

5.4.7 Electrical data BR09

BR motor – Without servo-ventilation – 1000 rpm			092104	094104	096104	098104
Stall torque ¹⁾³⁾ () ⁵⁾	T ₀	Nm	100 (153)	182 (270)	270 (400)	340 (493)
Nominal power ¹⁾ () ⁵⁾	P _N	W	9739 (14870)	15708 (24086)	21468 (33510)	28274 (38746)
Nominal torque ¹⁾ () ⁵⁾	T _N	Nm	93 (142)	150 (230)	205 (320)	270 (370)
Nominal speed	n _N	rpm	1000	1000	1000	1000
Peak torque 20°C	T _{max}	Nm	168	295	440	530
Nominal current ¹⁾ () ⁵⁾	I _N	Arms	21.6 (33)	32.7 (50.1)	47.6 (74.3)	58.8 (80.6)
Stall current ¹⁾³⁾ () ⁴⁾	I ₀	Arms	21.6 (33)	36.8 (54.7)	58.3 (86.4)	68.8 (99.8)
Peak current	I _{max}	Arms	38.3	63.1	100	113
Rotor inertia	J _m	kgcm ²	224	401	577	753
Voltage constant 20°C ²⁾	k _e	Vs/rad	2.92	3.12	2.92	3.12
Torque constant 20°C with stall rotor ²⁾	k _t	Nm/Arms	4.91	5.24	4.91	5.24
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	-0.11	-0.11	-0.11	-0.11
Winding resistance 20°C ²⁾	R _c	Ohm	0.826	0.312	0.155	0.115
Winding inductance ²⁾	L _c	mH	13.21	6.50	4.41	4.26
E.M.F at 1000 rpm 20°C ²⁾	V1000	V/krpm	306	326	306	326
Nominal voltage ¹⁾³⁾ () ⁵⁾	V _n	Vrms	323 (355)	325 (344)	303 (321)	325 (339)
Weight	m	kg	75	109	143	177
Number of poles	2p		8	8	8	8

BR motor – Without servo-ventilation – 2000 rpm			092204	094204	096204	098204
Stall torque ¹⁾³⁾ () ⁵⁾	T ₀	Nm	100 (151)	182 (270)	270 (440)	340 (493)
Nominal power ¹⁾ () ⁵⁾	P _N	W	15917 (27227)	23667 (43982)	24086 (69115)	27227 (71628)
Nominal torque ¹⁾ () ⁵⁾	T _N	Nm	76 (130)	113 (210)	115 (330)	130 (342)
Nominal speed	n _N	rpm	2000	2000 ⁴⁾	2000 ⁴⁾	2000
Peak torque 20°C	T _{max}	Nm	168	295	440	530
Nominal current ¹⁾ () ⁵⁾	I _N	Arms	33.1 (56.6)	49.2 (91.4)	44.5 (128)	56.6 (149)
Stall current ¹⁾³⁾ () ⁴⁾	I ₀	Arms	40.5 (61.1)	73.7 (109)	97.2 (158)	138 (200)
Peak current	I _{max}	Arms	71.9	126	167	227
Rotor inertia	J _m	kgcm ²	224	401	577	753
Voltage constant 20°C ²⁾	k _e	Vs/rad	1.56	1.56	1.75	1.56
Torque constant 20°C with stall rotor ²⁾	k _t	Nm/Arms	2.62	2.62	2.95	2.62
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	-0.11	-0.11	-0.11	-0.11
Winding resistance 20°C ²⁾	R _c	Ohm	0.23	0.07	0.05	0.03
Winding inductance ²⁾	L _c	mH	4.40	1.20	0.80	0.60
E.M.F at 1000 rpm 20°C ²⁾	V1000	V/krpm	163	163	184	163
Nominal voltage ¹⁾³⁾ () ⁵⁾	V _n	Vrms	330 (367)	311 (321)	345 (357)	326 (315)
Weight	m	kg	75	109	143	177
Number of poles	2p		8	8	8	8

BR motor – Without servo-ventilation – 3000 rpm			092304	094304	096304	098304
Stall torque ¹⁾³⁾ () ⁵⁾	T ₀	Nm	100 (151)	182 (270)	270 (400)	340 (493)
Nominal power ¹⁾ () ⁵⁾	P _N	W	18850 (29217)	14137 (47124)	0 (70686)	0 (76969)
Nominal torque ¹⁾ () ⁵⁾	T _N	Nm	60 (93)	45 (150)	0 (225)	0 (245)
Nominal speed	n _N	rpm	3000 ⁴⁾	3000 ⁴⁾	3000 ⁴⁾	3000 ⁴⁾
Peak torque 20°C	T _{max}	Nm	168	295	440	530
Nominal current ¹⁾ () ⁵⁾	I _N	Arms	34.8 (54)	26.1 (87.1)	0 (131)	0 (142)
Stall current ¹⁾³⁾ () ⁴⁾	I ₀	Arms	54 (81.5)	98 (146)	143 (216)	184 (266)
Peak current	I _{max}	Arms	95.8	168	251	302
Rotor inertia	J _m	kgcm ²	224	401	577	753
Voltage constant 20°C ²⁾	k _e	Vs/rad	1.17	1.17	1.17	1.17
Torque constant 20°C with stall rotor ²⁾	k _t	Nm/Arms	1.96	1.96	1.96	1.96
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	-0.11	-0.11	-0.11	-0.11
Winding resistance 20°C ²⁾	R _c	Ohm	0.12	0.04	0.02	0.02
Winding inductance ²⁾	L _c	mH	2.40	1.20	0.80	0.60
E.M.F at 1000 rpm 20°C ²⁾	V1000	V/krpm	122	122	122	122
Nominal voltage ¹⁾³⁾ () ⁵⁾	V _n	Vrms	358 (377)	344 (364)	341 (363)	341 (356)
Weight	m	kg	75	109	143	177
Number of poles	2p		8	8	8	8

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

Minimum PWM 4kHz, DC bus test voltage ≤ 560 Vdc uncontrolled, tested with resolver

¹⁾ Continuous service S1 (dT=105°C)

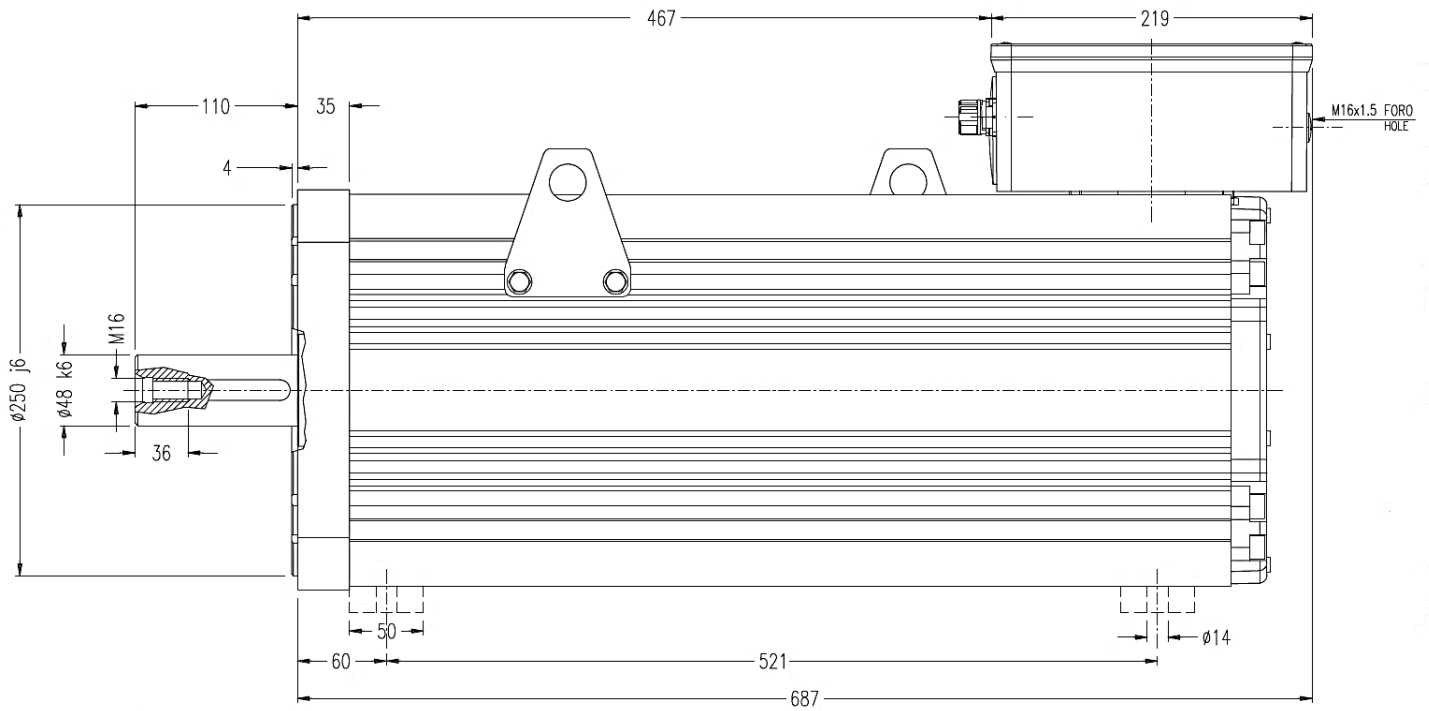
²⁾ Tolerance ± 10%

³⁾ Value referred to 100 rpm

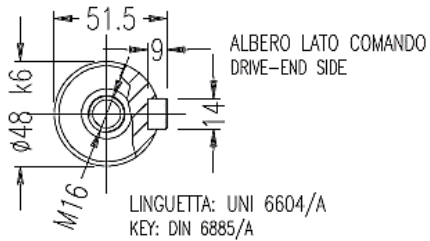
⁴⁾ Inverters connected to these motors must have a field weakening option in order to reach nominal speed

⁵⁾ Duty S3 - 40% - 1 minute

5.5.8 Overall dimensions – BR098304



VENTILATION: FREE CONVECTION IC410



BR098304			
	B	La	Lt
Without brake	521	467	687
With brake	656	602	822

