The recommended servo drive / inverter module is designed for 1.1x the stall current. If more than double the amount is needed during the acceleration phase, the next larger servo drive should be selected. This recommendation is only a guideline, detailed inspection of the corresponding speed - torque characteristic curve can result in deviations of the servo drive size (one size larger or smaller).

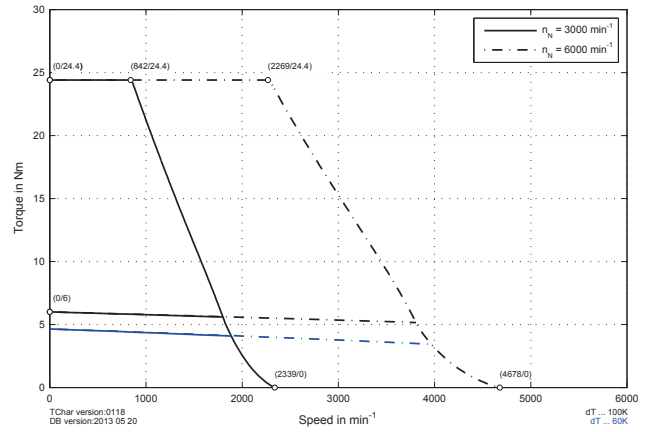
NOTE – Cable cross section: The B&R motor cables with this cable cross section are produced optimally (cables stripped to the correct length) for the ACOPOS servo drive or the recommended ACOPOS inverter module. B&R motor cables with other cable cross sections can also be used (within the specified terminal cross section range) and can be obtained from B&R in the desired design on request.

Speed-torque characteristics for DC bus voltage of 325 VDC

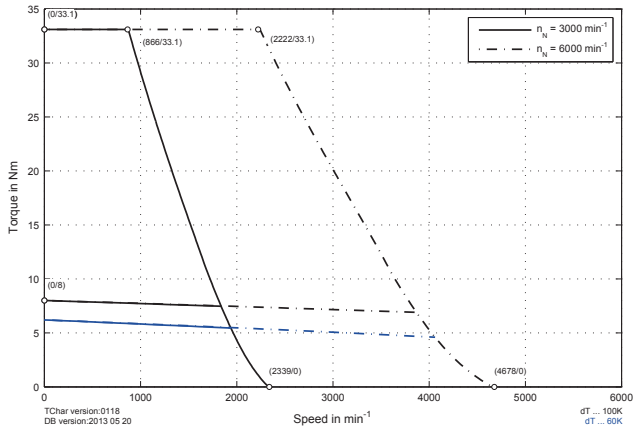
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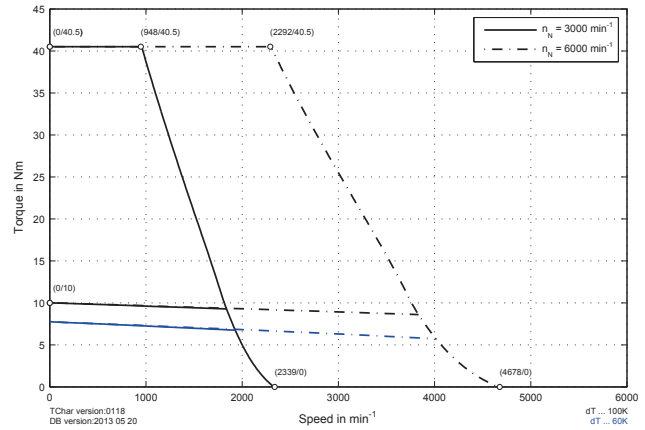
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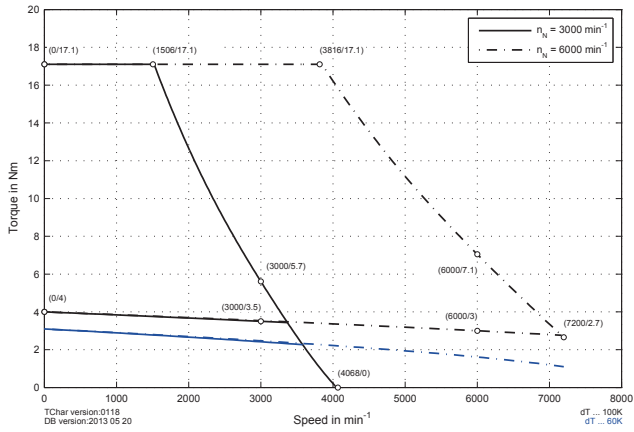
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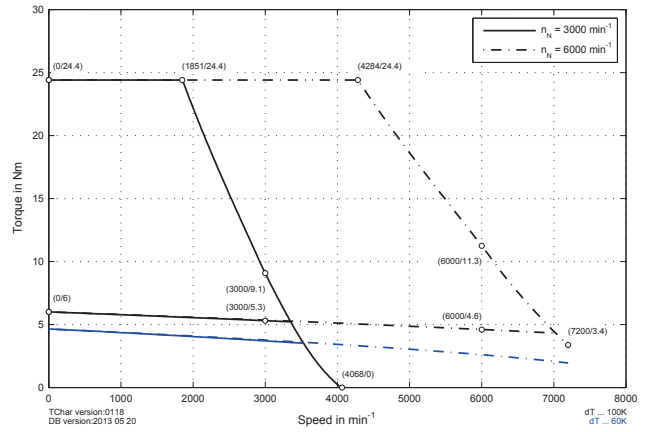
Speed-torque characteristics for DC bus voltage of 560 VDC

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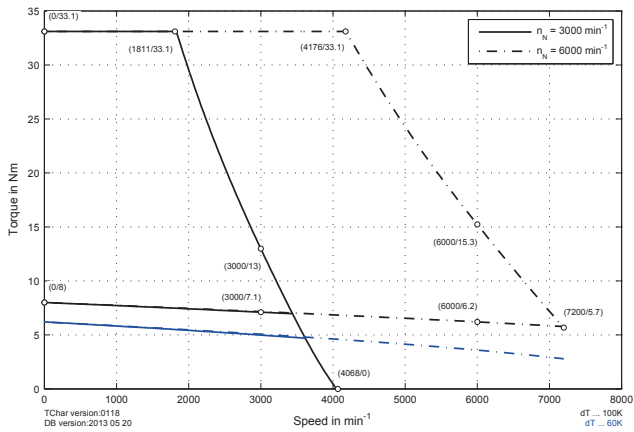
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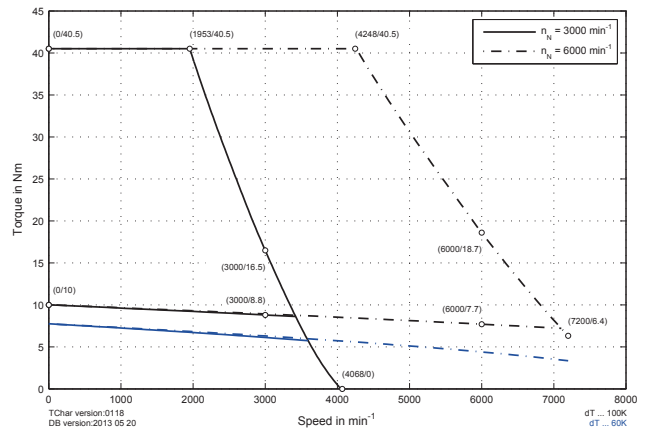
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8LSN45.eennffgg-0

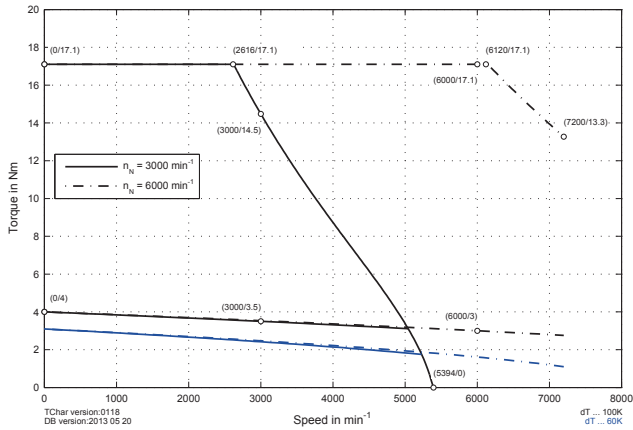
ACOPOS



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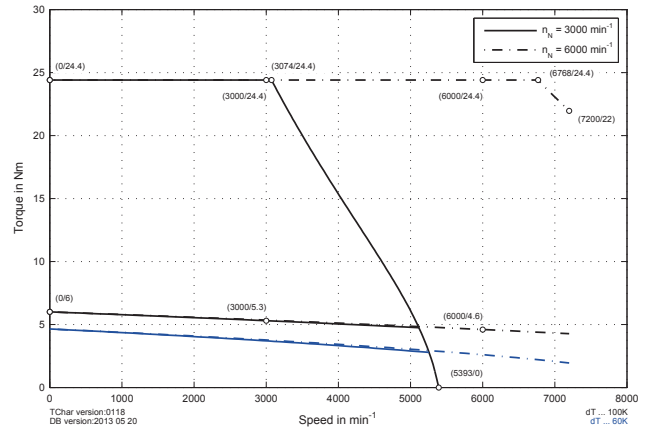
Speed-torque characteristics for DC bus voltage of 750 VDC

ACOPOSmulti



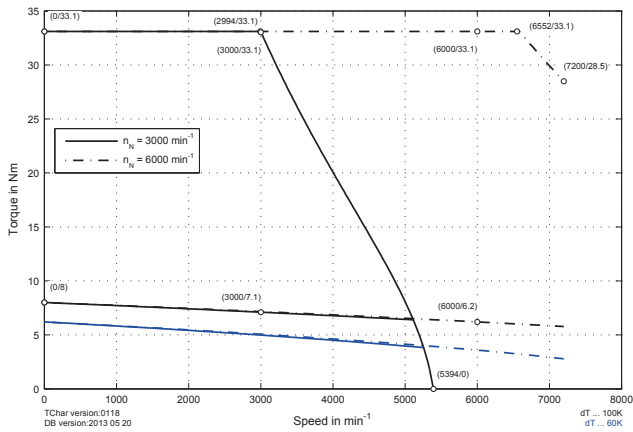
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ACOPOSmulti



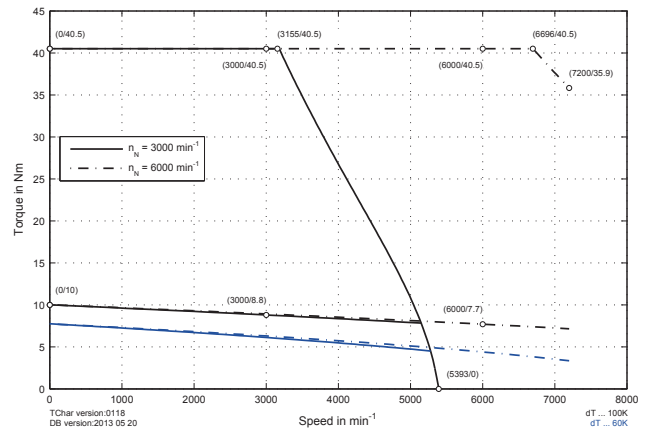
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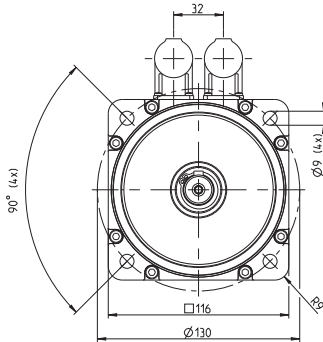
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ACOPOSmulti

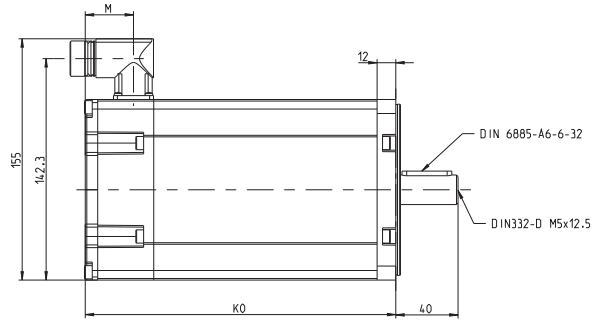
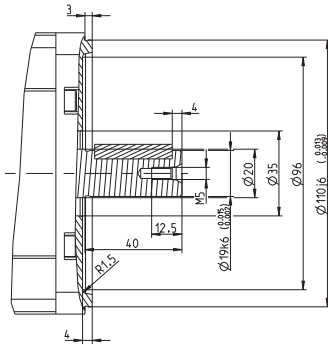


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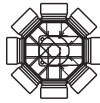
**A side flange detail
Standard bearing**



**Possible
Connection directions**



Straight (top connector)



Angled (swivel connector)

Optical EnDat feedback

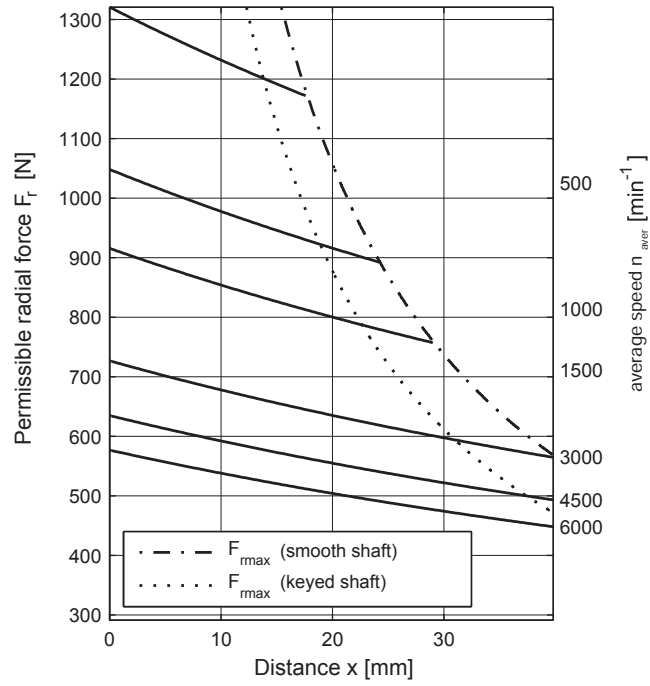
Model number	K ₀	M	Extension of K ₀ depending on the motor option [mm]		
			Holding brake	Oil seal	Reinforced A side bearing
8LSN43.eennffgg-0	221	52.5	29	---	---
8LSN44.eennffgg-0	246	52.5	29	---	---
8LSN45.eennffgg-0	271	52.5	29	---	---
8LSN46.eennffgg-0	296	52.5	29	---	---

Inductive EnDat / resolver feedback

Model number	K ₀	M	Extension of K ₀ depending on the motor option [mm]		
			Holding brake	Oil seal	Reinforced A side bearing
8LSN43.eennffgg-0	200	31.5	29	---	---
8LSN44.eennffgg-0	225	31.5	29	---	---
8LSN45.eennffgg-0	250	31.5	29	---	---
8LSN46.eennffgg-0	275	31.5	29	---	---

Maximum shaft load

The values in the diagram below are based on a mechanical lifespan of the bearings of 20,000 operating hours.



Maximum axial force: $F_{amax} = 121$ N