

## 5.4.3 Electrical data BR07

BR motor – Without servo-ventilation – 1500 rpm			071154	072154	073154	074154	075154	076154	077154	078154
Stall torque <sup>1)3)</sup>	T <sub>0</sub>	Nm	5.8	11.6	17.5	22	25.5	30	34.2	38.7
Nominal power <sup>1)</sup>	P <sub>N</sub>	W	880	1602	2592	3220	3770	4320	4791	5262
Nominal torque <sup>1)</sup>	T <sub>N</sub>	Nm	5.6	10.2	16.5	20.5	24	27.5	30.5	33.5
Nominal speed	n <sub>N</sub>	rpm	1500	1500	1500	1500	1500	1500	1500	1500
Peak torque 20°C	T <sub>max</sub>	Nm	13.2	25.9	37.7	48.3	63.0	74.4	87.9	100
Nominal current <sup>1)</sup>	I <sub>N</sub>	Arms	1.9	3.4	5.3	6.4	7.8	8.8	9.9	10.8
Stall current <sup>1)3)</sup>	I <sub>0</sub>	Arms	1.9	3.7	5.5	6.6	8.0	9.2	10.7	12.0
Peak current	I <sub>max</sub>	Arms	4.5	8.6	12.1	14.9	20.3	23.6	28.2	32.0
Rotor inertia	J <sub>m</sub>	kgcm <sup>2</sup>	5.23	8.52	11.82	15.10	18.40	21.69	24.98	28.27
Voltage constant 20°C <sup>2)</sup>	k <sub>e</sub>	Vs/rad	1.90	1.94	2.00	2.08	1.99	2.03	2.00	2.01
Torque constant 20°C with stall rotor <sup>2)</sup>	k <sub>t</sub>	Nm/Arms	3.19	3.26	3.36	3.49	3.35	3.41	3.36	3.38
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11
Winding resistance 20°C <sup>2)</sup>	R <sub>c</sub>	Ohm	23.58	8.02	4.635	3.4	2.34	1.93	1.59	1.37
Winding inductance <sup>2)</sup>	L <sub>c</sub>	mH	88.3	50.2	32.3	26.4	18.76	15.5	13.3	10.7
E.M.F at 1000 rpm 20°C <sup>2)</sup>	V1000	V/krpm	199	203	210	218	209	212	210	210
Nominal voltage <sup>1)</sup>	V <sub>n</sub>	Vrms	345	330	336	343	323	326	320	318
Weight	m	kg	9.5	11.9	14.2	16.6	18.9	21.3	23.6	26
Number of poles	2p		8	8	8	8	8	8	8	8

BR motor – Without servo-ventilation – 2000 rpm			071204	072204	073204	074204	075204	076204	077204	078204
Stall torque <sup>1)3)</sup>	T <sub>0</sub>	Nm	5.8	11.6	17.5	22	25.5	30	34.2	38.7
Nominal power <sup>1)</sup>	P <sub>N</sub>	W	1152	2094	3351	4189	4880	5362	5843	6367
Nominal torque <sup>1)</sup>	T <sub>N</sub>	Nm	5.5	10	16	20	23.3	25.6	27.9	30.4
Nominal speed	n <sub>N</sub>	rpm	2000	2000	2000	2000	2000	2000	2000	2000
Peak torque 20°C	T <sub>max</sub>	Nm	12.7	25.6	38.6	50.0	61.1	75.9	88.0	100
Nominal current <sup>1)</sup>	I <sub>N</sub>	Arms	2.4	4.4	7.0	8.5	9.7	11.0	11.9	12.9
Stall current <sup>1)3)</sup>	I <sub>0</sub>	Arms	2.4	4.9	7.4	9.0	10.2	12.4	14.1	15.9
Peak current	I <sub>max</sub>	Arms	5.5	11.0	16.7	21.1	25.2	32.4	37.3	42.2
Rotor inertia	J <sub>m</sub>	kgcm <sup>2</sup>	5.23	8.52	11.82	15.10	18.40	21.69	24.98	28.27
Voltage constant 20°C <sup>2)</sup>	k <sub>e</sub>	Vs/rad	1.50	1.49	1.48	1.52	1.56	1.51	1.52	1.52
Torque constant 20°C with stall rotor <sup>2)</sup>	k <sub>t</sub>	Nm/Arms	2.52	2.50	2.49	2.56	2.62	2.53	2.55	2.56
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11
Winding resistance 20°C <sup>2)</sup>	R <sub>c</sub>	Ohm	14.72	4.6	2.55	1.83	1.43	1.07	0.905	0.782
Winding inductance <sup>2)</sup>	L <sub>c</sub>	mH	58	29.3	18.14	14.2	10.96	9.3	7.81	5.86
E.M.F at 1000 rpm 20°C <sup>2)</sup>	V1000	V/krpm	157	156	155	160	163	158	159	160
Nominal voltage <sup>1)</sup>	V <sub>n</sub>	Vrms	349	328	324	328	330	317	316	314
Weight	m	kg	9.5	11.9	14.2	16.6	18.9	21.3	23.6	26
Number of poles	2p		8	8	8	8	8	8	8	8

BR motor – Without servo-ventilation – 3000 rpm			071304	072304	073304	074304	075304	076304	077304	078304
Stall torque <sup>1)3)</sup>	T <sub>0</sub>	Nm	5.8	11.6	17.5	22	25.5	30	34.2	38.7
Nominal power <sup>1)</sup>	P <sub>N</sub>	W	1696	3079	4430	5184	5812	6283	6692	6974
Nominal torque <sup>1)</sup>	T <sub>N</sub>	Nm	5.4	9.8	14.1	16.5	18.5	20	21.3	22.2
Nominal speed	n <sub>N</sub>	rpm	3000	3000	3000	3000	3000	3000	3000	3000
Peak torque 20°C	T <sub>max</sub>	Nm	12.4	25.4	37.5	50.0	62.5	75.0	88.2	100
Nominal current <sup>1)</sup>	I <sub>N</sub>	Arms	3.3	6.2	8.8	10.3	11.5	12.5	13.4	13.9
Stall current <sup>1)3)</sup>	I <sub>0</sub>	Arms	3.5	7.2	10.6	13.4	15.5	18.2	20.9	23.5
Peak current	I <sub>max</sub>	Arms	7.6	16.0	23.2	30.9	38.6	46.4	55.0	61.8
Rotor inertia	J <sub>m</sub>	kgcm <sup>2</sup>	5.23	8.52	11.82	15.10	18.40	21.69	24.98	28.27
Voltage constant 20°C <sup>2)</sup>	k <sub>e</sub>	Vs/rad	1.05	1.02	1.04	1.04	1.04	1.04	1.03	1.04
Torque constant 20°C with stall rotor <sup>2)</sup>	k <sub>t</sub>	Nm/Arms	1.76	1.72	1.75	1.75	1.75	1.75	1.73	1.75
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11
Winding resistance 20°C <sup>2)</sup>	R <sub>c</sub>	Ohm	7.25	2.19	1.26	0.849	0.65	0.515	0.419	0.361
Winding inductance <sup>2)</sup>	L <sub>c</sub>	mH	30.23	12.4	9.23	6.39	4.78	4.09	3.09	2.94
E.M.F at 1000 rpm 20°C <sup>2)</sup>	V1000	V/krpm	110	107	109	109	109	109	108	109
Nominal voltage <sup>1)</sup>	V <sub>n</sub>	Vrms	356	326	329	322	319	317	311	313
Weight	m	kg	9.5	11.9	14.2	16.6	18.9	21.3	23.6	26
Number of poles	2p		8	8	8	8	8	8	8	8

Torque and power values refer to motor flanged and suspended in horizontal positions (steel flange 500x500x40 mm)

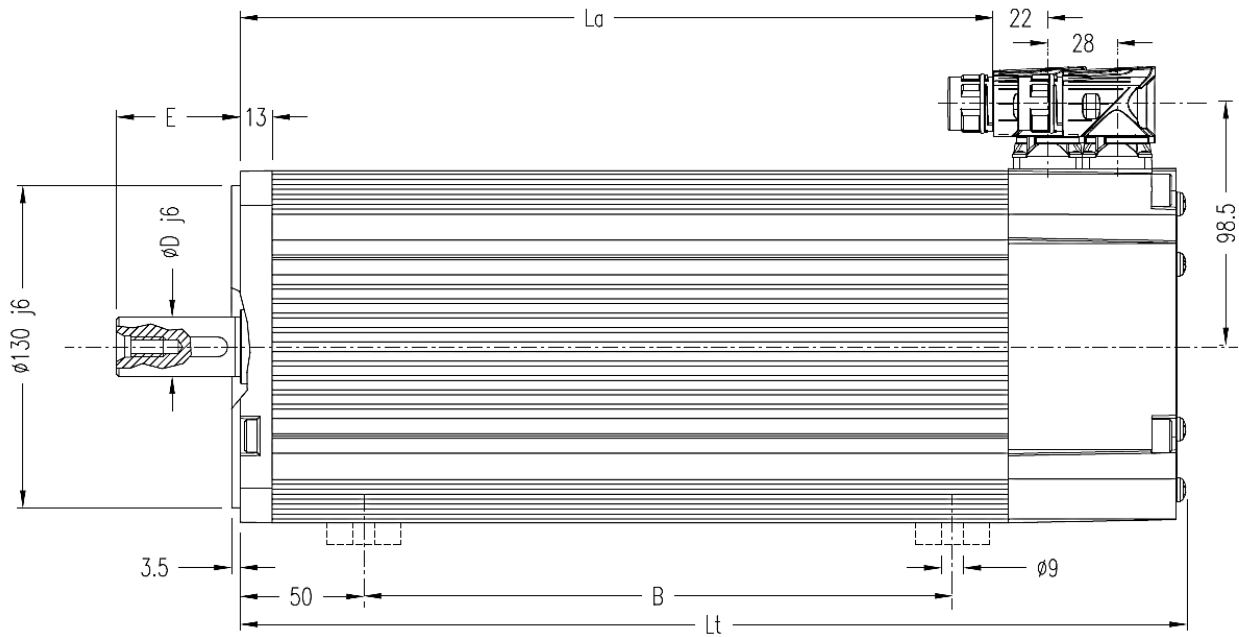
Minimum PWM 8kHz, DC bus test voltage ≤ 560 Vdc uncontrolled, tested with resolver

<sup>1)</sup> Continuous service S1 (dT=105°C)

<sup>2)</sup> Tolerance ± 10%

<sup>3)</sup> Value referred to 100 rpm

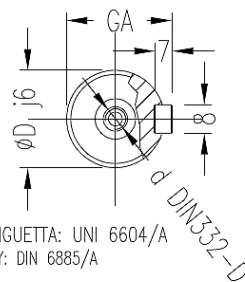
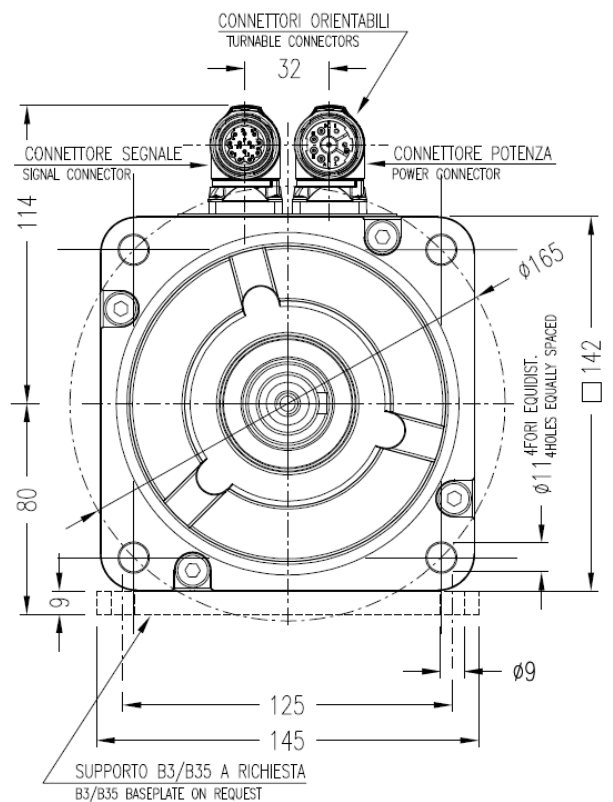
### 5.5.3 Overall dimensions – BR07



VENTILATION: FREE CONVECTION IC410

	Without brake			ØDxE
	B	La	Lt	
BR071	73	138	217	24x50
BR072	100	166	245	
BR073	128	194	273	
BR074	155	221	300	
BR075	183	249	328	
BR076	210	276	355	
BR077	238	304	383	28x60
BR078	265	331	410	

	With brake			ØDxE
	B	La	Lt	
BR071	123	188	267	24x50
BR072	150	216	295	
BR073	178	244	323	
BR074	205	271	350	
BR075	233	299	378	
BR076	260	326	405	
BR077	288	354	433	28x60
BR078	315	381	460	



ØDxE	24x50	28x60
GA	27	31
d	M8	M10