

P00 (11) operating time since last error 1	Display range: 99,999 hours Shows the operating time that has passed since the last error (TRIP) or last shutdown (power off). If the conditions are met, the timer is reset to zero with the next drive enable.
P00 (12) operating time since last error 2	Display range: 99,999 hours Shows the operating time that has passed since the last error (TRIP). If the conditions are met, the timer is reset to zero with the next drive enable.
P00 (13) operating time since last de-activation	Display range: 99,999 hours Shows operating time of an enable interval. Is reset to zero upon every enable.
P00 (14) current PWM switching frequency	Display range: 2 – 16 kHz Effective actual output switching frequency of inverter. This value can be smaller than the frequency selected in <i>P-17</i> if the inverter is too hot. The inverter will automatically reduce the switching frequency to prevent overtemperature shutdown and maintain operation.
P00 (15) DC link voltage log	Display range: 0 – 1000 V The last 8 values prior to the error shutdown.
P00 (16) heat sink temperature log	Display range: -20 – +120°C The last 8 values prior to the error shutdown.
P00 (17) motor current log	Display range: 0 – 2 × nominal current The last 8 values prior to the error shutdown.
P00 (18) software ID, I/O, and motor control	Display range: e.g., "1.00", "47AE" Version number and checksum. "1" on left side shows I/O processor while "2" shows motor control.
P00 (19) serial number of inverter	Display range: 000 000 – 999 999 00-000 – 99-999 Unique serial number of inverter: e.g., 540 102 / 32 / 005.
P00 (20) inverter identification number	Display range: Nominal value of the inverter/software version Nominal value, inverter type, and codes of software version: e.g., 0.37, 1 230, 3 P-aus.

9 Technical data

The next chapter contains the technical data.

9.1 Conformity

All products meet the following international standards:

- CE marking according to the low voltage directive
- IEC 664-1 Insulation coordination for electrical equipment within low-voltage systems
- UL 508C Power conversion equipment
- EN 61800-3 Variable-speed electrical drives – part 3
- EN 61000-6 / -2, -3, -4 Interference immunity/Interference emission (EMC)
- Housing protection classes according to NEMA 250, EN 55011:2007
- Classification of flammability according to UL 94
- C-Tick
- cUL
- EAC

9.2 Information on ambient conditions

	Permitted conditions
Ambient temperature during operation	-10 – +50°C for PWM frequency of 2 kHz (IP20) -10 – +40°C for PWM frequency of 2 kHz (IP66 NEMA 4X/IP55 NEMA 12K)
Maximum derating depending on the ambient temperature	4% / 1°C – 55°C for IP20 frequency inverters 4% / 1°C – 45°C for IP66/IP55 frequency inverters
Ambient temperature during storage	-40°C – +60°C
Maximum installation altitude for nominal operation	1000 m
Derating above 1000 m	1%/100 m to max. 2000 m
Relative humidity	< 95% (condensation not permitted)
Degree of protection of control cabinet inverter	IP20 NEMA 1
Frequency inverter with high degree of protection	IP66 NEMA 4X / IP55 NEMA 12K

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9.3 Output power and current carrying capacity without EMC filter

Whether the MOVITRAC® LTE-B frequency inverters are used with or without filters depends on the regulations applicable in the various countries where the product is used.

- **Without filter: permitted in America, Asia, and Africa.**
- With filter: suited for use worldwide.

The specification "horsepower" (HP) is defined as follows.

- 200 – 240 V units: NEC2002, table 430-150, 230 V
- 380 – 480 V units: NEC2002, table 430-150, 460 V

9.3.1 1-phase system AC 115 V for 3-phase AC 230 V motors (voltage doubler)

MOVITRAC® LTE-B – EMC filter class 0					
IP20	Type	MC LTE B...	0004-101-1-00	0008-101-1-00	0011-101-4-00
	Part number		08296839	08296847	08296855
IP55/NEMA 12K housing without switch	Type	MC LTE B...	0004-101-1-10	0008-101-1-10	0011-101-4-10
	Part number		08297754	08297762	08297770
IP55/NEMA 12K housing with switch	Type	MC LTE B...	0004-101-1-20	0008-101-1-20	0011-101-4-20
	Part number		08297290	08297304	08297312
IP66/NEMA 4X housing without switch	Type	MC LTE B...	0004-101-1-30	0008-101-1-30	0011-101-4-30
	Part number		18254640	18254659	18254667
IP66/NEMA 4X housing with switch	Type	MC LTE B...	0004-101-1-40	0008-101-1-40	0011-101-4-40
	Part number		18252540	18252559	18252567
INPUT					
Line voltage V_{line}	V		1 × AC 110 – 115 ± 10%		
Line frequency f_{line}	Hz		50 / 60 ± 5%		
Input fuse	A		10	16 (15) ¹⁾	20
Rated input current	A		6.7	12.5	16.8
OUTPUT					
Recommended motor power	kW		0.37	0.75	1.1
	HP		0.5	1.0	1.5
Output voltage V_{motor}	V		3 × 0 – 250		
Output current	A		2.3	4.3	5.8
Maximum output frequency	Hz		500		
Cross section of motor cable Cu 75C	mm ²		1.5		
	AWG		16		
Max. motor cable length	Shielded	m	50		100
	Unshielded		75		150
GENERAL INFORMATION					
Size	Size		1		2
Heat loss at nominal output power	W		11	22	33
Minimum braking resistance value	Ω		–		47

1) Recommended values for UL compliance

9.3.2 1-phase system AC 230 V for 3-phase AC 230 V motors

MOVITRAC® LTE-B – EMC filter class 0								
IP20 ¹⁾	Type	MC LTE B...	0004-201-1-00	0008-201-1-00	0015-201-1-00	0015-201-4-00	0022-201-4-00	0040-201-4-00
	Part number		08296863	08296871	08296898	08296901	08296928	18250394
IP55/NEMA 12K housing without switch ¹⁾	Type	MC LTE B...	0004-201-1-10	0008-201-1-10	0015-201-1-10	0015-201-4-10	0022-201-4-10	0040-201-4-10
	Part number		08297789	08297797	08297800	08297819	08297827	18250408
IP55/NEMA 12K housing with switch ¹⁾	Type	MC LTE B...	0004-201-1-20	0008-201-1-20	0015-201-1-20	0015-201-4-20	0022-201-4-20	0040-201-4-20
	Part number		08297320	08297339	08297347	08297355	08297363	18250416
INPUT								
Line voltage V _{line}		V	1 × AC 200 – 240 ± 10%					
Line frequency f _{line}		Hz	50 / 60 ± 5%					
Input fuse		A	10	16	20		32 (35) ²⁾	40
Rated input current		A	6.7	12.5	14.8		22.2	31.7
OUTPUT								
Recommended motor power	kW		0.37	0.75	1.5		2.2	4
	HP		0.5	1	2		3	5
Output voltage V _{motor}		V	0 – V _{line}					
Output current		A	2.3	4.3	7		10.5	16
Maximum output frequency		Hz	500					
Cross section of motor cable Cu 75C		mm ²	1.5					2.5
		AWG	16					18
Max. motor cable length	Shielded	m	50			100		
	Unshielded		75			150		
GENERAL INFORMATION								
Size		Size	1			2		3
Heat loss at nominal output power		W	11	22	45		66	120
Minimum braking resistance value		Ω	–			47		

1) Device for America, Asia, and Africa

2) Recommended values for UL compliance

9.3.3 3-phase system AC 230 V for 3-phase AC 230 V motors

MOVITRAC® LTE-B – EMC filter class 0								
IP20 ¹⁾	Type	MC LTE B...	0004-203-1-00	0008-203-1-00	0015-203-1-00	0015-203-4-00	0022-203-4-00	0040-203-4-00
	Part number		08296936	08296944	08296952	08296960	08296979	08296987
IP55/NEMA 12K housing without switch ¹⁾	Type	MC LTE B...	0004-203-1-10	0008-203-1-10	0015-203-1-10	0015-203-4-10	0022-203-4-10	0040-203-4-10
	Part number		08297835	08297843	08297851	08297878	08297886	08297894
IP55/NEMA 12K housing with switch ¹⁾	Type	MC LTE B...	0004-203-1-20	0008-203-1-20	0015-203-1-20	0015-203-4-20	0022-203-4-20	0040-203-4-20
	Part number		08297371	08297398	08297401	08297428	08297436	08297444
INPUT								
Line voltage V _{line}		V	3 × AC 200 – 240 ± 10%					
Line frequency f _{line}		Hz	50 / 60 ± 5%					
Input fuse		A	6	10	16 (15) ²⁾		20	32 (35) ²⁾
Rated input current		A	3	5.8	9.2		13.7	20.7
OUTPUT								
Recommended motor power		kW	0.37	0.75	1.5		2.2	4
		HP	0.5	1	2		3	5
Output voltage V _{motor}		V	0 – V _{line}					
Output current		A	2.3	4.3	7		10.5	18
Maximum output frequency		Hz	500					
Cross section of motor cable Cu 75C		mm ²	1.5					2.5
		AWG	16					12
Max. motor cable length	Shielded	m	50			100		
	Unshielded		75			150		
GENERAL INFORMATION								
Size		Size	1			2		3
Heat loss at nominal output power		W	11	22	45		66	120
Minimum braking resistance value		Ω	–			47		

1) Device for America, Asia, and Africa

2) Recommended values for UL compliance

9.3.4 3-phase system AC 400 V for 3-phase AC 400 V motors

Sizes 1 and 2

MOVITRAC® LTE-B – EMC filter class 0							
IP20 ¹⁾	Type	MC LTE B...	0008-503-1-00	0015-503-1-00	0015-503-4-00	0022-503-4-00	0040-503-4-00
	Part number		08296995	08297002	08297010	08297029	08297037
IP55/NEMA 12K housing without switch	Type	MC LTE B...	0008-503-1-10	0015-503-1-10	0015-503-4-10	0022-503-4-10	0040-503-4-10
	Part number		08297908	08297916	08297924	08297932	08297940
IP55/NEMA 12K housing with switch	Type	MC LTE B...	0008-503-1-20	0015-503-1-20	0015-503-4-20	0022-503-4-20	0040-503-4-20
	Part number		08297452	08297460	08297479	08297487	08297495
INPUT							
Line voltage V _{line}		V	3 × AC 380 – 480 ± 10%				
Line frequency f _{line}		Hz	50 / 60 ± 5%				
Input fuse		A	5	10			16 (15) ²⁾
Rated input current		A	2.9	5.4		7.6	12.4
OUTPUT							
Recommended motor power		kW	0.75	1.5		2.2	4
		HP	1	2		3	5
Output voltage V _{motor}		V	0 – V _{line}				
Output current		A	2.2	4.1		5.8	9.5
Maximum output frequency		Hz	500				
Cross section of motor cable Cu 75C		mm ²	1.5				
		AWG	16				
Max. motor cable length	Shielded	m	50		100		
	Unshielded		75		150		
GENERAL INFORMATION							
Size		Size	1		2		
Heat loss at nominal output power		W	22	45		66	120
Minimum braking resistance value		Ω	–		100		

1) Device for America, Asia, and Africa

2) Recommended values for UL compliance

Size 3

MOVITRAC® LTE-B – EMC filter class 0					
IP20 ¹⁾	Type	MC LTE B...	0055-503-4-00	0075-503-4-00	0110-503-4-00
	Part number		08297045	08297053	08299218
IP55/NEMA 12K housing without switch ¹⁾	Type	MC LTE B...	0055-503-4-10	0075-503-4-10	-
	Part number		08297959	08297967	-
IP55/NEMA 12K housing with switch ¹⁾	Type	MC LTE B...	0055-503-4-20	0075-503-4-20	-
	Part number		08297509	08297517	-
INPUT					
Line voltage V_{line}		V	3 × AC 380 – 480 ± 10%		
Line frequency f_{line}		Hz	50 / 60 ± 5%		
Input fuse		A	20	25	32 (35) ²⁾
Rated input current		A	16.1	20.7	27.1
OUTPUT					
Recommended motor power		kW	5.5	7.5	11
		HP	7.5	10	15
Output voltage V_{motor}		V	0 – V_{line}		
Output current		A	14	18	24
Maximum output frequency		Hz	500		
Cross section of motor cable Cu 75C		mm ²	2.5		4
		AWG	12		10
Max. motor cable length	Shielded	m	100		
	Unshielded		150		
GENERAL INFORMATION					
Size		Size	3		
Heat loss at nominal output power		W	165	225	330
Minimum braking resistance value		Ω	47		

1) Device for America, Asia, and Africa

2) Recommended values for UL compliance

9.4 Output power and current carrying capacity with EMC filter

Whether the MOVITRAC® LTE-B frequency inverters are used with or without filters depends on the regulations applicable in the various countries where the product is used.

- **With filter: suited for use worldwide.**
- Without filter: permitted in America, Asia, and Africa.

The specification "horsepower" (HP) is defined as follows.

- 200 – 240 V units: NEC2002, table 430-150, 230 V
- 380 – 480 V units: NEC2002, table 430-150, 460 V

9.4.1 1-phase system AC 230 V for 3-phase AC 230 V motors

MOVITRAC® LTE-B – EMC filter class B								
IP20 ¹⁾	Type	MC LTE B...	0004-2B1-1-00	0008-2B1-1-00	0015-2B1-1-00	0015-2B1-4-00	0022-2B1-4-00	0040-2B1-4-00
	Part number		08297061	08297088	08297096	08297118	08297126	18250424
IP55/NEMA 12K housing without switch	Type	MC LTE B...	0004-2B1-1-10	0008-2B1-1-10	0015-2B1-1-10	0015-2B1-4-10	0022-2B1-4-10	0040-2B1-4-10
	Part number		08297975	08297983	08297991	08298009	08298017	18250432
IP55/NEMA 12K housing with switch	Type	MC LTE B...	0004-2B1-1-20	0008-2B1-1-20	0015-2B1-1-20	0015-2B1-4-20	0022-2B1-4-20	0040-2B1-4-20
	Part number		08297525	08297533	08297541	08297568	08297576	18250440
IP66/NEMA 4X housing without switch	Type	MC LTE B...	0004-2B1-1-30	0008-2B1-1-30	0015-2B1-1-30	0015-2B1-4-30	0022-2B1-4-30	0040-2B1-4-30
	Part number		18254675	18254683	18254691	18254705	18254713	18254721
IP66/NEMA 4X housing with switch	Type	MC LTE B...	0004-2B1-1-40	0008-2B1-1-40	0015-2B1-1-40	0015-2B1-4-40	0022-2B1-4-40	0040-2B1-4-40
	Part number		18251013	18251021	18251048	18251056	18251064	18251072
INPUT								
Line voltage V _{line}		V	1 × AC 200 – 240 ± 10%					
Line frequency f _{line}		Hz	50 / 60 ± 5%					
Input fuse		A	10	16	20		32 (35) ²⁾	40
Rated input current		A	6.7	12.5	14.8		22.2	31.7
OUTPUT								
Recommended motor power		kW	0.37	0.75	1.5		2.2	4
		HP	0.5	1	2		3	5
Output voltage V _{motor}		V	0 – V _{line}					
Output current		A	2.3	4.3	7		10.5	16
Maximum output frequency		Hz	500					
Cross section of motor cable Cu 75C		mm ²	1.5					2.5
		AWG	16					18
Max. motor cable length	Shielded	m	50			100		
	Unshielded		75			150		
GENERAL INFORMATION								
Size		Size	1			2		3
Heat loss at nominal output power		W	11	22	45		66	120
Minimum braking resistance value		Ω	-			47		

1) Device for Europe, Australia, and New Zealand

2) Recommended values for UL compliance

9.4.2 3-phase system AC 230 V for 3-phase AC 230 V motors

MOVITRAC® LTE-B – EMC filter class A					
IP20 ¹⁾	Type	MC LTE B...	0015-2A3-4-00	0022-2A3-4-00	0040-2A3-4-00
	Part number		08297134	08297142	08297150
IP55/NEMA 12K housing without switch	Type	MC LTE B...	0015-2A3-4-10	0022-2A3-4-10	0040-2A3-4-10
	Part number		08298025	08298033	08298041
IP55/NEMA 12K housing with switch	Type	MC LTE B...	0015-2A3-4-20	0022-2A3-4-20	0040-2A3-4-20
	Part number		08297584	08297592	08297606
IP66/NEMA 4X housing without switch	Type	MC LTE B...	0015-2A3-4-30	0022-2A3-4-30	0040-2A3-4-30
	Part number		18254748	18254756	18254764
IP66/NEMA 4X housing with switch	Type	MC LTE B...	0015-2A3-4-40	0022-2A3-4-40	0040-2A3-4-40
	Part number		18251110	18251129	18251137
INPUT					
Line voltage V _{line}		V	3 × AC 200 – 240 ± 10%		
Line frequency f _{line}		Hz	50 / 60 ± 5%		
Input fuse		A	16 (15) ²⁾	20	32 (35)
Rated input current		A	9.2	13.7	20.7
OUTPUT					
Recommended motor power		kW	1.5	2.2	4.0
		HP	2	3	5
Output voltage V _{motor}		V	0 – V _{line}		
Output current		A	7	10.5	18
Maximum output frequency		Hz	500		
Cross section of motor cable Cu 75C		mm ²	1.5		2.5
		AWG	16		12
Max. motor cable length	Shielded	m	100		
	Unshielded		150		
GENERAL INFORMATION					
Size		Size	2		3
Heat loss at nominal output power		W	45	66	120
Minimum braking resistance value		Ω	47		

1) Device for Europe, Australia, and New Zealand

2) Recommended values for UL compliance

9.4.3 3-phase system AC 400 V for 3-phase AC 400 V motors

Sizes 1 and 2

MOVITRAC® LTE-B – EMC filter class A							
IP20 ¹⁾	Type	MC LTE B...	0008-5A3-1-00	0015-5A3-1-00	0015-5A3-4-00	0022-5A3-4-00	0040-5A3-4-00
	Part number		08297169	08297177	08297185	08297193	08297207
IP55/NEMA 12K housing without switch	Type	MC LTE B...	0008-5A3-1-10	0015-5A3-1-10	0015-5A3-4-10	0022-5A3-4-10	0040-5A3-4-10
	Part number		08298068	08298076	08298084	08298092	08298106
IP55/NEMA 12K housing with switch	Type	MC LTE B...	0008-5A3-1-20	0015-5A3-1-20	0015-5A3-4-20	0022-5A3-4-20	0040-5A3-4-20
	Part number		08297614	08297622	08297630	08297649	08297657
IP66/NEMA 4X housing without switch	Type	MC LTE B...	0008-5A3-1-30	0015-5A3-1-30	0015-5A3-4-30	0022-5A3-4-30	0040-5A3-4-30
	Part number		18254772	18254780	18254799	18254802	18254810
IP66/NEMA 4X housing with switch	Type	MC LTE B...	0008-5A3-1-40	0015-5A3-1-40	0015-5A3-4-40	0022-5A3-4-40	0040-5A3-4-40
	Part number		18251145	18251153	18251161	18251188	18251196
INPUT							
Line voltage V _{line}		V	3 × AC 380 – 480 ± 10%				
Line frequency f _{line}		Hz	50 / 60 ± 5%				
Input fuse		A	5	10			16 (15) ²⁾
Rated input current		A	2.9	5.4		7.6	12.4
OUTPUT							
Recommended motor power		kW	0.75	1.5		2.2	4
		HP	1	2		3	5
Output voltage V _{motor}		V	0 – V _{line}				
Output current		A	2.2	4.1		5.8	9.5
Maximum output frequency		Hz	500				
Cross section of motor cable Cu 75C		mm ²	1.5				
		AWG	16				
Max. motor cable length	Shielded	m	50		100		
	Unshielded		75		150		
GENERAL INFORMATION							
Size		Size	1		2		
Heat loss at nominal output power		W	22	45		66	120
Minimum braking resistance value		Ω	-		100		

1) Device for Europe, Australia, and New Zealand

2) Recommended values for UL compliance

Size 3

MOVITRAC® LTE-B – EMC filter class A					
IP20 ¹⁾	Type	MC LTE B...	0055-5A3-4-00	0075-5A3-4-00	0110-5A3-4-00
	Part number		08297215	08297223	08299196
IP55/NEMA 12K housing with-out switch	Type	MC LTE B...	0055-5A3-4-10	0075-5A3-4-10	-
	Part number		08298114	08298122	-
IP55/NEMA 12K housing with switch	Type	MC LTE B...	0055-5A3-4-20	0075-5A3-4-20	-
	Part number		08297665	08297673	-
IP66/NEMA 4X housing with-out switch	Type	MC LTE B...	0055-5A3-4-30	0075-5A3-4-30	-
	Part number		18254829	18254837	-
IP66/NEMA 4X housing with switch	Type	MC LTE B...	0055-5A3-4-40	0075-5A3-4-40	-
	Part number		18251218	18251226	-
INPUT					
Line voltage V _{line}		V	3 × AC 380 – 480 ± 10%		
Line frequency f _{line}		Hz	50 / 60 ± 5%		
Input fuse		A	20	25	32 (35) ²⁾
Rated input current		A	16.1	20.1	27.1
OUTPUT					
Recommended motor power		kW	5.5	7.5	11
		HP	7.5	10	15
Output voltage V _{motor}		V	0 – V _{line}		
Output current		A	14	18	24
Maximum output frequency		Hz	500		
Cross section of motor cable Cu 75C		mm ²	2.5		4
		AWG	12		10
Max. motor cable length	Shielded	m	100		
	Unshielded		150		
GENERAL INFORMATION					
Size		Size	3		
Heat loss at nominal output power		W	165	225	330
Minimum braking resistance value		Ω	47		

1) Device for Europe, Australia, and New Zealand

2) Recommended values for UL compliance