

5.4.5 Electrical data BR08

BR motor – Without servo-ventilation – 1000 rpm			082104	084104	086104	088104
Stall torque ¹⁾³⁾	T ₀	Nm	32.5	60	82	102
Nominal power ¹⁾	P _N	W	3299	5864	7540	9425
Nominal torque ¹⁾	T _N	Nm	31.5	56	72	90
Nominal speed	n _N	rpm	1000	1000	1000	1000
Peak torque 20°C	T _{max}	Nm	88	165	239	290
Nominal current ¹⁾	I _N	Arms	6.7	13.1	15.3	19.7
Stall current ¹⁾³⁾	I ₀	Arms	6.72	13.6	17	21.7
Peak current	I _{max}	Arms	18.4	37.9	49.9	62.4
Rotor inertia	J _m	kgcm ²	49	89	128	167
Voltage constant 20°C ²⁾	k _e	Vs/rad	2.99	2.72	2.99	2.9
Torque constant 20°C with stall rotor ²⁾	k _t	Nm/Arms	5.03	4.57	5.03	4.88
Ke and kt reduction coeff. over temperature	dk/dt	[%/°C]	0.89	2.89	4.89	-0.11
Winding resistance 20°C ²⁾	R _c	Ohm	4.86	1.34	0.9	0.62
Winding inductance ²⁾	L _c	mH	47.8	19.8	15.9	11.2
E.M.F at 1000 rpm 20°C ²⁾	V1000	V/krpm	314	285	314	304
Nominal voltage ¹⁾	V _n	Vrms	351	302	321	308
Weight	m	kg	30	43	54	68
Number of poles	2p		8	8	8	8

BR motor – Without servo-ventilation – 2000 rpm			082204	084204	086204	088204
Stall torque ¹⁾³⁾	T ₀	Nm	32.5	60	82	102
Nominal power ¹⁾	P _N	W	6388	10681	12985	15980
Nominal torque ¹⁾	T _N	Nm	30.5	51	62	76.3
Nominal speed	n _N	rpm	2000	2000	2000	2000
Peak torque 20°C	T _{max}	Nm	88	165	239	290
Nominal current ¹⁾	I _N	Arms	14.3	22.4	29	33.5
Stall current ¹⁾³⁾	I ₀	Arms	14.8	25.6	37.3	43.5
Peak current	I _{max}	Arms	40.4	71	110	125
Rotor inertia	J _m	kgcm ²	49	89	128	167
Voltage constant 20°C ²⁾	k _e	Vs/rad	1.36	1.45	1.36	1.45
Torque constant 20°C with stall rotor ²⁾	k _t	Nm/Arms	2.29	2.44	2.29	2.44
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	0.95	0.39	0.19	0.16
Winding inductance ²⁾	L _c	mH	9.9	5.6	3.3	2.81
E.M.F at 1000 rpm 20°C ²⁾	V1000	V/krpm	143	152	143	152
Nominal voltage ¹⁾	V _n	Vrms	300	307	281	297
Weight	m	kg	30	43	54	68
Number of poles	2p		8	8	8	8

BR motor – Without servo-ventilation – 3000 rpm			082304	084304	086304	088304
Stall torque ¹⁾³⁾	T ₀	Nm	32.5	60	82	102
Nominal power ¹⁾	P _N	W	9268	13823	16650	20420
Nominal torque ¹⁾	T _N	Nm	29.5	44	53	65
Nominal speed	n _N	rpm	3000	3000	3000	3000
Peak torque 20°C	T _{max}	Nm	88	165	239	290
Nominal current ¹⁾	I _N	Arms	18.8	30.9	31	38
Stall current ¹⁾³⁾	I ₀	Arms	20.2	40.9	46.6	58
Peak current	I _{max}	Arms	55.1	114	137	166
Rotor inertia	J _m	kgcm ²	49	89	128	167
Voltage constant 20°C ²⁾	k _e	Vs/rad	1.00	0.91	1.09	1.09
Torque constant 20°C with stall rotor ²⁾	k _t	Nm/Arms	1.68	1.52	1.83	1.83
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	0.49	0.15	0.13	0.09
Winding inductance ²⁾	L _c	mH	5.3	2.19	2.11	1.58
E.M.F at 1000 rpm 20°C ²⁾	V1000	V/krpm	105	95	114	114
Nominal voltage ¹⁾	V _n	Vrms	322	281	331	329
Weight	m	kg	30	43	54	68
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 8kHz, 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

