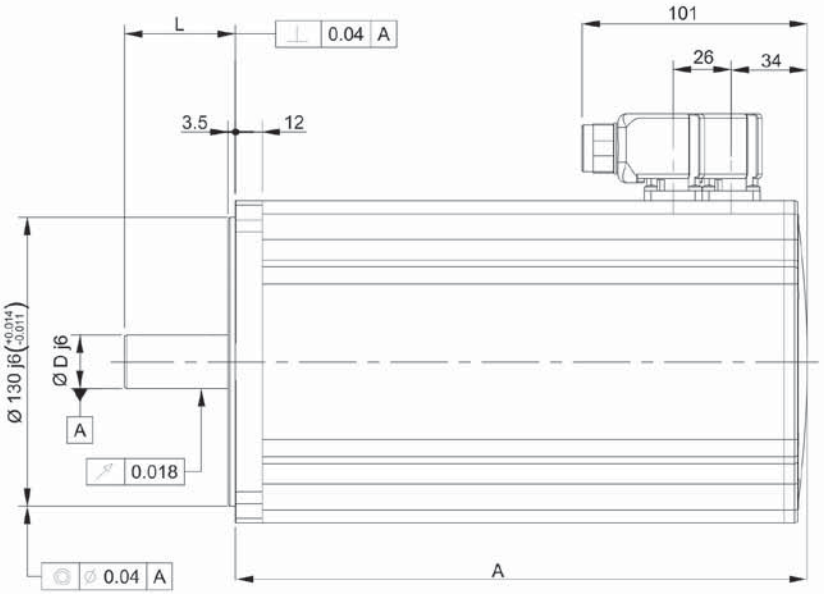
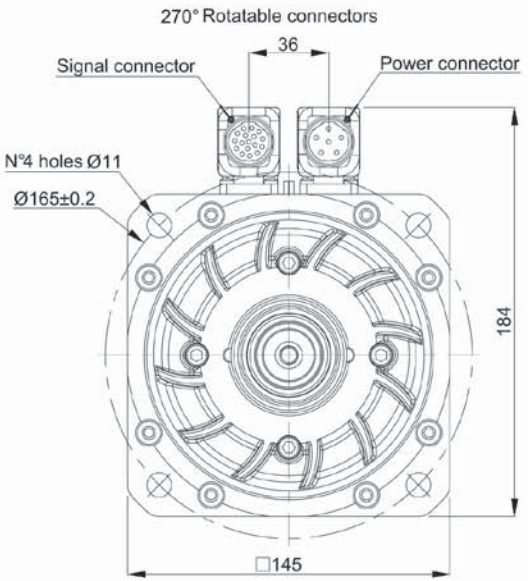
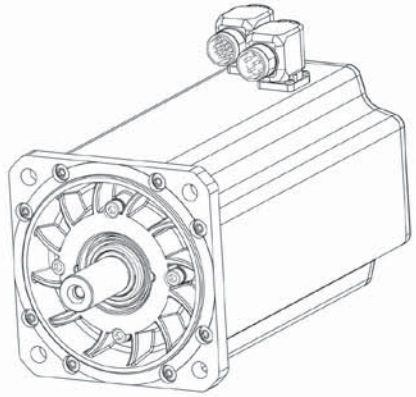
U307N Models





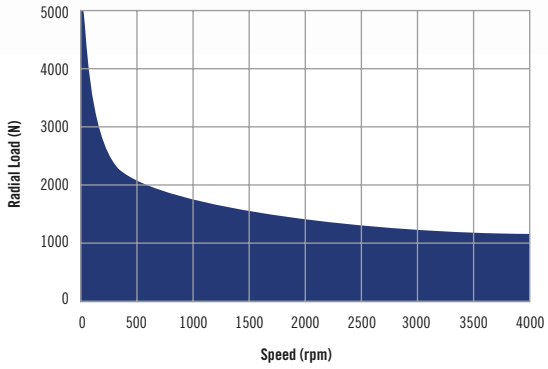


DIMENSIONS

			Shaft Dimensions	
MOTOR TYPE	**A**	**A (with brake or inertia)**	**Ø D*L [1]**	**Ø D*L with key**
U307N10	209	259	24*50	24*50
U307N20	258	308	24*50	24*50
U307N30	308	358	24*50	24*50
U307N40	359	409	28*60	28*60

1) Shaft dimension according to DIN 748-1 column (b): simultaneous transmission of torque and a know bending moment.

Max. Radial Load
applicable in the middle of the shaft extension



Natural Convection Cooling - For inverter rated Voltage 380Vac to 480Vac

Motor Type			10			20			30			40		
Rated Speed	nM	[rpm]	2000	3000	4000	2000	3000	4000	2000	3000	4000	2000	3000	4000
Stall Torque 1)	Md0	[Nm]		10			19			27			35	
Current @ Stall Torque 1)	Id0	[A]	3,87	5,6	7,2	7	10,6	13,8	10	15	18	12,3	19,4	24,6
Number of Poles	2p		8											
Nominal Rating														
Rated Torque 1)	MdN	[Nm]	9,1	8,5	8	16	11	8,1	23	19	14,4	32	26	21
Rated Current 1)	IdN	[A]	3,5	4,8	5,7	6	6,6	5,8	8,5	10,4	9,5	11,23	14,7	14,9
Rated Power	PdN	[kW]	1,90	2,73	3,35	3,37	3,7	3,42	4,83	6,06	6,02	6,70	8,32	8,99
Voltage Constant (+/- 10%)	Ke20°C	[Vrms/1000rpm]	167	116	90,26	173	115	89,7	174	116	96,7	183,2	116	91,6
Torque Constant (+/- 10%)	Kt20°C	[Nm/A]	2,77	1,92	1,49	2,86	1,908	1,49	2,88	1,92	1,60	3,03	1,92	1,51
Winding Resistance (+/- 10%)	Ru-v	[Ω]	6,3	2,8	1,8	2,51	1,1	0,67	1,35	0,6	0,42	0,982	0,405	0,245
Winding Inductance (+/- 10%)	Lu-v	[mH]	39,65	19	11,5	19,1	8,5	5,15	12,5	5,55	3,85	9,92	4,1	2,48
Derating Temp. Coeff. Of Back EMF	Dke/Dt	[%/°C]	-0,11											
Nominal Voltage	Vn	[V]	356	358	365	354	342	346,7	350	343	374	367	342	355
Losses	Loss	[kW]	0,210	0,210	0,210	0,25	0,25	0,25	0,310	0,310	0,310	0,350	0,350	0,350
Minimum Flow Rate	Flow	[L/min]	n.a.											
Efficiency	Eff	[%]	0,895	0,928	0,930	0,917	0,919	0,900	0,939	0,945	0,940	0,950	0,985	0,955
Knee Speed @ 380Vac	nknee1	[rpm]	2132	3117	4115	2147	3358	4400	2169	3340	4065	2062	3341	4294
Knee Speed @ 480Vac	nknee2	[rpm]	2757	4049	5433	2766	4386	5300	2784	4298	5004	2633	4283	5538
Knee Speed 380Vac and Mmax	nknee3	[rpm]	1126	1793	2369	1236	1988	2600	1283	2029	2491	1284	2100	2756
Knee Speed 480Vac and Mmax	nknee4	[rpm]	1510	2341	3071	1631	2576	2900	1676	2616	3194	1673	2700	3529
Maximum Values														
Max. Torque	Mmax	[Nm]		33			65			100			130	
Max. Current (peak value)	Imax	[A]	14,9	21,5	27,6	28,3	42,6	54,8	43,4	65,0	78,1	53,6	84,6	107,2
Max. Saturation Speed @ 380Vac	nmax1	[rpm]	2400	3480	4400	2300	3500	4500	2295	3450	4086	2184	3456	4420
Max. Saturation Speed @ 480Vac	nmax2	[rpm]	3100	4400	5580	2950	4350	5400	2925	4440	5161	2800	4400	5600
Max. Mechanical Speed	nmax	[rpm]	6000											
Mechanical Data (+/- 10%)														
Inertia	Jm	[kgcm²]		8			14			20			26	
Mass	M	[kg]		12			16			20			24	
Technical Data of the holding brake														
Holding Torque	MBr	[Nm]	32											
Rated Voltage (±10%)	UBr	[Vdc]	24											
Rated Current 1)	IBr	[A]	0,93											
Mass	MBr	[kg]	2,4											
Inertia	JBr	[kgcm²]	13,5											
Additional motor length	Length	[mm]	50											

Test Condition

1) Motor flanged (Tflange = 30°C or heatsinker 500x500x20); Chopper frequency 8kHz