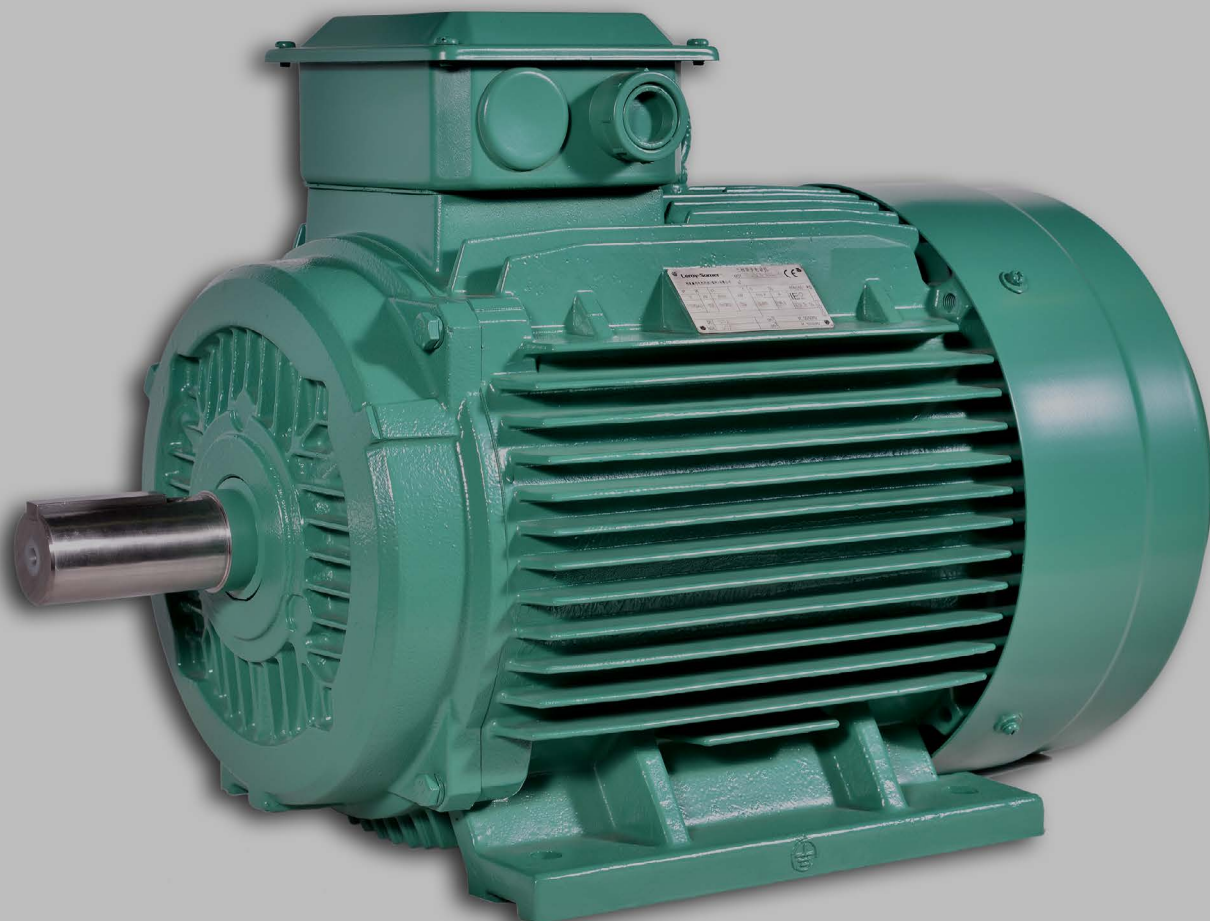




OptiMity 3-phase induction motors

IE2 High efficiency

Frame Size 80-355

Power Rating 0.37-355Kw

Leroy-Somer™

Drives & Motors Technology

Core Offering in Asia Pacific

Drives	Process	Construction & Infrastructure
	AC Drives Powerdrive MD2 & F300 Flexible and energy efficiency drive family 1.1kW – 2.8MW 	AC & Servo Drives Unidrive M Drive models to optimize productivity, across multitude of automation applications 0.25kW – 2.8MW 
Motors and Brakes	Process	Construction & Infrastructure
	Permanent Magnet Motors Dyneo range Premium Efficiency Permanent Magnet Synchronous Motor with drive IP23/55 0.75 – 500kW 	Liquid Cooled Motors IMfinity LC Liquid-Cooled Induction Motors for extreme environments, compactness and noise reduction 37 - 1500 kW IP 56 
	Normal Duty Motors OptIMity 3 phase motors IP55, Cast Iron & Aluminum For General Industry 0.37 to 355 kW 	Induction Motors PLS 3 phase motors IP23, with Aluminum or Steel housing 55 to 900 kW 

Manufacturing

Servo Drives Digitax STM

Intelligent, compact and
dynamic servo drive
range

0.72– 19.3 Nm
200V, 400V



DC Drives Mentor MP

High performance
DC drive

25 -7,400A

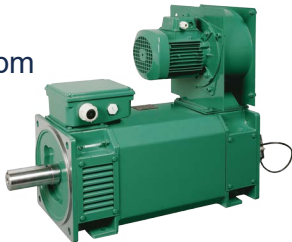


Manufacturing

High Speed Motors CPLS

High Speed Induction
Motors
DC replacement

Up to 8000rpm
7.5-550kW



Servo Motors Unimotor fm and hd

Dynamic performance AC
brushless

0.72-136 Nm
(408 Nm peak)



Heavy Duty Motors + Brakes FLSMV + FCPL

3-phase motors IP55/65
Optimized for VS applications
with optional encoder and
High performance Brake

11-400kW
75 – 5000 Nm



Contents

OVERVIEW	5
-----------------------	---

GENERAL INFORMATION

INTERNATIONAL AND NATIONAL STANDARD EQUIVALENTS

CONSTRUCTION

Mountings and Positions.....	7
Cooling	8
Terminal Box.....	8
Wiring Diagram	8
Earth Terminal	8
Bearing.....	9
Operation.....	9

OPERATION

Supply Voltage	10
Overload Capacity	10
Insulation System	10
Vibration	11
Thermal Protection.....	12
Anti-condensation Protection.....	12
Starting Method	13

DESCRIPTION

Product Code	14
Nameplate	14

ELECTRICAL AND MECHANICAL CHARACTERISTICS.. 15

ELECTRICAL AND MECHANICAL DATA

DIMENSION	17
------------------------	----

OPTA

IM 1001 (IM B3)	17
IM 3001 (IM B5)	18
IM 2001 (IM B35)	19

OPT

IM 1001 (IM B3).....	20
IM 3001 (IM B5)	21
IM 2001 (IM B35)	22

OptiMity 3-phase induction motors

Overview

General Information

Leroy Somer OptiMity series general industries TEFC 3 phase asynchronous motors with efficiency level IE2. These motors have been designed to incorporate the latest IEC and European standards, and can satisfy most of industry's demands.

OptiMity is designed for constant speed with continuous duty operation (S1).

OptiMity Standard Features

- Aluminum frame (SH ≤ 132) and cast iron frame
- Standard painting color reference RAL6000
- Supply voltage 380V, frequency 50Hz
- The permitted tolerance of the voltage is ±5%
- Efficiency level IE2
- Standard mounting construction according to IEC 60034-7: IMB3, IM B5, IM B35 and etc
- Top position of main terminal
- Regreasing device (SH ≥ 250 as standard, SH160-200 as option)
- Cooling method IC411
- Enclosure protection IP55
- Insulation/Thermal class F/B
- Vibration A

OptiMity Options

- Space heater
- Special painting color
- Special voltage
- Insulation class H
- Forced ventilation
- Thermal protection PTC and PT100
- Double shaft end/Special shaft end
- SKF/FAG bearing
- Insulated bearing
- Regreasing device
- Metal fan
- Drip cover
- Main terminal box position (RH or LH)
- External earthing bolt
- Type test
- Cable glands
 - Plastic
 - Brass
 - Stainless steel

Environmental

- Ambient temperature: -15°C ~ 40°C
- Altitude less than 1000 m
- Humidity ≤ 90%

For higher coolant temperatures and / or site altitudes higher than 1000 m above sea level, the motor should be derated. Please consult LS.

OptiMity 3-phase induction motors

Overview

International and National Standard Equivalents

OptiMity range motor comply with following IEC standards

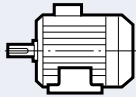
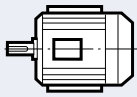
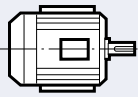
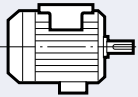
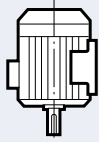
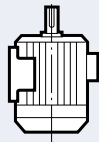
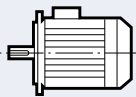
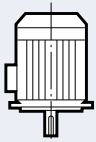
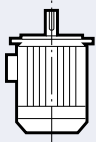
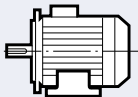
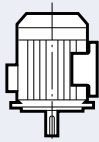
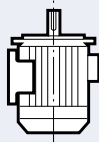
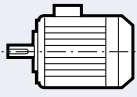
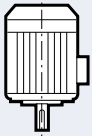
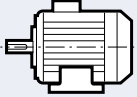
IEC standards	Title
IEC 60034-1	Ratings and operating characteristics
IEC 60034-5	Classification of degrees of protection
IEC 60034-6	Cooling methods
IEC 60034-7	Mounting arrangements and assembly layouts
IEC 60034-8	Terminal markings and direction of rotation
IEC 60034-9	Noise limits
IEC 60034-14	Mechanical vibrations of machines with frame size ≥ 56 mm
IEC 60072-1	Dimensions and output powers for machines of between 56 and 400 frame size and flanges of between 55 and 1080.
IEC 60085	Evaluation and thermal classification of electrical insulation
IEC 60721-2-1	Environmental conditions appearing in nature Temperature and humidity

OptiMity 3-phase induction motors

Overview

Construction

Mountings and Positions

Construction Type	Foot mounted motors					
Mounting Type	IMB3	IMB6	IMB7	IMB8	IMV5	IMV6
Diagram						
Construction Type	(FF) Flange mounted motors					
Mounting Type	IMB5	IMV1	IMV3	IMB35	IMV15	IMV36
Diagram						
Construction Type	(FT) Face mounted motors					
Mounting Type	IMB14		IMB18			IMB34
Diagram						

Frame Size	Foot mounted motors			Secondary Mounting											
	B3	B5	B35	V1	V3	V5	V6	B6	B7	B8	V15	V36	B14	B34	V18
80-112	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
132-160	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-
180-280	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-
315-355	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-

✓ available, -not available

Overview

Construction

Cooling

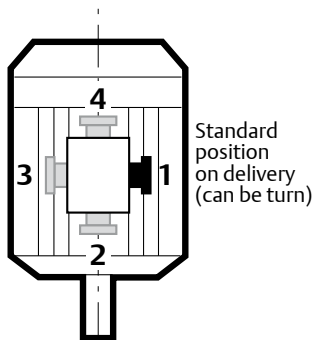
Standard cooling method is self-ventilation motors with radial-flow fans (IC411 according to IEC 60034-6), forced air cool with external separately driven fans as option (IC416).

Terminal Box

Placed as standard on the top of the motor near the drive end, it is IP 55 protection and fitted with threaded plugs.

The standard position of the plug is on the right, seen from the drive end but, owing to the symmetrical construction of the box, it can usually be placed in any of the 4 directions as below picture:

Positions of the plug in relation to the drive end



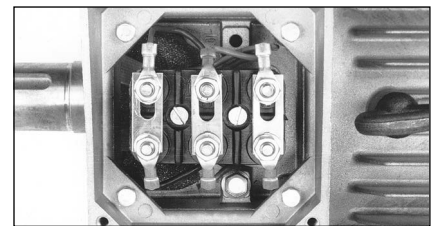
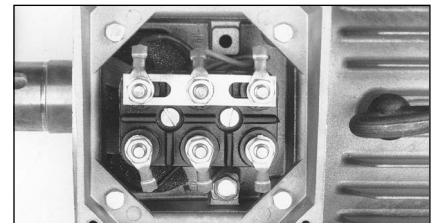
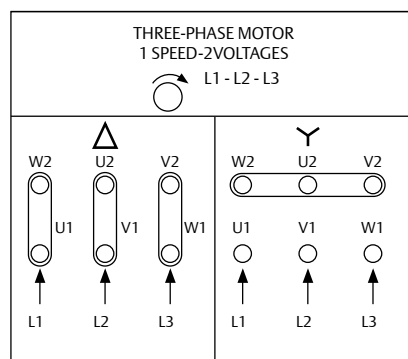
Positions 2 not recommended
(impossible on standard (FF)
flange mounted motor)

Wiring Diagram

All standard motors are supplied with a wiring diagram in the terminal box.

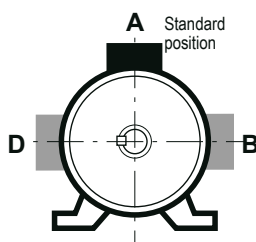
Earth Terminal

This is situated inside the terminal box. Consisting of a threaded stud with a hexagonal nut, it is used to connect cables with cross-sections at least as large as the cross-section of the phase conductors. It is indicated by the sign: ($\perp$) in the terminal box. On request, a second earth terminal can be fitted on one or both of the feet.



If required, the terminal box may be fitted right or left side of the motor (seen from the drive end) .

Positions of the terminal box in relation
to the drive end (motor in IM 1001
position)



OptiMity 3-phase induction motors

Overview

Construction

Bearing

OptiMity series motors are equipped with the ball bearing as standard (sealed type or regreasable type).

For frame size 80-225mm sealed bearing as standard. For frame size 250-355mm regreasable bearing as standard, with regrease devise.

If required, frame size 160-225mm regreasable bearing and regrease device as option.

Bearing assignment as below table:

Type	DE	NDE
OPT/OPTA-80	6204-2RZ/C3	6204-2RZ/C3
OPT/OPTA-90	6205-2RZ/C3	6205-2RZ/C3
OPT/OPTA-100	6206-2RZ/C3	6206-2RZ/C3
OPT/OPTA-112	6206-2RZ/C3	6206-2RZ/C3
OPTA-132	6308-2RZ/C3	6308-2RZ/C3
OPT-132	6208-2RZ/C3	6208-2RZ/C3
OPT-160	6309-2RZ/C3	6309-2RZ/C3
OPT-180	6311-2RS/C3	6311-2RS/C3
OPT-200	6312-2RS/C3	6312-2RS/C3
OPT-225	6313-2RS/C3	6312-2RS/C3
OPT-250-2	6313/C3	6313/C3
OPT-250-4,6	6314/C3	6313/C3
OPT-280-2	6314/C3	6314/C3
OPT-280-4,6	6317/C3	6314/C3
OPT-315-2	6317/C3	6317/C3
OPT-315-4,6	NU319/C3	6319/C3
OPT-355-2	6218/C3	6316/C3
OPT-355-4,6	6322/C3	6316/C3

Bearing Re-greasing

Re-greasing interval and quantity of grease as below table:

Frame Size	Quantity of Grease(g)	Re-greasing Interval(h)		
		3000(r/min)	1500(r/min)	1000(r/min)
160,180	20	4200	7000	9000
200,225	25	3100	6500	8500
250,280	35	2000	6000	8000
315	50	2000	5500	7500
355	60	3700(35g)	8300	13800

Overview

Operation

Supply Voltage

The IEC 60038 standard gives the reference voltage as 230/400V 50Hz three-phase.

The tolerances usually permitted for power supply sources are indicated below:

- Maximum line drop between customer delivery point and customer usage point: 7%.

- Variation in frequency around the rated frequency:

- continuous operation: $\pm 1\%$
- transient state: $\pm 2\%$

- Three-phase mains phase voltage imbalance:

- Zero-sequence component and/or negative phase sequence component compared to positive phase sequence

component: $< 2\%$

The characteristics of motors will of course vary with a corresponding variation in voltage of $\pm 10\%$ around the rated value.

An approximation of these variations is given in the table below.

	Voltage variation as a(%)				
	UN-10%	UN-5%	0UN	UN+5%	UN+10%
Torque curve	0.81	0.90	1	1.10	1.21
Slip	1.23	1.11	1	0.91	0.83
Rated current	1.10	1.05	1	0.98	0.98
Rated efficiency	0.97	0.98	1	1.00	0.98
Rated power factor ($\cos \phi$)	1.03	1.02	1	0.97	0.94
Starting current	0.90	0.95	1	1.05	1.10
Nominal temperature rise	1.18	1.05 *	1	1 *	1.10
P(Wall)no-load	0.85	0.92	1	1.12	1.25
Q(reactive V A)no-load	0.81	0.9	1	1.1	1.21

* According to standard IEC 60034-1, the additional temperature rise must not exceed 10 K within $\pm 5\%$ of U_N .

Overload Capacity

According to IEC60034, OptiMity series motors are designed to withstand overload capacity of 1.5 times rated current for 2 minutes at rated voltage and frequency.

Insulation System

The machines in this catalogue have been designed with a class F insulation system for the windings. Class F allows for temperature rises of 105 K (measured by the resistance variation method) and maximum temperatures at the hot spots in the machine of 155°C (Ref. IEC 60085 and IEC 60034-1).

For special constructions, the winding is class H and impregnated with special varnishes which enable it to operate in conditions of high temperatures with relative air humidity of up to 100%.

The insulation of the windings is monitored in two ways:

a - Dielectric inspection which involves checking the leakage current, at an applied voltage of $(2U + 1000)$ V, in conditions complying with standard IEC 60034-1 (systematic test).

b - Monitoring the insulation resistance between the windings and between the windings and the earth (sampling test) at a D.C. voltage of 500 V or 1000 V.

OptiMity 3-phase induction motors

Overview

Operation

Vibration

OptiMity rotors are balanced to severity grade A with half key. The effective vibration values for unloaded motors as table below (Free suspension).

Vibration Level	Frame Size H(mm)								
	<i>56 ≤ H ≤ 132</i>			<i>132 < H ≤ 280</i>			<i>H > 280</i>		
	Displacement μm	Speed mm/s	Acceleration m/s ²	Displacement μm	Speed mm/s	Acceleration m/s ²	Displacement μm	Speed mm/s	Acceleration m/s ²
A	25	1.6	2.5	35	2.2	3.5	45	2.8	4.4

Overview

Operation

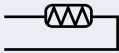
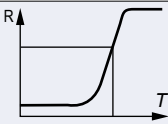
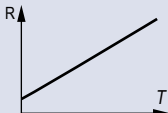
Thermal Protection

Motors are protected by a manual or automatic overcurrent relay, placed between the isolating switch and the motor. This relay may in turn be protected by fuses. These protection devices provide total protection of the motor against non-transient overloads. If a shorter reaction

time is required, if you want to detect transient overloads, or if you wish to monitor temperature rises at "hot spots" in the motor or at strategic points in the installation for maintenance purposes, it would be advisable to install heat sensors at sensitive points. The various types are shown in the table below, with a description of each. It must be emphasized

that under no circumstances can these sensors be used to carry out direct regulation of the motor operating cycles.

Built-in Indirect Thermal Protection

Type	Operating principle	Operating curve	Breaking capacity(A)	Protection provided	Mounting Number of devices*
Positive temperature coefficient thermistor PTC	Non-linear variable resistor, indirectly heated 		0	General monitoring for transient overloads	Mounted with associated relay in control circuit 3 in series
Platinum temperature sensor PT 100	Linear variable resistor indirectly heated		0	High accuracy continuous surveillance of key hot spots	Mounted in control boards with associated reading equipment (or recorder) 1 per hot spot

- NRT: nominal running temperature

- The NRTs are chosen according to the position of the sensor in the motor and the temperature rise class.

* The number of devices relates to the winding protection.

Fitting Thermal Protection

- PTC, with relay, in the control circuits
- PT 100, with reading equipment or recorder, in the installation control panel for continuous surveillance

Alarm and Early Warning

All protective equipment can be backed up by another type of protection (with different NRTs): the first device will then act as an early warning (light or sound signals given without shutting down the power circuits), and the second device will be the alarm (shutting down the power circuits)

Bearing Protection

OptiMity motors bearing has no protection as standard. The bearing is recommended to be protected for some severe application. The bearing is protected through thermometers screwed into the bearing plates of motor driven end (DE) and non-drive-end (NDE). The wires are routed through the main connection box.

Anti-condensation Protection

Motors whose windings are at risk of condensation due to the climatic conditions, e.g. inactive motors in humid atmospheres or motors that are subjected to widely fluctuating temperatures can be equipped with anti-condensation heaters.

Overview

Operation

Starting Method

The two essential parameters for starting cage induction motors are:

- starting torque
- starting current

These two parameters and the resistive torque determine the starting time.

These three characteristics arise from the construction of cage induction motors. Depending on the driven load, it may be necessary to adjust these values to avoid torque surges on the load or current surges in the supply. There are essentially five different types of supply, which are:

- D.O.L. starting
- star/delta starting
- soft starting with auto-transformer
- soft starting with resistors
- electronic starting

The tables on the next few pages give the electrical outline diagrams, the effect on the characteristic curves, and a comparison of the respective advantages of each mode.

MOTORS WITH ASSOCIATED ELECTRONICS

Electronic starting modes control the voltage at the motor terminals throughout the entire starting phase, giving very gradual smooth starting.

DIGISTART D2 electronic starter

This simple, compact electronic starter enables three-phase induction motors to be started smoothly by controlling their acceleration. It incorporates motor protection.



- **18 to 200 A range**
- **Integrated by-pass:** ease of wiring
- Simplicity and speed of setup
- All settings configured with just seven selector switches
- **Flexibility**
- Mains supply voltages 200-440 VAC & 200-575 VAC
- **Starting and stopping modes:**

- Current limit
- Current ramp
- Deceleration control
- Communication
- Modbus, DeviceNet, Profibus, USB, display console
- Management of pumping functions

DIGISTART D3 electronic starter

Using the latest electronic control technologies to manage transient phases, the DIGISTART D3 range combines simplicity and user-friendliness while offering the user a high-performance, communicating electronic starter, and can achieve substantial energy savings.



- Range from 23 to 1600 A/400 V or 690 V
- Integrated bypass up to 1000 A:
- Compact design Up to 60% space saving.
- Energy saving.
- Reduced installation costs.
- **Advanced control**
- Starting and stopping adapt to the load automatically.
- Automatic parameter optimisation by gradually learning the types of start.
- Special deceleration curve for pumping applications which derives from more than 15 years of Leroy-Somer's experience and expertise.
- **High availability**
- Able to operate with only two power components operational.
- Protection devices can be disabled to implement forced run mode (smoke extraction, fire pump, etc).
- **Total protection**
- Continuous thermal modelling for maximum motor protection (even in the event of a power cut).
- Trips on configurable power thresholds.
- Control of phase current imbalance.
- Monitoring of motor temperatures and the environment with PTC or PT 100.
- **As an option**
- Installation trips in the event of an earth

fault

- Protection against mains over- and undervoltages
- Connection to "Δ" motor (6-wire)
- Starter size at least one rating lower
- Automatic detection of motor connection
- Ideal for replacing Y/Δ starters

- **Communication**

Modbus RTU, DeviceNet, Profibus, USB

- **Simplicity of setup**

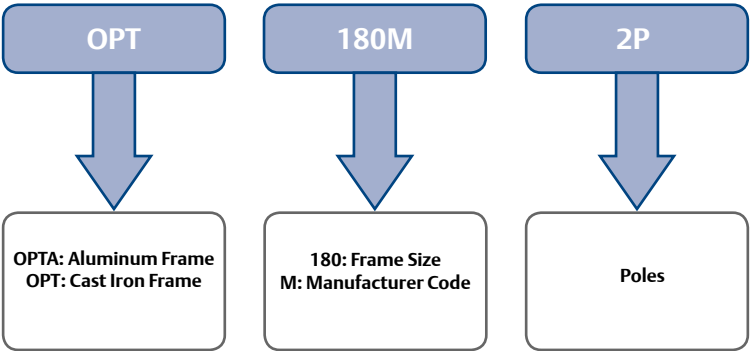
- 3 parameter-setting levels
- Preset configurations for pumps, fans, compressors, etc
- Standard: access to the main parameters
- Advanced menu: access to all data
- Storage
- Time-stamped log of trips
- Energy consumption and operating conditions
- Latest modifications
- Simulate operation by forcing control
- Display the state of the inputs/outputs
- Counters: running time, number of starts, etc.

OptIMity 3-phase induction motors

Overview

Description

Product Code



Nameplate

OPTA

Leroy-Somer
利莱森玛电机科技（福州）有限公司

三相异步电动机
MOT: ~
SN. _____

CE

IP	IK	cl.	°C	S	%	d/h	kg
V	Hz	r/min	kW	cos	A	IE	%
DE	NDE						

MADE IN CHINA

IEC60034-1

OPT

Leroy-Somer
利莱森玛电机科技（福州）有限公司

三相异步电动机
MOT: ~
SN. _____

CE

IP	IK	cl.	°C	S	%	d/h	kg
V	Hz	r/min	kW	cos	A	IE	%
DE	NDE						

MADE IN CHINA

IEC60034-1

MOT: Code No.
SN: Serial No.
IP&IK: Protection Level
cl: Insulation Class
°C: Ambient operating temperature
S: Duty-Duty factor
V: Supply Voltage
Hz: Supply frequency
r/min: Rated Speed

kW: Rated Power
cos: Power Factor
A: Rated Current
IE: Efficiency Level
%: Efficiency Value
DE: Drive End Bearing
NDE: Non Drive End Bearing
cm3: Quantity of Grease at Each Regreasing (g)
H: Regreasing Interval(hours)

OptiMity 3-phase induction motors

Electrical and Mechanical Characteristics

Electrical and Mechanical Data

Type	Rated Power	Rated Current	Rated Speed	Rated Torque	Starting Torque/ Rated Torque	Starting Current/ Rated Current	Max. Torque/ Rated Torque	Noise	Efficiency	Weight
	Pn kW	In A	r/min	Mn N.m	Md/Mn	Id/In	Mm/Mn	LP db(A)	%	IM B3 kg
2P										
OPTA 80M1-2P	0.75	1.8	2855	2.5	2.2	7.0	2.3	62	77.4	11
OPTA 80M2-2P	1.1	2.5	2870	3.7	2.2	7.3	2.3	62	79.6	12
OPTA 90S-2P	1.5	3.3	2865	5.0	2.2	7.6	2.3	67	81.3	16
OPTA 90L-2P	2.2	4.7	2870	7.3	2.2	7.6	2.3	67	83.2	20
OPTA 100L-2P	3	6.2	2875	10.0	2.2	7.8	2.3	74	84.6	23
OPTA 112M-2P	4	8.0	2910	13.1	2.2	8.3	2.3	77	85.8	31
OPTA 132S1-2P	5.5	10.9	2935	2.5	2.2	7.0	2.3	79	87.0	46
OPTA 132S2-2P	7.5	14.5	2930	3.7	2.2	7.3	2.3	79	88.1	54
OPT 80M1-2P	0.75	1.8	2855	2.5	2.2	7	2.3	62	77.4	15
OPT 80M2-2P	1.1	2.5	2870	3.7	2.2	7.3	2.3	62	79.6	16
OPT 90S-2P	1.5	3.3	2865	5	2.2	7.6	2.3	67	81.3	20
OPT 90L-2P	2.2	4.7	2870	7.3	2.2	7.6	2.3	67	83.2	24
OPT 100L-2P	3	6.2	2875	10	2.2	7.8	2.3	74	84.6	32
OPT 112M-2P	4	8	2910	13.1	2.2	8.3	2.3	77	85.8	39
OPT 132S1-2P	5.5	10.9	2935	17.9	2	8.3	2.3	79	87	58
OPT 132S2-2P	7.5	14.5	2930	24.4	2	7.9	2.3	79	88.1	66
OPT 160M1-2P	11	21	2950	35.6	2	8.1	2.3	81	89.4	107
OPT 160M2-2P	15	28.4	2945	48.6	2	8.1	2.3	81	90.3	112
OPT 160L-2P	18.5	34.7	2945	60	2	8.2	2.3	81	90.9	132
OPT 180M-2P	22	41.1	2950	71.2	2	8.2	2.3	83	91.3	162
OPT 200L1-2P	30	55.7	2960	96.8	2	7.6	2.3	84	92	225
OPT 200L2-2P	37	68.3	2960	119	2	7.6	2.3	84	92.5	245
OPT 225M-2P	45	82.7	2965	145	2	7.7	2.3	86	92.9	294
OPT 250M-2P	55	101	2970	177	2	7.1	2.3	89	93.2	367
OPT 280S-2P	75	137	2975	241	1.8	7.1	2.3	91	93.8	495
OPT 280M-2P	90	163	2970	289	1.8	7.1	2.3	91	94.1	541
OPT 315S-2P	110	197	2975	353	1.8	7.1	2.3	92	94.3	880
OPT 315M-2P	132	236	2975	424	1.8	7.1	2.3	92	94.6	1000
OPT 315L1-2P	160	282	2975	514	1.8	7.2	2.3	92	94.8	1080
OPT 315L2-2P	200	352	2975	642	1.8	7.2	2.2	92	95	1130
OPT 355L1-2P	250	436	2980	801	2.48	7.27	2.8	84	95.4	1577
OPT 355L2-2P	315	549	2980	1009	2.68	7.59	3.1	84	95.9	1750
OPT 355L3-2P	355	620	2978	1138	2.84	7.88	2.8	84	96.1	1792

4P										
OPTA 80M1-4P	0.55	1.4	1430	3.7	2.3	6.0	2.3	56	79	12
OPTA 80M2-4P	0.75	1.9	1425	5	2.3	6.6	2.3	56	79.6	13
OPTA 90S-4P	1.1	2.7	1420	7.4	2.3	6.8	2.3	59	81.4	17
OPTA 90L-4P	1.5	3.5	1420	10.1	2.3	7	2.3	59	82.8	21
OPTA 100L1-4P	2.2	5	1430	14.7	2.3	7.6	2.3	64	84.3	24
OPTA 100L2-4P	3	6.6	1430	20	2.3	7.6	2.3	64	85.5	29
OPTA 112M-4P	4	8.7	1450	26.3	2.2	7.8	2.3	65	86.6	36
OPTA 132S-4P	5.5	11.6	1465	35.9	2	7.9	2.3	71	87.7	48
OPTA 132M-4P	7.5	15.5	1465	48.9	2	7.5	2.3	71	88.7	58
OPT 80M1-4P	0.55	1.4	1430	3.7	2.3	6.0	2.3	56	79	15
OPT 80M2-4P	0.75	1.9	1425	5	2.3	6.6	2.3	56	79.6	16
OPT 90S-4P	1.1	2.7	1420	7.4	2.3	6.8	2.3	59	81.4	20
OPT 90L-4P	1.5	3.5	1420	10.1	2.3	7	2.3	59	82.8	24
OPT 100L1-4P	2.2	5	1430	14.7	2.3	7.6	2.3	64	84.3	31
OPT 100L2-4P	3	6.6	1430	20	2.3	7.6	2.3	64	85.5	35
OPT 112M-4P	4	8.7	1450	26.3	2.2	7.8	2.3	65	86.6	41
OPT 132S-4P	5.5	11.6	1465	35.9	2	7.9	2.3	71	87.7	60
OPT 132M-4P	7.5	15.5	1465	48.9	2	7.5	2.3	71	88.7	74
OPT 160M-4P	11	22.4	1470	71.5	2	7.7	2.3	73	89.8	108
OPT 160L-4P	15	29.9	1470	97.4	2	7.8	2.3	73	90.6	128
OPT 180M-4P	18.5	36.3	1470	120	2	7.8	2.3	76	91.2	158
OPT 180L-4P	22	42.9	1465	143	2	7.8	2.3	76	91.6	172
OPT 200L-4P	30	58.1	1475	194	2	7.3	2.3	76	92.3	241
OPT 225S-4P	37	70.5	1480	239	2	7.4	2.3	78	92.7	285
OPT 225M-4P	45	85.4	1480	290	2.0	7.4	2.3	78	93.1	310
OPT 250M-4P	55	104	1480	354	2	7.4	2.3	79	93.5	375
OPT 280S-4P	75	139	1485	481	2	6.9	2.3	80	94	507
OPT 280M-4P	90	165	1490	579	2	6.9	2.3	80	94.2	572
OPT 315S-4P	110	199	1485	707	2	7	2.2	88	94.5	930
OPT 315M-4P	132	238	1485	849	2	7	2.2	88	94.7	1050
OPT 315L1-4P	160	285	1485	1029	2	7.1	2.2	88	94.9	1110
OPT 315L2-4P	200	355	1485	1286	2	7.1	2.2	88	95.1	1180
OPT 355L1-4P	250	439	1489	1600	2.4	8.9	3.49	80	95.4	1600
OPT 355L2-4P	315	573	1492	2015	2.9	10	4.2	80	95.3	1670
OPT 355L3-4P	355	635	1491	2271	2.8	9.7	4	80	95.4	1710

OptiMity 3-phase induction motors

Electrical and Mechanical Characteristics

Electrical and Mechanical Data

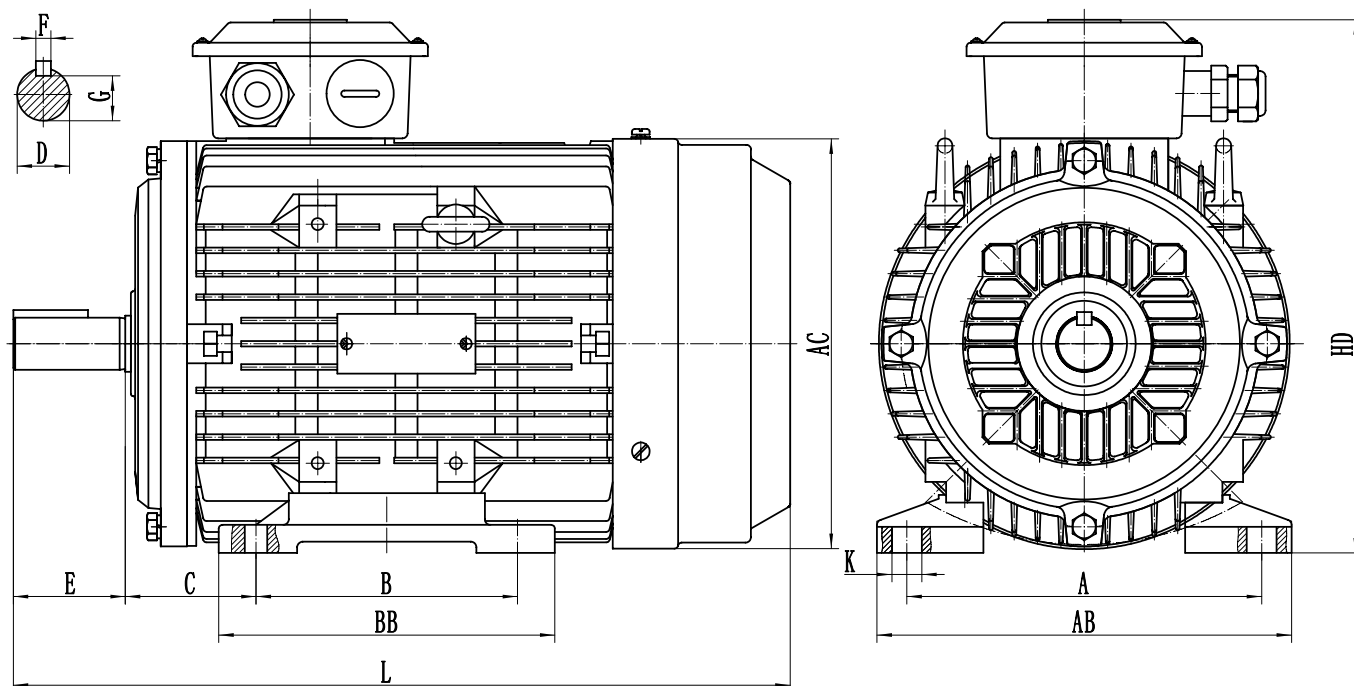
Type	Rated Power	Rated Current	Rated Speed	Rated Torque	Starting Torque/ Rated Torque	Starting Current/ Rated Current	Max. Torque/ Rated Torque	Noise	Efficiency	Weight
	Pn kW	In A	r/min	Mn N.m	Md/Mn	Id/In	Mm/Mn	LP db(A)	%	IM B3 kg
6P										
OPTA 80M1-6P	0.37	1.2	910	3.9	1.9	5.5	2.1	54	67	10
OPTA 80M2-6P	0.55	1.7	910	5.8	1.9	5.5	2.1	54	70	12
OPTA 90S-6P	0.75	2.1	935	7.7	2	6	2.1	57	75.9	15
OPTA 90L-6P	1.1	3	935	11.2	2	6	2.1	57	78.1	19
OPTA 100L-6P	1.5	4	945	15.2	2	6.5	2.1	61	79.8	23
OPTA 112M-6P	2.2	5.7	965	21.8	2	6.6	2.1	65	81.8	30
OPTA 132S-6P	3	7.6	975	29.4	1.9	6.8	2.1	69	83.3	40
OPTA 132M1-6P	4	9.7	975	39.2	1.9	6.8	2.1	69	84.6	48
OPTA 132M2-6P	5.5	13	975	53.9	1.9	7	2.1	69	86	55
OPT 80M1-6P	0.37	1.2	910	3.9	1.9	5.5	2.1	54	67	15
OPT 80M2-6P	0.55	1.7	910	5.8	1.9	5.5	2.1	54	70	16
OPT 90S-6P	0.75	2.1	935	7.7	2	6	2.1	57	75.9	20
OPT 90L-6P	1.1	3	935	11.2	2	6	2.1	57	78.1	24
OPT 100L-6P	1.5	4	945	15.2	2	6.5	2.1	61	79.8	30
OPT 112M-6P	2.2	5.7	965	21.8	2	6.6	2.1	65	81.8	39
OPT 132S-6P	3	7.6	975	29.4	1.9	6.8	2.1	69	83.3	55
OPT 132M1-6P	4	9.7	975	39.2	1.9	6.8	2.1	69	84.6	68
OPT 132M2-6P	5.5	13	975	53.9	1.9	7	2.1	69	86	73
OPT 160M-6P	7.5	16.8	975	73.5	2	7	2.1	70	87.2	104
OPT 160L-6P	11	23.9	975	108	2	7.2	2.1	70	88.7	126
OPT 180L-6P	15	31.8	980	146	1.9	7.3	2.1	73	89.7	163
OPT 200L1-6P	18.5	38.9	980	180	1.9	7.3	2.1	73	90.4	215
OPT 200L2-6P	22	45.4	980	214	1.9	7.4	2.1	73	90.9	238
OPT 225M-6P	30	60.6	985	291	1.9	6.9	2.1	74	91.7	288
OPT 250M-6P	37	73.5	985	359	1.9	7.1	2.1	76	92.2	354
OPT 280S-6P	45	86.8	990	434	1.9	7.3	2	78	92.7	463
OPT 280M-6P	55	104	990	531	1.9	7.3	2	78	93.1	507
OPT 315S-6P	75	145	990	723	1.9	6.6	2	83	93.7	860
OPT 315M-6P	90	171	990	868	1.9	6.7	2	83	94	980
OPT 315L1-6P	110	209	990	1061	1.9	6.7	2	83	94.3	1010
OPT 315L2-6P	132	247	990	1273	1.9	6.8	2	83	94.6	1135
OPT 355L1-6P	160	292	992	1540	1.54	6.32	2.67	78	94.9	1511
OPT 355L2-6P	200	369	992	1924	1.78	6.8	2.95	78	95.1	1628
OPT 355L3-6P	250	454	991	2404	1.48	6	2.5	78	95.1	1700

OptiMity 3-phase induction motors

Size

OPTA

IM 1001 (IM B3)



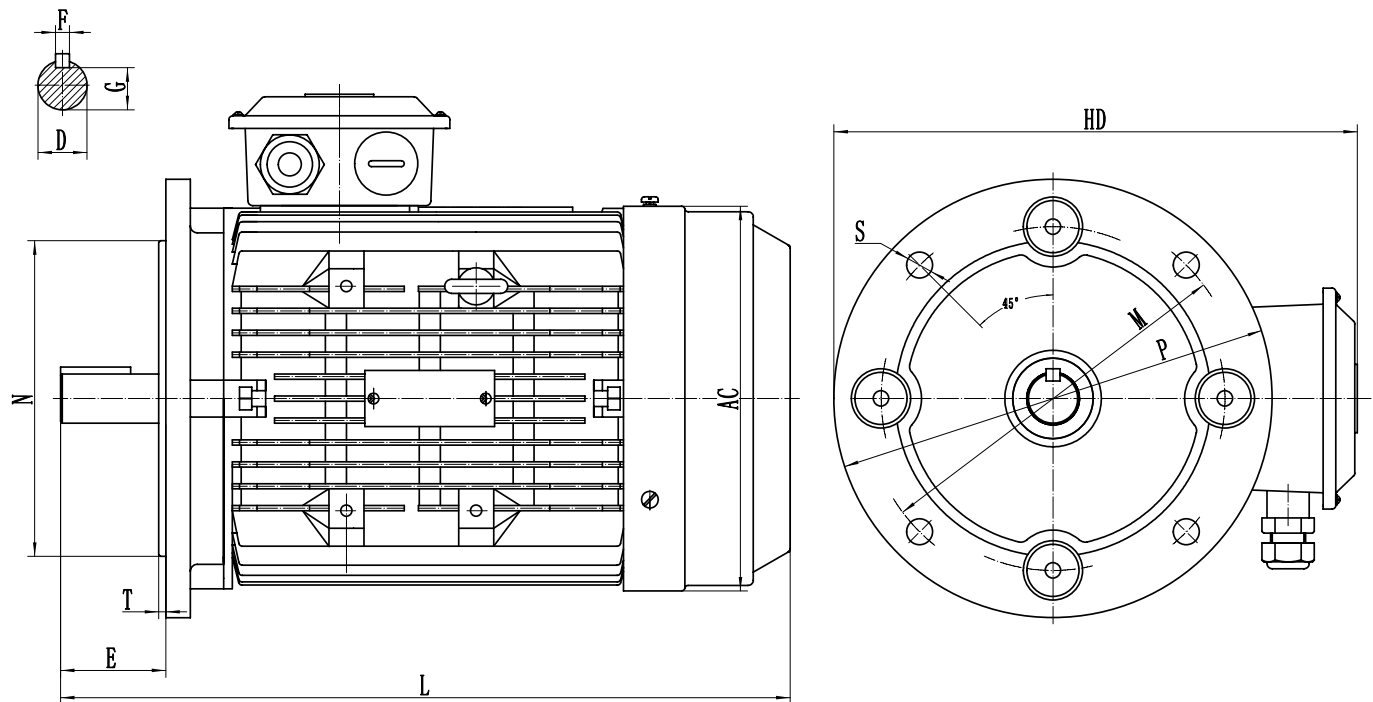
Frame Size	Pole	Main Dimension(mm)													
			B	C	D	E	F	G	H	K	BB	HA	AB	HD	L
80M	2,4,6	125	100	50	19	40	6	15.5	80	10	130	10	165	215	295
90S	2,4,6	140	100	56	24	50	8	20	90	10	130	12	180	235	320
90L			125								155				345
100L	2,4,6	160	140	63	28	60	8	24	100	12	176	14	200	255	390
112M	2,4,6	190	140	70	28	60	8	24	112	12	180	14	220	290	420
132S	2,4,6	216	140	89	38	80	10	33	132	12	190	16	265	335	465
132M			178								230				505

OptiMity 3-phase induction motors

Size

OPTA

IM 3001 (IM B5)



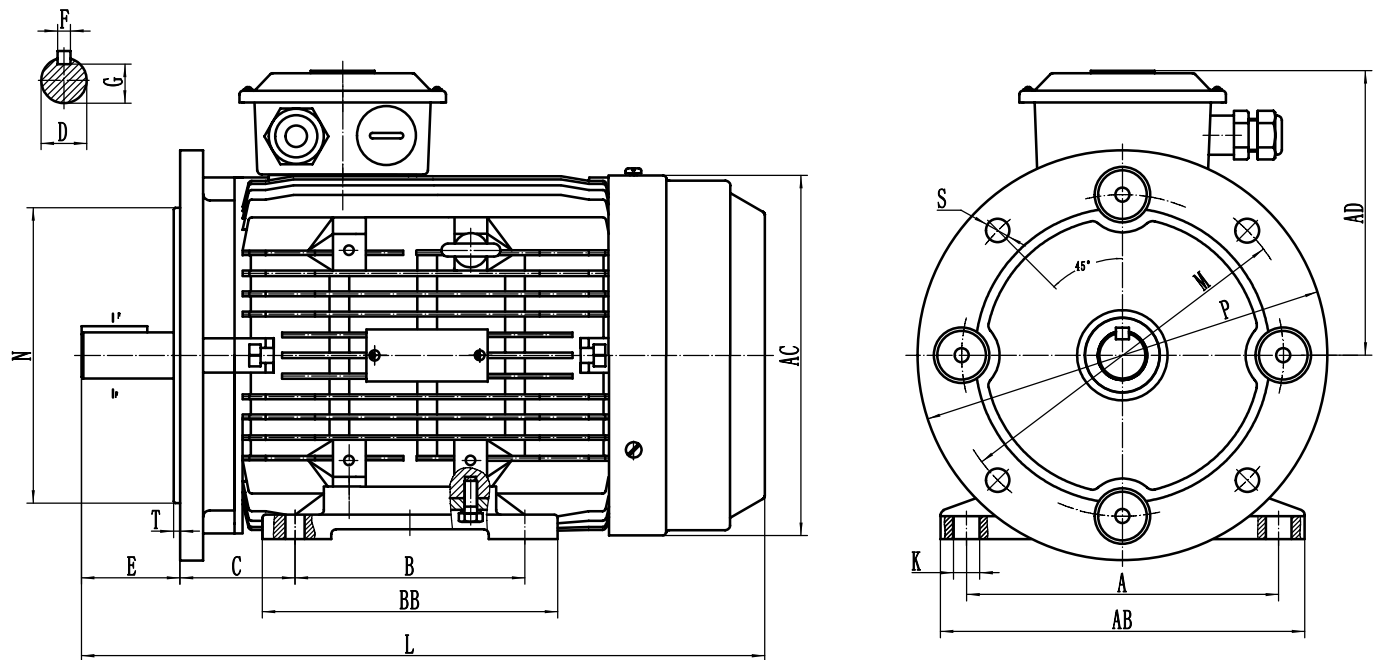
Frame Size	Pole	Main Dimension(mm)											
		D	E	F	G	M	N	P	S	T	AC	HF	L
80M	2,4,6	19	40	6	15.5	165	130	200	4-Φ 12	3.5	165	245	295
90S	2,4,6	24	50	8	20	165	130	200	4-Φ 12	3.5	180	265	320
90L													345
100L	2,4,6	28	60	8	24	215	180	250	4-Φ 15	4	205	300	390
112M	2,4,6	28	60	8	24	215	180	250	4-Φ 15	4	225	315	420
132S	2,4,6	38	80	10	33	265	230	300	4-Φ 15	4	270	370	465
132M													505

OptiMity 3-phase induction motors

Size

OPTA

IM 2001 (IM B35)



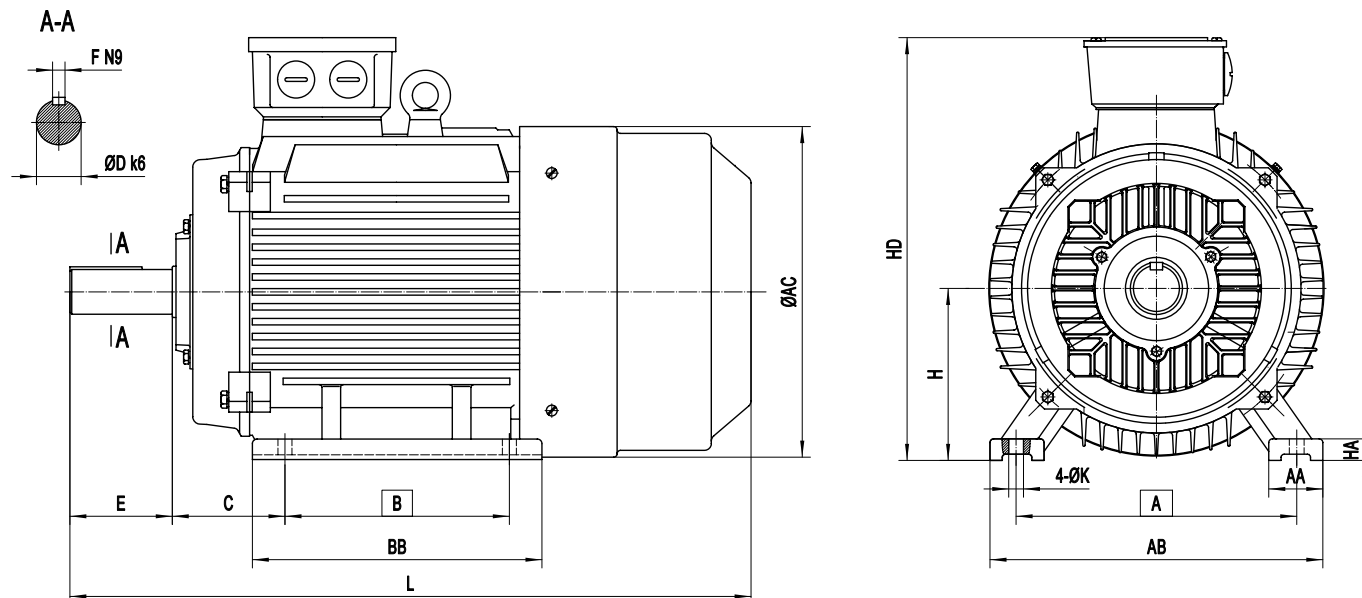
Frame Size	Pole	Main Dimension(mm)																				
		A	B	C	D	E	F	G	H	K	M	N	P	S	T	AA	BB	HA	AB	AC	HD	L
80M	2,4,6	125	100	50	19	40	6	15.5	80	10	165	130	200	4-Φ 12	3.5	32	135	10	160	165	215	295
90S	2,4,6	140	100	56	24	50	8	20	90	10	165	130	200	4-Φ 12	3.5	34	145	12	180	180	235	320
90L			125														170					345
100L	2,4,6	160	140	63	28	60	8	24	100	12	215	180	250	4-Φ 15	4	39	186	14	200	205	255	390
112M	2,4,6	190	140	70	28	60	8	24	112	12	215	180	250	4-Φ 15	4	45	200	14	230	225	290	420
132S	2,4,6	216	140	89	38	80	10	33	132	12	265	230	300	4-Φ 15	4	55	190	16	265	270	335	465
132M			178														230					505

OptiMity 3-phase induction motors

Size

OPT

IM 1001 (IM B3)



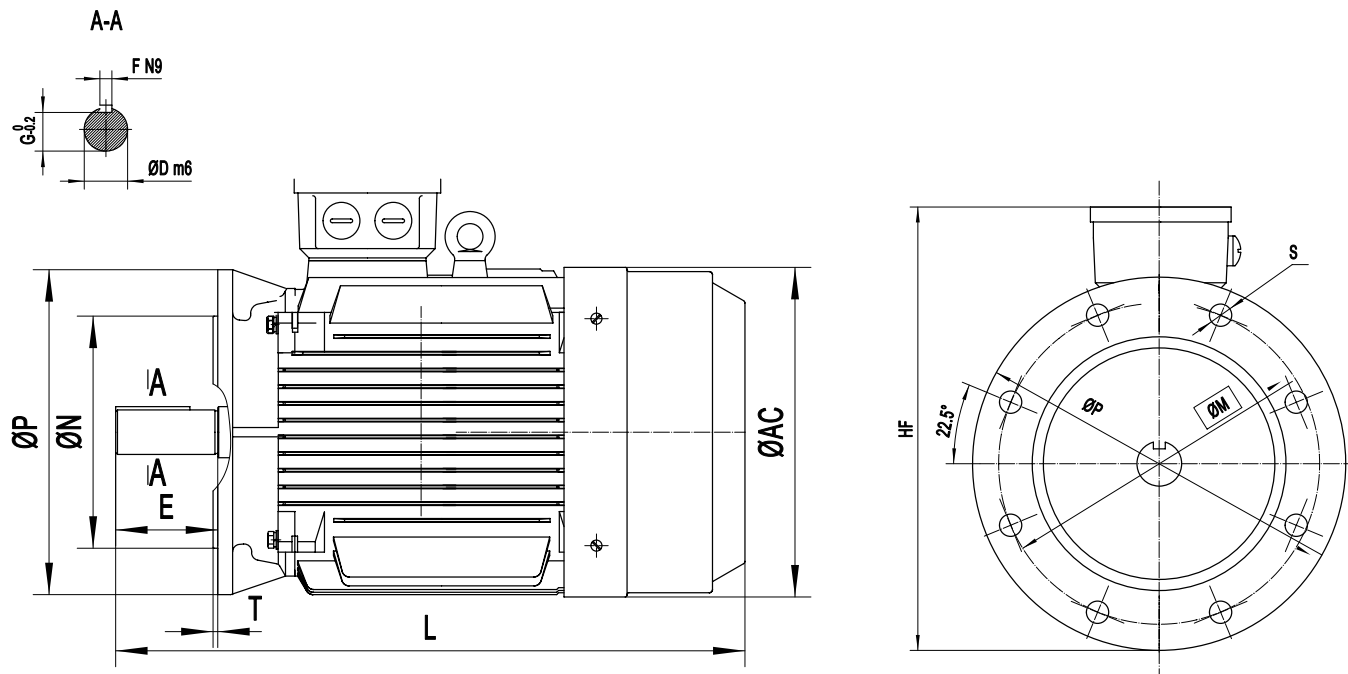
Frame Size	Pole	Main Dimension(mm)															
		A	B	C	D	E	F	G	H	K	AA	BB	HA	AB	AC	HD	L
80M	2,4,6	125	100	50	19	40	6	15.5	80	10	32	135	10	160	165	225	295
90S	2,4,6	140	100	56	24	50	8	20	90	10	34	145	12	180	180	255	320
90L			125									170					345
100L	2,4,6	160	140	63	28	60	8	24	100	12	39	186	14	200	205	275	390
112M	2,4,6	190	140	70	28	60	8	24	112	12	45	200	14	230	225	300	420
132S	2,4,6	216	140	89	38	80	10	33	132	12	55	190	18	265	270	350	465
132M			178									230					505
160M	2,4,6	254	210	108	42	110	12	37	160	15	65	260	20	315	320	420	610
160L			254									304					650
180M	2,4,6	279	241	121	48	110	14	42.5	180	15	70	311	22	355	360	445	685
180L			279									349					725
200L	2,4,6	318	305	133	55	110	16	49	200	19	74	379	26	395	400	505	775
225S	4	356	286	149	60	140	18	53	225	19	78	375	28	435	450	550	815
225M	2 4,6		311		55 60	110 140	16 18	49 53				400					810 840
250M	2 4,6	406	349	168	60 65	140	18	53 58	250	24	80	445	30	490	510	630	920
280S	2 4,6	457	368	190	65 75 65	140	18	58 20 58				485					965
280M	2 4,6		419		75 65		20 18	67.5 58	280	24	90	536	35	545	550	675	1015
315S	2 4,6		406		75 65		20 18	67.5 58				570					1180 1220
315M	2 4,6	508	457	216	65 80	170	18 22	58 71	315	28	120	610	45	635	630	855	1215 1245
315L	2 4,6		508		65 80		18 22	58 71				680					1290 1320
355L	2,4,6	610	630	254	80	170	22	71	355	28	110	710	38	710	688	1000	1515

OptiMity 3-phase induction motors

Size

OPTA

IM 3001 (IM B5)



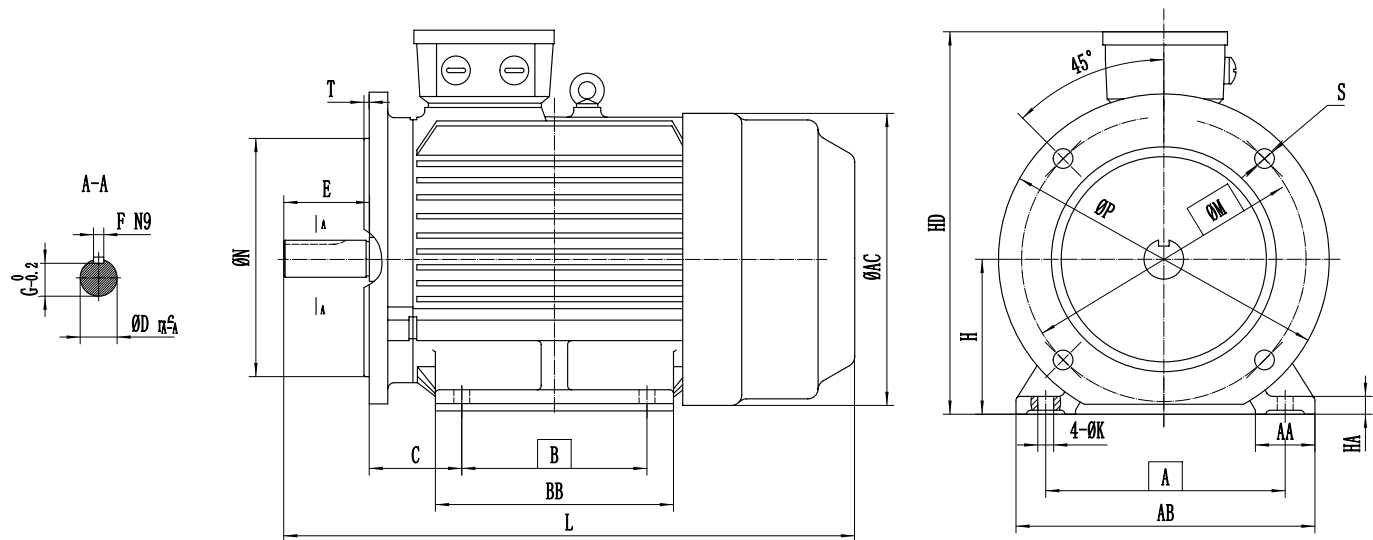
Frame Size	Pole	Main Dimension(mm)											
		D	E	F	G	M	N	P	S	T	AC	HF	L
80M	2,4,6	19	40	6	15.5	165	130	200	4-Φ 12	3.5	165	245	295
90S	2,4,6	24	50	8	20	165	130	200	4-Φ 12	3.5	180	265	320
90L													345
100L	2,4,6	28	60	8	24	215	180	250	4-Φ 15	4	205	300	390
112M	2,4,6	28	60	8	24	215	180	250	4-Φ 15	4	225	315	420
132S	2,4,6	38	80	10	33	265	230	300	4-Φ 15	4	270	370	465
132M													505
160M	2,4,6	42	110	12	37	300	250	350	4-Φ 19	5	320	435	610
160L													650
180M	2,4,6	48	110	14	42.5	300	250	350	4-Φ 19	5	360	440	685
180L													725
200L	2,4,6	55	110	16	49	350	300	400	4-Φ 19	5	400	505	775
225S	4	60	140	18	53	400	350	450	8-Φ 19	5	450	550	815
225M	2	55	110	16	49								810
	4,6	60	140	18	53								840
250M	2	60	140	18	53	500	450	550	8-Φ 19	5	510	655	920
	4,6	65			58								
280S	2	65			18	500	450	550	8-Φ 19	5	550	670	965
	4,6	75			20								
280M	2	65		18	58								1015
	4,6	75			20								

OptiMity 3-phase induction motors

Size

OPT

IM 2001 (IM B35)



Frame Size	Pole	Main Dimension(mm)																								
		A	B	C	D	E	F	G	H	K	M	N	P	S	T	AA	BB	HA	AB	AC	HD	L				
80M	2,4,6	125	100	50	19	40	6	15.5	80	10	165	130	200	4-Φ12	3.5	32	135	10	160	165	225	295				
90S	2,4,6	140	100	56	24	50	8	20	90	10	165	130	200	4-Φ12	3.5	34	145	12	180	180	255	320				
90L			125														170					345				
100L	2,4,6	160	140	63	28	60	8	24	100	12	215	180	250	4-Φ15	4	39	186	14	200	205	275	390				
112M	2,4,6	190	140	70	28	60	8	24	112	12	215	180	250	4-Φ15	4	45	200		230	225	300	420				
132S	2,4,6	216	140	89	38	80	10	33	132	12	265	230	300	4-Φ15	4	55	190	18	265	270	350	465				
132M			178														230					505				
160M	2,4,6	254	210	108	42	110	12	37	160	15	300	250	350	4-Φ19	5	65	260	20	315	320	420	610				
160L			254														304					650				
180M	2,4,6	279	241	121	48	110	14	42.5	180	15	300	250	350	4-Φ19	5	70	311	22	355	360	445	685				
180L			279														349					725				
200L	2,4,6	318	305	133	55	110	16	49	200	19	350	300	400	4-Φ19	5	74	379	26	395	400	505	775				
225S	4	356	286	149	60	140	18	53	225	19	400	350	450	8-Φ19	5	78	375	28	435	450	550	815				
225M	2		311		55	110	16	49									810									
	4, 6		60		140	18	53	840																		
250M	2	406	349	168	60	140	18	53	250	24	500	450	550	8-Φ19	5	80	445	30	490	510	630	920				
	4, 6				65		18	58																		
280S	2	457	368	190	65	140	15	58	280	24	500	450	550	8-Φ19	5	90	485	35	545	550	675	965				
	4, 6				75		20	67.5																		
280M	2		419		65		18	58									536					1015				
	4, 6				75		20	67.5																		
315S	2	508	406	216	65	140	18	58	315	28	600	550	660	8-Φ24	6	120	570	45	635	630	855	1180				
	4,6				80	170	22	71									1220									
315M	2		457		65	140	18	58									610					1215				
	4,6				80	170	22	71														1245				
315L	2	508	457		65	140	18	58	680					1290												
	4,6				80	170	22	71						1320												
35	2,4,6	610	630	254	80	170	22	71	355	27	740	680	800	8-Φ22	6	110	710	38	710	688	920	1515				

Leroy-Somer™

www.emersonindustrial.com/automation

Leroy-Somer™

© Emerson 2016. The information contained in this brochure is for guidance only and does not form part of any contract. The accuracy cannot be guaranteed as Emerson have an ongoing process of development and reserve the right to change the specification of their products without notice.

Control Techniques Limited. Registered Office: The Gro, Newtown, Powys SY16 3BE. Registered in England and Wales. Company Reg. No. 01236886

Moteurs Leroy-Somer SAS. Headquarters: Bd Marcellin Leroy, CS 10015, 16915 Angoulême Cedex 9, France. Share Capital: 65 800 512 €, RCS Angoulême 338 567 258.

5472 en – 2016.10 / a