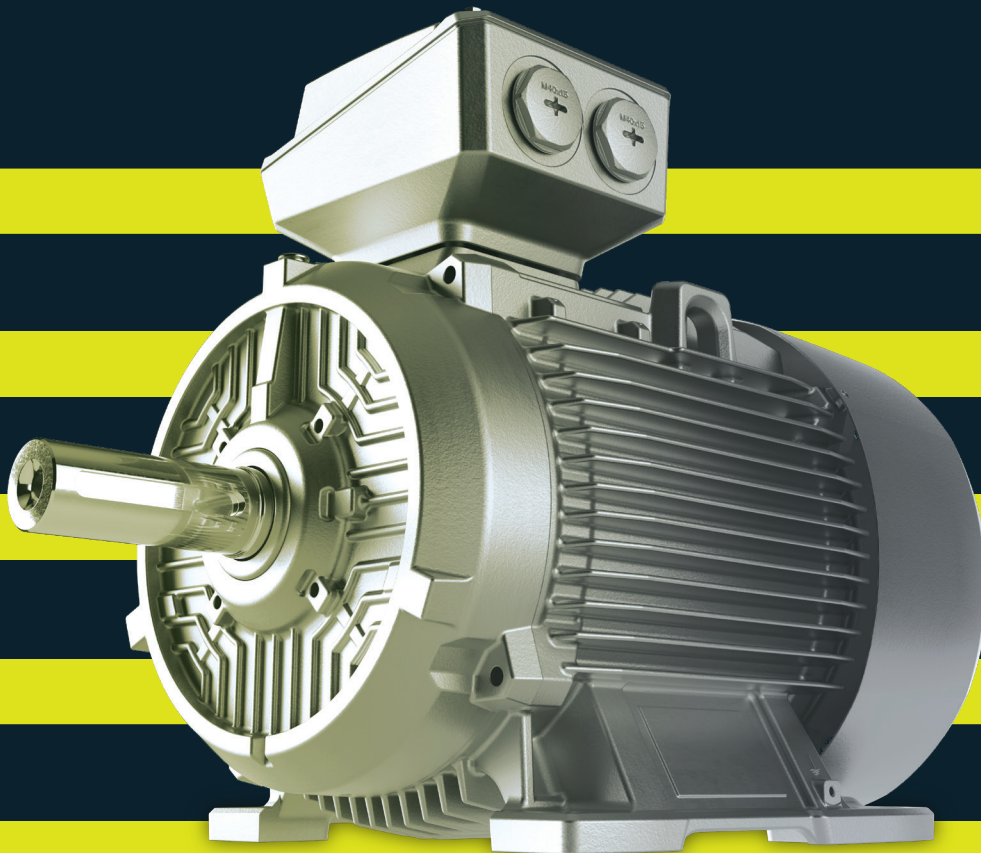


INNOMOTICS

Crane Duty Motors

Innomotics 1LE7

Optimized, Reliable and Sturdy



innomotics.com

Overview

Innomotics severe duty the most comprehensive range of motors

The history of today's most comprehensive range of motors worldwide started more than 150 years ago when Werner von Siemens developed the dynamo-electric principle. This principle allowed powerful electric motors to be designed and built, thereby creating the basis for their widespread use in industry today. And with greater than a century worth of experience, Innomotics sets the pace when it comes to innovative motor technology. Today, millions of Innomotics motors are efficiently powering machines and equipment in industrial facilities around the world. In all sectors, applications and power classes. Innomotics energy-efficient low-voltage motors with high dynamic performance have proven themselves in use, and are attractive as a result of their quality, efficiency and compactness. The new Innomotics severe duty 1LE7 range of motors are offered in line with the range of motors offered worldwide from the house of Innomotics.

Innomotics severe duty stands for:

- More than 150 years of motor production worldwide and 59 years of motor production in India
- Optimum solutions in all sectors, regions and power classes
- Innovative motor technology with the highest quality and reliability
- Highest dynamic performance, precision and efficiency, with an optimum degree of compactness
- Integration of the motors in the drive train to create an overall system
- The global network of skill sets and round the clock service worldwide

CE mark will be stamped on the nameplate only if the motor conforms to the requirements of COMMISSION REGULATION (EU) 2019/1781 of 1st October 2019 and its amendment issued vide COMMISSION REGULATION (EU) 2021/341 of 23rd February 2021 of the European Union.

Innomotics severe duty LE7 motors have a rugged cast-iron housing, which means they are also suitable for use in harsh to very harsh environments. With a wide power range from 0.12kW (in 8pole) to 250kW (in 1LE7 extended output). Innomotics severe duty 1LE7 motors are the basis for machine and plant builders and owners who require a motor for flexible requirements and conditions of use.

Available motor variants:

- Induction motors, optimized for line operation
 - in efficiency classes IE3, IE2 (in frame size 71 to 315) & IE4 (in frame size 100 to 315)
 - standards-compliant version
 - as a 2, 4, 6, 8-pole version
- Different types of construction, voltage versions, and a very wide variety of options/add-ons for precise adaptation of the motors to application and customer-specific requirements.

Severe crane duty motors

Crane-duty motors are engineered for short, frequent starts/stops and intermittent duty cycles typical for cranes, hoisting, trolley and long-travel motions. They deliver high breakdown torque, withstand repeated thermal cycling and are suitable for VFD control for precise speed/positioning.

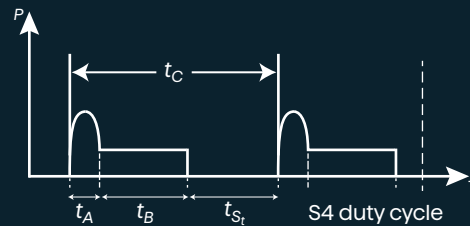
Performance characteristics (S4 duty definition)

A sequence of identical duty cycles, each including a significant period of starting, a period of operation at constant load, and a rest and de-energized period.

Braking, if any, is mechanical and does not contribute to heating the windings.

t_r : The Cyclic Duration Factor (CDF) is the time during which motor heating takes place. It is given by:

$$t_r = \frac{t_A + t_B}{t_A + t_B + t_{St}}$$



Notes:

In S4 duty DOL operation, the effect of heating due to starting current is NOT IGNOREABLE.

Salient features:

Shaft height	71 to 180 FS in 4 & 6 pole (balance on request)
Power range	0.37kW to 22kW in 4P 0.25kW to 18.5kW in 6P (balance on request)
Duty type	S4 duty with 40% CDF, 150 SPH (different CDF, SPH on request)
Frame	Cast Iron
Efficiency class	IE2 with S1 duty and standard output on main nameplate
Applicable standards	Efficiency classification according to IS 12615: 2018
Degree of protection	IP55 (IP56/IP65 options are available)
Voltages	415V (standard additional voltage variants available on request)
Frequency	50Hz
Type of construction	IMB3 (other construction variants available on request)
Cooling method	IC411 totally enclosed fan cooled (IC416 available from FS 100 onwards)
Temperature class	155°C (F) utilized to 130°C (B) for line fed and 155°C (F) for VFD fed
Insulation system	VFD suitable insulation scheme for voltage up to 480V as a standard.
Impulse voltage insulation Class (ivc) for un 415v	C (Severe) As per std. IEC 60034-18-41 / IS 15999 (Part 18/Sec 41): 2018.

Compliance & nameplate guidelines

- Efficiency classification as per IS 12615 for equivalent S1 outputs.
- Main nameplate: S1 duty data with S1 output and efficiency class.
- Auxiliary plate: S4 (intermittent duty) data — duty cycle, CDF, starts/hour, equivalent power, current and Mk/Mn
- S4 data can be moved to the main nameplate on request, however, S1 data and IE mark will be available on Auxiliary nameplate in accordance with IS 12615

Additional information:

- Diagonally split terminal box as a standard
- Terminal box can be rotated through 360° in steps of 90°
- Terminal box mounting on RHS/LHS with L-shaped adaptor box enables easy interchangeability on site (applicable for frames 160 to 315)
- Increased cantilever force bearings at DE as an option

Ordering codes for Innomatics crane duty motors 1LE7-IE2

Degree of Protection IP55, Insulation Class F, Ambient 50°C, Cast Iron housing, Method of Cooling - IC411, 415V ± 10%, 50Hz ± 5%, combined 10%, IMB3 (foot mounted) version as per IS:12615 / IEC:60034-1.

Line (DOL) operation (Temperature utilization limit to class B)

4 - Pole 1500 rev/min							6 - Pole 1000 rev/min						
S1 duty kW		S4 duty kW 40% CDF, 150 SPH		Frame Size	Mounting Holes	Ordering code (MLFB)	S1 duty kW		S4 duty kW 40% CDF, 150 SPH		Frame Size	Mounting Holes	Ordering code (MLFB)
KW	HP	KW	HP				KW	HP	KW	HP			
240VΔ/415VY 50Hz+							240VΔ/415VY 50Hz+						
0.37	0.5	0.47	0.64	71	-	1LE7501-0CB32-3AA4-Z, Z=Y82	0.25	0.34	0.32	0.44	71	-	1LE7501-0CC32-3AA4-Z, Z=Y82
0.55	0.75	0.69	0.94	80	-	1LE7501-0DB22-3AA4-Z, Z=Y82	0.37	0.5	0.47	0.64	80	-	1LE7501-0DC22-3AA4-Z, Z=Y82
0.75	1.0	0.94	1.3	80	-	1LE7501-0DB32-3AA4-Z, Z=Y82	0.55	0.75	0.7	0.95	80	-	1LE7501-0DC32-3AA4-Z, Z=Y82
1.1	1.5	1.35	1.8	90S	S & L	1LE7501-0EB02-3AA4-Z, Z=Y82	0.75	1.0	0.9	1.2	90S	S & L	1LE7501-0EC02-3AA4-Z, Z=Y82
1.5	2.0	1.9	2.6	90L	S & L	1LE7501-0EB42-3AA4-Z, Z=Y82	1.1	1.5	1.5	2.0	90L	S & L	1LE7501-0EC42-3AA4-Z, Z=Y82
2.2	3.0	2.2	3.0	90L	S & L	1LE7501-0EB72-3AA4-Z, Z=Y82	415VΔ 50Hz						
415VΔ 50Hz							2.2	3.0	2.4	3.3	100L	-	1LE7501-1AC79-0AA4-Z, Z=Y82
3.7	5.0	3.7	5.0	100L	-	1LE7501-1AB79-0AA4-Z, Z=Y82+M1Y	3.7	5.0	3.9	5.3	112M	-	1LE7501-1BC79-0AA4-Z, Z=Y82
5.5	7.5	5.5	7.5	112M	-	1LE7501-1BB79-0AA4-Z, Z=Y82+M1Y	5.5	7.5	5.9	8.0	132M	S & M	1LE7501-1CC33-5AA4-Z, Z=Y82
7.5	10	7.5	10	132M	S & M	1LE7501-1CB23-5AA4-Z, Z=Y82	7.5	10	7.5	10	132M	S & M	1LE7501-1CC73-5AA4-Z, Z=Y82
9.3	12.5	9.3	12.5	132M	S & M	1LE7501-1CB79-0AA4-Z, Z=Y82+M1Y	7.5	10	8.2	11	160M	M & L	1LE7501-1DC23-5AA4-Z, Z=Y82
11	15	11	15	160M	M & L	1LE7501-1DB23-5AA4-Z, Z=Y82	11	15	11	15	160L	M & L	1LE7501-1DC43-5AA4-Z, Z=Y82
15	20	15	20	160L	M & L	1LE7501-1DB43-5AA4-Z, Z=Y82	15*	20	15	20	160L	M & L	1LE7501-1DC79-0AA4-Z, Z=Y82+M1Y
18.5	25	18.5	25	160L	M & L	1LE7501-1DB79-0AA4-Z, Z=Y82+M1Y	18.5*	25	18.5	25	180L	M & L	1LE7501-1EC79-0AA4-Z, Z=Y82+M1Y
22	30	22	30	180L	M & L	1LE7501-1EB43-5AA4-Z, Z=Y82							

VFD operation (Temperature utilization limit to class F)

4 - Pole 1500 rev/min							6 - Pole 1000 rev/min						
S1 duty kW		S4 duty kW 40% CDF, 150 SPH		Frame Size	Mounting Holes	Ordering code (MLFB)	S1 duty kW		S4 duty kW 40% CDF, 150 SPH		Frame Size	Mounting Holes	Ordering code (MLFB)
KW	HP	KW	HP				KW	HP	KW	HP			
240VΔ/415VY 50Hz+							240VΔ/415VY 50Hz+						
0.37	0.5	0.5	0.7	71	-	1LE7501-0CB32-3AA4-Z, Z=Y82	0.25	0.34	0.34	0.5	71	-	1LE7501-0CC32-3AA4-Z, Z=Y82
0.55	0.75	0.75	1.0	80	-	1LE7501-0DB22-3AA4-Z, Z=Y82	0.37	0.5	0.5	0.7	80	-	1LE7501-0DC22-3AA4-Z, Z=Y82
0.75	1.0	1.1	1.5	80	-	1LE7501-0DB32-3AA4-Z, Z=Y82	0.55	0.75	0.75	1.0	80	-	1LE7501-0DC32-3AA4-Z, Z=Y82
1.1	1.5	1.5	2.0	90S	S & L	1LE7501-0EB02-3AA4-Z, Z=Y82	0.75	1.0	1.1	1.5	90S	S & L	1LE7501-0EC02-3AA4-Z, Z=Y82
1.5	2.0	2.2	3.0	90L	S & L	1LE7501-0EB42-3AA4-Z, Z=Y82	1.1	1.5	1.5	2.0	90L	S & L	1LE7501-0EC42-3AA4-Z, Z=Y82
415VΔ 50Hz							415VΔ 50Hz						
2.2	3.0	2.9	3.9	100L	-	1LE7501-1AB43-5AA4-Z, Z=Y82	2.2	3.0	3.2	4.4	112M	-	1LE7501-1BC23-5AA4-Z, Z=Y82
3.7	5.0	4.0	5.4	100L	-	1LE7501-1AB73-5AA4-Z, Z=Y82	3.7	5.0	4.0	5.4	112M	-	1LE7501-1BC73-5AA4-Z, Z=Y82
5.5	7.5	6.0	8.2	112M	-	1LE7501-1BB73-5AA4-Z, Z=Y82	3.7	5.0	5.5	7.5	132S	S & M	1LE7501-1CC13-5AA4-Z, Z=Y82
5.5	7.5	7.0	9.5	132S	S & M	1LE7501-1CB03-5AA4-Z, Z=Y82	5.5	7.5	7.5	10	132M	S & M	1LE7501-1CC33-5AA4-Z, Z=Y82
7.5	10	9.3	12.5	132M	S & M	1LE7501-1CB23-5AA4-Z, Z=Y82	7.5	10	9.3	12.5	160M	M & L	1LE7501-1DC23-5AA4-Z, Z=Y82
11	15	14	19	160M	M & L	1LE7501-1DB23-5AA4-Z, Z=Y82	11	15	15	20	160L	M & L	1LE7501-1DC43-5AA4-Z, Z=Y82
15	20	18.5	25	160L	M & L	1LE7501-1DB43-5AA4-Z, Z=Y82	15	20	18.5	25	180L	M & L	1LE7501-1EC43-5AA4-Z, Z=Y82
18.5	25	22	30	180M	M & L	1LE7501-1EB23-5AA4-Z, Z=Y82							
22	30	27	37	180L	M & L	1LE7501-1EB43-5AA4-Z, Z=Y82							

S1 data will be punched on main nameplate with IE marking wherever applicable with S1 duty and standard output.

Respective S4 data will be punched on auxiliary nameplate. S4 data on main nameplate can be provided on request however S1 data and IE mark will be available on Auxiliary nameplate. B59 and M1Y to be added for S4 data on main nameplate

*Temperature utilization limited to class F (applicable for line operation)

-Z Y82 prices are inclusive in above LP.

M1Y is mandatory wherever applicable & prices are inclusive in above LP

+Ratings ≤1.5kW are star connected and ratings >1.5kW are delta connected (2.2kW/4P in Line operation is star connected)

Selection and ordering data of 1LE7 IE2 4P crane duty motors for line fed supply

Degree of protection IP55, insulation class F, temp. Rise - class B, ambient 50°C, cast iron housing, method of cooling - IC411, 415V ± 10%, 50Hz ± 5%, combined 10%, IMB3 (foot mounted) version as per IS:12615 / IEC:60034-1. motor suitable to operate on line fed supply

Ordering code (MLFB)	Frame size	Pole	S4 data with 40% CDF and 150 SPH				Equivalent S1 data								
			Output kW	Approx current at 415V, 50Hz; (A)	Approx RPM	Approx torque (kgfm)	Output kW	RPM	Rated current at 415V, 50Hz; (A)	Efficiency in % 1.00PN	Power factor at 1.00PN	Locked rotor current / Rated current	Locked rotor torque/ Rated torque	Break-down torque / Rated torque	
1LE7501-OCB32-3AA4-Z, Z=Y82	71	4	0.47	1.43	1186	0.4	0.37	1382	1.0	72.7	0.71	3.6	2.2	2.2	
1LE7501-ODB22-3AA4-Z, Z=Y82	80	4	0.69	1.78	1389	0.4	0.55	1430	1.4	77.1	0.72	5.3	2.8	2.8	
1LE7501-ODB32-3AA4-Z, Z=Y82	80	4	0.94	1.1	1438	0.6	0.75	1438	1.7	79.6	0.75	5.8	2.7	2.7	
1LE7501-OEB02-3AA4-Z, Z=Y82	90S	4	1.35	3.0	1412	0.9	1.1	1438	2.5	81.4	0.76	5.7	2.6	2.6	
1LE7501-OEB42-3AA4-Z, Z=Y82	90L	4	1.95	4.2	1384	1.4	1.5	1433	3.3	82.8	0.76	6.0	2.8	2.8	
1LE7501-OEB72-3AA4-Z, Z=Y82	90L	4	2.2	4.7	1433	1.5	2.2	1433	4.7	84.3	0.77	7.0	2.8	2.8	
1LE7501-1AB79-0AA4-Z, Z=Y82+M1Y	100L	4	3.7	7.3	1447	2.5	3.7	1447	7.3	86.3	0.82	7.0	2.8	2.8	
1LE7501-1BB79-0AA4-Z, Z=Y82+M1Y	112M	4	5.5	11	1445	3.7	5.5	1445	11	87.7	0.76	7.0	3.6	3.6	
1LE7501-1CB23-5AA4-Z, Z=Y82	132M	4	7.5	15	1455	5	7.5	1445	15	88.7	0.79	7.0	2.6	2.6	
1LE7501-1CB79-0AA4-Z, Z=Y82+M1Y	132M	4	9.3	19	1454	6.2	9.3	1454	19	89.3	0.77	7.0	2.6	2.6	
1LE7501-1DB23-5AA4-Z, Z=Y82	160M	4	11	21	1465	7.0	11	1465	21	89.4	0.80	7.0	2.9	2.9	
1LE7501-1DB43-5AA4-Z, Z=Y82	160L	4	15	27	1455	10	15	1455	27	90.7	0.84	7.0	2.9	2.9	
1LE7501-1DB79-0AA4-Z, Z=Y82+M1Y	160L	4	18.5	33	1455	12	18.5	1455	33	91.2	0.85	7.0	3.1	3.1	
1LE7501-1EB43-5AA4-Z, Z=Y82	180L	4	22	40	1465	15	22	1465	40	91.8	0.83	7.0	2.9	2.9	

Selection and ordering data of 1LE7 IE2 6P crane duty motors for line fed supply

Ordering code (MLFB)	Frame size	Pole	S4 data with 40% CDF and 150 SPH				Equivalent S1 data								
			Output kW	Approx current at 415V, 50Hz; (A)	Approx RPM	Approx torque (kgfm)	Output kW	RPM	Rated current at 415V, 50Hz; (A)	Efficiency in % 1.00PN	Power factor at 1.00PN	Locked rotor current / Rated current	Locked rotor torque/ Rated torque	Break-down torque / Rated torque	
1LE7501-OCC32-3AA4-Z, Z=Y82	71	6	0.32	0.81	863	0.4	0.25	880	0.81	61.6	0.70	2.8	2.3	2.4	
1LE7501-ODC22-3AA4-Z, Z=Y82	80	6	0.47	1.3	867	0.53	0.37	925	1.1	67.6	0.69	4.0	2.1	2.4	
1LE7501-ODC32-3AA4-Z, Z=Y82	80	6	0.7	1.8	898	0.76	0.55	938	1.6	73.1	0.67	4.4	2.5	2.9	
1LE7501-OEC02-3AA4-Z, Z=Y82	90S	6	0.9	2.2	909	1.0	0.75	937	1.9	75.9	0.72	4.1	2.0	2.4	
1LE7501-OEC42-3AA4-Z, Z=Y82	90L	6	1.5	3.5	935	1.6	1.1	940	2.7	79	0.72	4.4	2.2	2.4	
1LE7501-1AC79-0AA4-Z, Z=Y82	100L	6	2.2	4.6	945	2.3	2.2	945	4.6	81.8	0.81	7.0	2.1	2.2	
1LE7501-1BC79-0AA4-Z, Z=Y82	112M	6	3.7	8.3	940	3.8	3.7	940	8.3	84.3	0.74	5.5	2.6	2.5	
1LE7501-1CC33-5AA4-Z, Z=Y82	132M	6	5.9	13	961	6.0	5.5	965	13	86.5	0.70	6.0	2.6	2.8	
1LE7501-1CC73-5AA4-Z, Z=Y82	132M	6	7.5	16	958	7.6	7.5	958	16	87.2	0.75	6.0	2.2	2.4	
1LE7501-1DC23-5AA4-Z, Z=Y82	160M	6	8.2	17	968	8.3	7.5	975	15	87.3	0.78	6.0	2.5	2.6	
1LE7501-1DC43-5AA4-Z, Z=Y82	160L	6	11	22	970	11	11	970	22	88.9	0.78	6.0	2.5	2.6	
1LE7501-1DC79-0AA4-Z, Z=Y82+M1Y	160L	6	15	30	975	15	15*	975	30	89.7	0.71	7.0	2.8	2.9	
1LE7501-1EC79-0AA4-Z, Z=Y82+M1Y	180L	6	18.5	37	971	19	18.5*	971	37	90.4	0.78	6.5	2.2	2.4	

Eff values declared are as per equivalent S1 data

Factor of Inertia = 2. i.e. Load GD² referred to the motor shaft is equal to Motor GD²

*In case of factor of Inertia is different from 2, pls refer it to R&D.

Selection and ordering data of 1LE7 IE2 4P crane duty motors for VFD fed supply

Degree of protection IP55, insulation class F, temp. rise - class F, ambient 50°C, cast iron housing, method of cooling - IC411, 415V ± 10%, 50Hz ± 5%, combined 10%, IMB3 (foot mounted) version as per IS:12615 / IEC:60034-1. motor suitable to operate on VFD supply

Ordering code (MLFB)	Frame size	Pole	S4 data with 40% CDF and 150 SPH				Equivalent S1 data							
			Output kW	Approx current at 415V, 50Hz; (A)	Approx RPM	Approx torque (kgfm)	Output kW	RPM	Rated current at 415V, 50Hz; (A)	Efficiency in % 1.00PN	Power factor at 1.00PN	Locked rotor current / Rated current	Locked rotor torque / Rated torque	Break-down torque / rated torque
1LE7501-OCB32-3AA4-Z, Z=Y82	71	4	0.5	1.4	1344	0.3	0.37	1382	1.0	72.7	0.71		2.2	2.3
1LE7501-ODB22-3AA4-Z, Z=Y82	80	4	0.75	2.0	1376	0.5	0.55	1430	1.4	77.1	0.72		2.8	2.8
1LE7501-ODB32-3AA4-Z, Z=Y82	80	4	1.1	2.8	1363	0.7	0.75	1438	1.7	79.6	0.75		2.7	2.8
1LE7501-OEB02-3AA4-Z, Z=Y82	90S	4	1.5	3.6	1385	1.0	1.1	1438	2.5	81.4	0.76		2.6	2.9
1LE7501-OEB42-3AA4-Z, Z=Y82	90L	4	2.2	5.4	1301	1.6	1.5	1433	3.3	82.8	0.76		2.8	3.1
1LE7501-1AB43-5AA4-Z, Z=Y82	100L	4	2.9	4.8	1301	1.5	2.2	1440	4.8	84.3	0.76		2.8	3.0
1LE7501-1AB73-5AA4-Z, Z=Y82	100L	4	4.0	7.9	1440	2.7	3.7	1447	7.3	86.3	0.82		2.8	3.2
1LE7501-1BB73-5AA4-Z, Z=Y82	112M	4	6.0	12.6	1440	4.0	5.5	1445	11	87.7	0.76		3.6	4.2
1LE7501-1CB03-5AA4-Z, Z=Y82	132S	4	7.0	14	1425	4.7	5.5	1450	11	88.7	0.79		2.4	2.8
1LE7501-1CB23-5AA4-Z, Z=Y82	132M	4	9.3	18	1438	6.2	7.5	1455	15	88.7	0.79		2.6	2.5
1LE7501-1DB23-5AA4-Z, Z=Y82	160M	4	14	16	1452	9.3	11	1465	21	89.4	0.80		2.9	2.9
1LE7501-1DB43-5AA4-Z, Z=Y82	160L	4	18.5	34	1450	12	15	1455	27	90.7	0.84		2.9	2.9
1LE7501-1EB23-5AA4-Z, Z=Y82	180M	4	22	41	1460	14	18.5	1465	34	91.2	0.82		2.7	2.9
1LE7501-1EB43-5AA4-Z, Z=Y82	180L	4	27	49	1462	18	22	1465	40	91.8	0.83		2.9	2.9

Selection and ordering data of 1LE7 IE2 6P crane duty motors for VFD fed supply

Ordering code (MLFB)	Frame size	Pole	S4 data with 40% CDF and 150 SPH				Equivalent S1 data							
			Output kW	Approx current at 415V, 50Hz; (A)	Approx RPM	Approx torque (kgfm)	Output kW	RPM	Rated current at 415V, 50Hz; (A)	Efficiency in % 1.00PN	Power factor at 1.00PN	Locked rotor current / Rated current	Locked rotor torque / Rated torque	Break-down torque / Rated torque
1LE7501-OCC32-3AA4-Z, Z=Y82	71	6	0.34	1.25	768	0.4	0.25	880	0.81	61.6	0.70	2.8	2.3	2.4
1LE7501-ODC22-3AA4-Z, Z=Y82	80	6	0.5	1.75	794	0.6	0.37	925	1.1	67.6	0.69	4.0	2.1	2.4
1LE7501-ODC32-3AA4-Z, Z=Y82	80	6	0.75	2.1	874	0.8	0.55	938	1.6	73.1	0.67	4.4	2.5	2.9
1LE7501-OEC02-3AA4-Z, Z=Y82	90S	6	1.1	2.7	914	1.1	0.75	937	1.9	75.9	0.72	4.1	2.0	2.4
1LE7501-OEC42-3AA4-Z, Z=Y82	90L	6	1.5	3.5	930	1.6	1.1	940	2.7	79	0.72	4.4	2.2	2.4
1LE7501-1AC42-3AA4-Z, Z=Y82	100L	6	2.2	5.0	920	2.3	1.5	945	3.5	80.6	0.74	5.2	2.3	2.5
1LE7501-1BC23-5AA4-Z, Z=Y82	112M	6	3.2	7.0	945	3.2	2.2	945	5.1	82.6	0.73	5.5	2.6	2.6
1LE7501-1BC73-5AA4-Z, Z=Y82	112M	6	4.0	9.1	936	4.1	3.7	940	8.3	84.3	0.74	5.5	2.6	2.5
1LE7501-1CC13-5AA4-Z, Z=Y82	132S	6	5.5	15	924	6.0	3.7	965	8.7	84.8	0.70	6.0	2.6	2.8
1LE7501-1CC33-5AA4-Z, Z=Y82	132M	6	7.5	16	931	8.0	5.5	965	13	86.5	0.70	6.0	2.6	2.8
1LE7501-1DC23-5AA4-Z, Z=Y82	160M	6	9.3	19	955	9.4	7.5	975	15	87.3	0.78	6.0	2.5	2.6
1LE7501-1DC43-5AA4-Z, Z=Y82	160L	6	15	33	915	15.9	11	970	22	88.9	0.78	6.0	2.5	2.6
1LE7501-1EC43-5AA4-Z, Z=Y82	180L	6	18.5	51	956	18.8	15	970	30	89.9	0.78	6.0	2.2	2.4

Eff values declared are as per equivalent S1 data

Innomotics severe duty 1LE7

Voltage code (Specified in MLFB postions 12 & 13)

Frequency 50Hz						
Position 12 & 13	Connection		Position 12 & 13	Connection		Short code
	Δ	Y		Δ	Y	
18	200VΔ		90	220VΔ	-	M1Y
20	-	360VY	90	230VΔ	-	M1Y
21	-	380VY	90	240VΔ	-	M1Y
22	-	400VY	90	360VΔ	-	M1Y
23	-	415VY	90	440VΔ	-	M1Y
27	-	500VY	90	460VΔ	-	M1Y
33	380VΔ	-	90	480VΔ	-	M1Y
34	400VΔ	-	90	525VΔ	-	M1Y
35	415VΔ	-	90	-	660VY	M1Y
40	500VΔ	-	90	-	690VY	M1Y
43	(575VΔ)	-				
46	660VΔ	-				
47	690VΔ	-				
90	Any other voltage					M1Y

Notes:

- Short codes are mandatory when 12 and 13 in MLFB is 9 and 0 respectively.
- M1Y requires Hz, V and kW to be specified in plain text
- For 60Hz please inquire

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