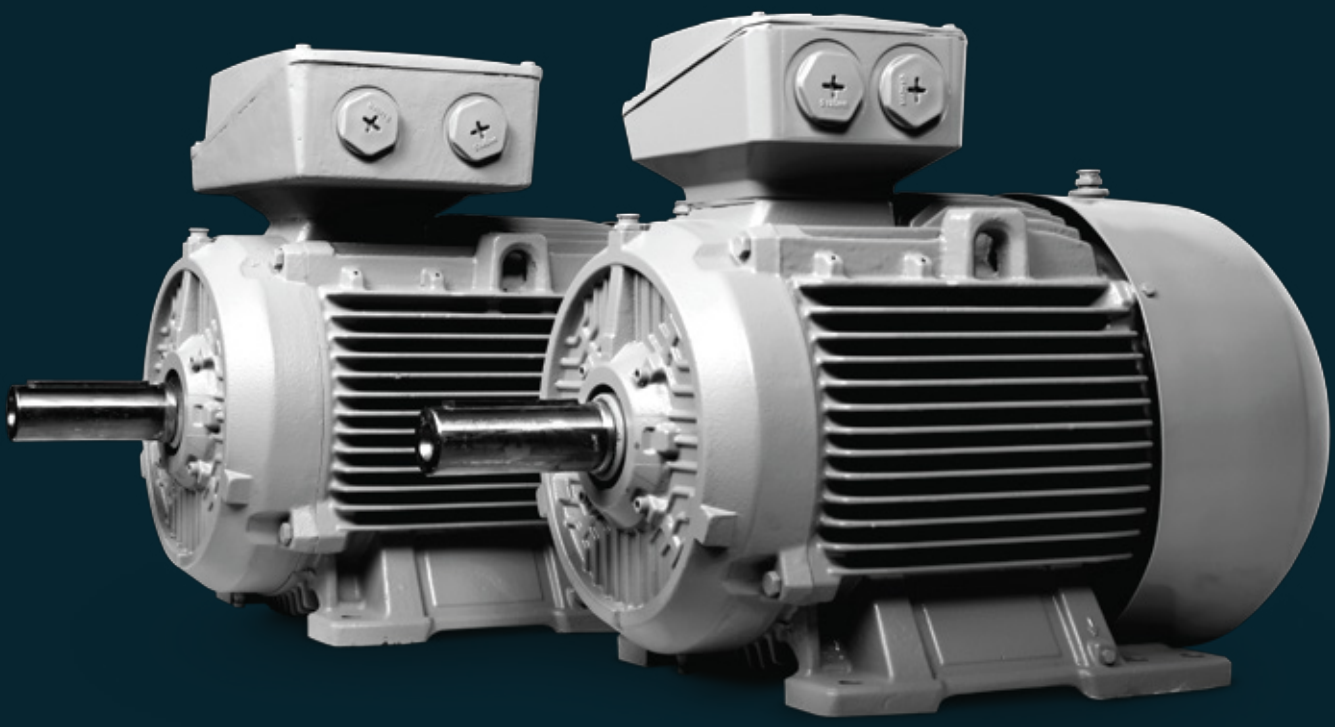
INNOMOTICS

INNOMOTICS MOVES! 1LE7 IE4 Efficiency Class Motors

Driving the sustainability
with Induction Motor Technology



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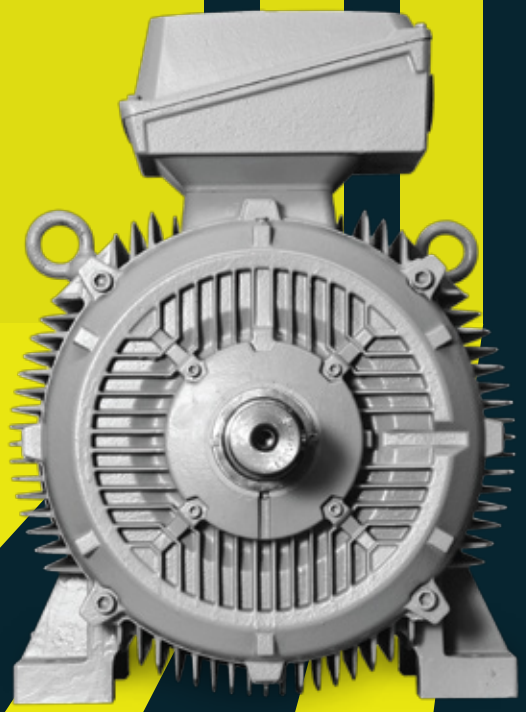
Innomotics
Low Voltage Motors –
The most comprehensive range of motors

Innomotics Moves! sets the pace when it comes to innovative motor technology. Today, millions of Innomotics Moves! motors are efficiently powering machines and equipment in industrial facilities around the world in all sectors, applications and power classes.

Innomotics Moves! 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 future readiness.



Innomotics Moves! stands for:

- 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
- More than 50 years of motor manufacturing in India

Innomotics Moves! 1LE7 series of IE4 Motors

State-of-the-art development and production processes in conjunction with systematic function tests ensure a long service life for our IE4 series of motors. Inverter suitable winding and a highly ribbed structure for better cooling enables high degree of ruggedness for use in adverse conditions. Time for installation, commissioning and motor replacement is lesser, as a result of the diagonally split, metallic terminal box and dual mounting holes (wherever applicable).

With frame to output relation in line with IS 1231, the replacement of existing IE2/IE3 motors is a hassle-free affair.

Salient Features:

Shaft height	100 - 315 for 2P, 4P & 6P
Power Range, Pole	3.7kW to 200kW, 2P | 2.2kW to 200kW, 4P | 1.5kW to 132kW, 6P
Frame	Cast Iron
Efficiency class	IE4
Applicable standards	Efficiency Classification according to IS 12615: 2018 / IEC 60034-30-1
Degree of protection	IP55 (IP56/IP65 options are available)
Voltages	415VΔ (Standard) (Additional voltages available. Refer Siemens Product Configurator for more details)
Frequency	50Hz
Type of construction	IMB3 (Refer Siemens Product Configurator for other construction variants)
Cooling method	IC411 Totally enclosed fan cooled [TEFC]
Temperature class	155°C (F) utilized to 130°C (B)
Insulation system	VFD Suitable insulation scheme for voltage up to 480V as a standard, up to frame size 225M.
	VFD Suitable insulation scheme for voltage up to 500V as a standard in frames 250 - 315
Impulse Voltage Insulation Class (IVIC) for U_N 415V	C (Severe) As per std. IEC 60034-18-41 / IS 15999 (Part 18/Sec 41): 2018.

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 Innomotics Moves! 1LE7-IE4 series of motors

Output kW	Pole	Frame Size	Ordering Code (MLFB)*	12-13	14	15	16
3.7	2	100L	1LE7504-1AA5	3-5	A	A	4
5.5	2	132S	1LE7504-1CA0	3-5	A	A	4
7.5	2	132S	1LE7504-1CA1	3-5	A	A	4
11	2	160M	1LE7504-1DA2	3-5	A	A	4
15	2	160M	1LE7504-1DA3	3-5	A	A	4
18.5	2	160L	1LE7504-1DA4	3-5	A	A	4
22	2	180M	1LE7504-1EA2	3-5	A	A	4
30	2	200L	1LE7504-2AA4	3-5	A	A	4
37	2	200L	1LE7504-2AA5	3-5	A	A	4
45	2	225M	1LE7504-2BA2	3-5	A	A	4
55	2	250M	1LE7504-2CA2	3-5	A	A	4
75	2	280S	1LE7504-2DA0	3-5	A	A	4
90	2	280M	1LE7504-2DA2	3-5	A	A	4
110	2	315S	1LE7504-3AA0	3-5	A	A	4
132	2	315M	1LE7504-3AA2	3-5	A	A	4
160	2	315L	1LE7504-3AA4	3-5	A	A	4
200	2	315L	1LE7504-3AA6	3-5	A	A	4
2.2	4	100L	1LE7504-1AB4	3-5	A	A	4
3.7	4	112M	1LE7504-1BB2	3-5	A	A	4
5.5	4	132S	1LE7504-1CB0	3-5	A	A	4
7.5	4	132M	1LE7504-1CB2	3-5	A	A	4
11	4	160M	1LE7504-1DB2	3-5	A	A	4
15	4	160L	1LE7504-1DB4	3-5	A	A	4
18.5	4	180M	1LE7504-1EB2	3-5	A	A	4
22	4	180L	1LE7504-1EB4	3-5	A	A	4
30	4	200L	1LE7504-2AB5	3-5	A	A	4
37	4	225S	1LE7504-2BB0	3-5	A	A	4
45	4	225M	1LE7504-2BB2	3-5	A	A	4
55	4	250M	1LE7504-2CB2	3-5	A	A	4
75	4	280S	1LE7504-2DB0	3-5	A	A	4
90	4	280M	1LE7504-2DB2	3-5	A	A	4
110	4	315S	1LE7504-3AB0	3-5	A	A	4
132	4	315M	1LE7504-3AB2	3-5	A	A	4
160	4	315L	1LE7504-3AB4	3-5	A	A	4
200	4	315L	1LE7504-3AB6	3-5	A	A	4
1.5	6	100L	1LE7504-1AC4	2-3	A	A	4
2.2	6	112M	1LE7504-1BC2	3-5	A	A	4
3.7	6	132S	1LE7504-1CC1	3-5	A	A	4
5.5	6	132M	1LE7504-1CC3	3-5	A	A	4
7.5	6	160M	1LE7504-1DC2	3-5	A	A	4
11	6	160L	1LE7504-1DC4	3-5	A	A	4
15	6	180L	1LE7504-1EC4	3-5	A	A	4
18.5	6	200L	1LE7504-2AC4	3-5	A	A	4
22	6	200L	1LE7504-2AC5	3-5	A	A	4
30	6	225M	1LE7504-2BC2	3-5	A	A	4
37	6	250M	1LE7504-2CC2	3-5	A	A	4
45	6	280S	1LE7504-2DC0	3-5	A	A	4
55	6	280M	1LE7504-2DC2	3-5	A	A	4
75	6	315S	1LE7504-3AC0	3-5	A	A	4
90	6	315M	1LE7504-3AC2	3-5	A	A	4
110	6	315L	1LE7504-3AC4	3-5	A	A	4
132	6	315L	1LE7504-3AC6	3-5	A	A	4

*Refer last page for details

Notes:
Si/Pn ratio will be higher than as required as per IEC 60034-12 for the NE design and therefore NE will not be indicated on the nameplate.
@ FS315/2P suitable for DOL operation at 50Hz, Please contact nearest sales office for VFD operation.
IVIC-C as per std. IEC 60034-18-41 / IS 15999 (Part 18/Sec 41): 2018.
CE Motors conforming to Commission Regulation (EU) 2019/1781 of October 1, 2019 and its amendment under the regulation (EU) 2021/341 of February 23, 2021 of the European Union as effective from 1st July 2023. Please contact nearest sales office for motors requiring CE Marking.

INNOMOTICS MOVES! 1LE7

Voltage Code (Specified in MLFB Positions 12 & 13)

Frequency 50Hz						
Position 12 & 13	Connection Δ	Connection Y	Position 12 & 13	Connection Δ	Connection Y	Short Code
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 1LE77 motors only 2-3 or 3-5 is possible. For 60Hz please enquire. • For 1LE75 and 1LE76 all above voltagees are possible for frames 71 - 225. • For frames 250-315, please enquire with nearest sales office as not all above voltages may be possible.

Construction Code (Specified in MLFB Position 14)

14th	← Position in the MLFB
A	IM B3, IM B6, IM B7, IM B8, IM V5, IM V6, ***(stamped IM B3)***
B	
C	IM V5 / IM 1011
D	IM V6 / IM 1031
E	
F	IM B5 / IM 3001, IM V1, IM V3, (stamped IM B5) flange (upto 315M only)
G	IM V1 / IM 3011 flange
H	IM V3 / IM 3031 flange (for frames upto 315M only)
J	IM B35 / IM 2001 flange
K	IM B14 / IM 3601, IM V19 / IM 3631, IM V18 / IM 3611 ***(stamped IMB14);*** standard flange (for frames upto 132M only)
L	IM V19 / IM 3631 standard flange (for frames upto 132M only)
M	IM V18 / IM 3611 standard flange (for frames upto 132M only)
N	IM B34 / IM 2101 standard flange (for frames upto 132M only)
O	
T	IM B6 / IM 1051
U	IM B7 / IM 1061
V	IM B8 / IM 1071
W	IMV15
Y	IMV36 (IMV35 when used with B59)

Motor Protection (Specified in MLFB Position 15)

15th	← Position in the MLFB	
A		Without winding protection
B		3x PTC thermistors for tripping (Class F)
C		6x PTC thermistors - 3x for alarm and 3x for tripping (Class F)
H		3x PT100 resistance thermometers in stator winding - 2 wire
J		6x PT100 resistance thermometers in stator winding - 2 wire
K		1x Temperature sensor - PT1000
L		2x Temperature sensor - PT1000
Z	Q1B	3x PT100 resistance thermometers in stator winding - 3 wire from sensor
Z	Q2B	6x PT100 resistance thermometers in stator winding - 3 wire from sensor
Z	Q3A	3x Bi-metallic sensors for trip operation (Thermostats)
Z	Q9A	6x Bi-metallic sensors (3x for alarm, 3x for tripping) (Thermostats)
		Addition to Position 15 (Value of Positon 15 = B)
B	-Z = Q11	Additional 3x PTC thermistors for tripping
		Addition to Position 15 (Value of Positon 15 = B or C with or without Q11)
B or C	-Z = Q90	Class B PTC thermistors (Alarm 130°C, Trip 140°C)
		Only few cases shown as examples. For further options, please consult nearest Sales office.

Terminal Box Position (Specified in MLFB Position 16)

16th	← Position in the MLFB
4	Terminal box on TOP
5	Terminal box on RHS (as viewed from DE)
6	Terminal box on LHS (as viewed from DE)
7	Terminal box at bottom (only for horizontal constructions without feet)

Reliable motion for a better tomorrow

For sales contact:
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