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Smart Energy and Sustainable Growth*

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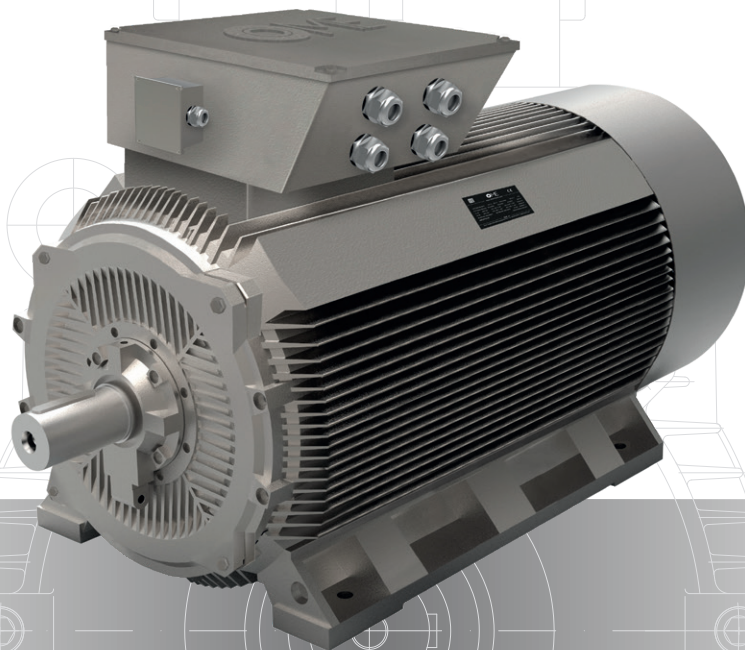
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OMPM

PERMANENT MAGNET ULTRA PREMIUM EFFICIENCY SERIES

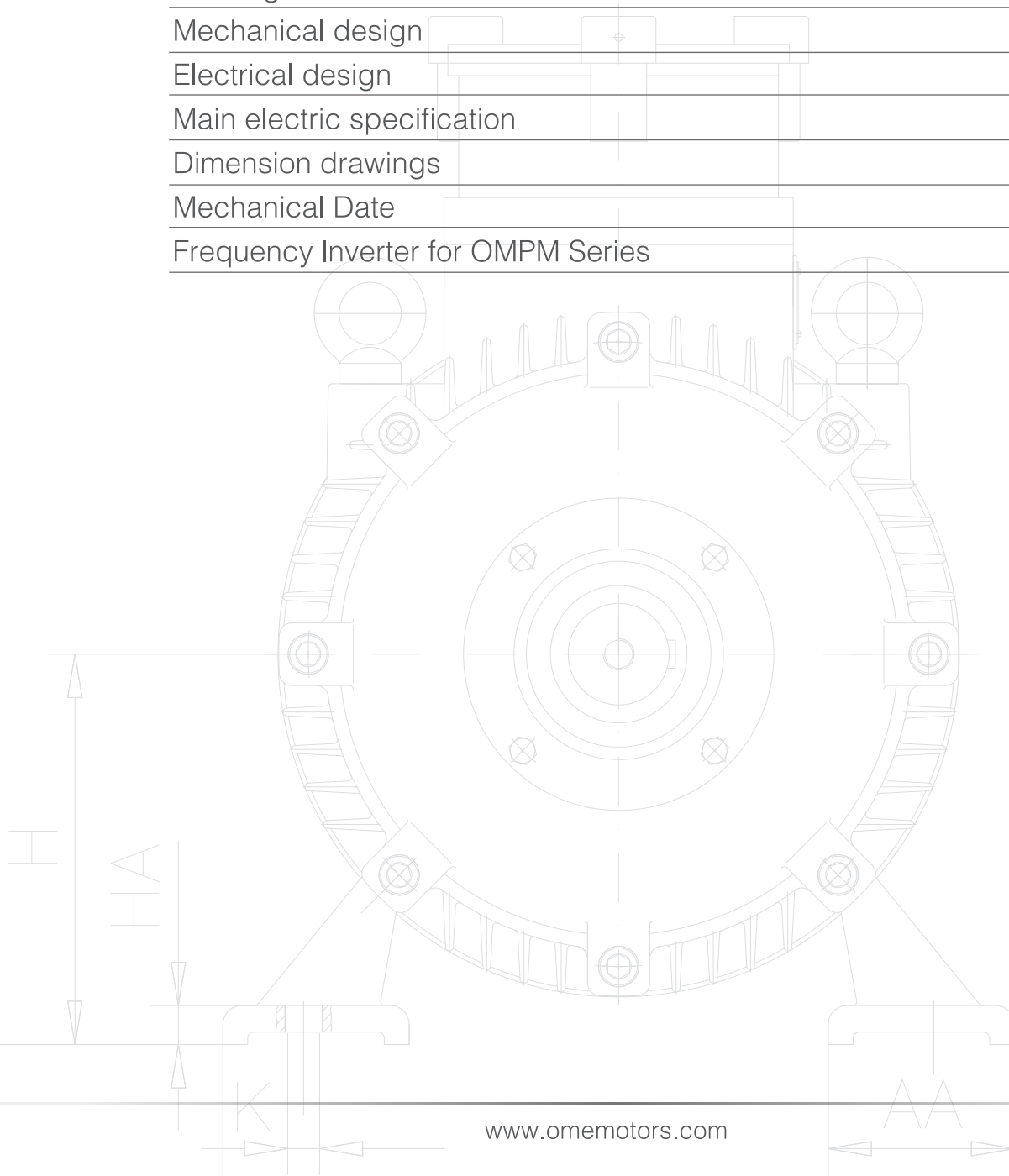
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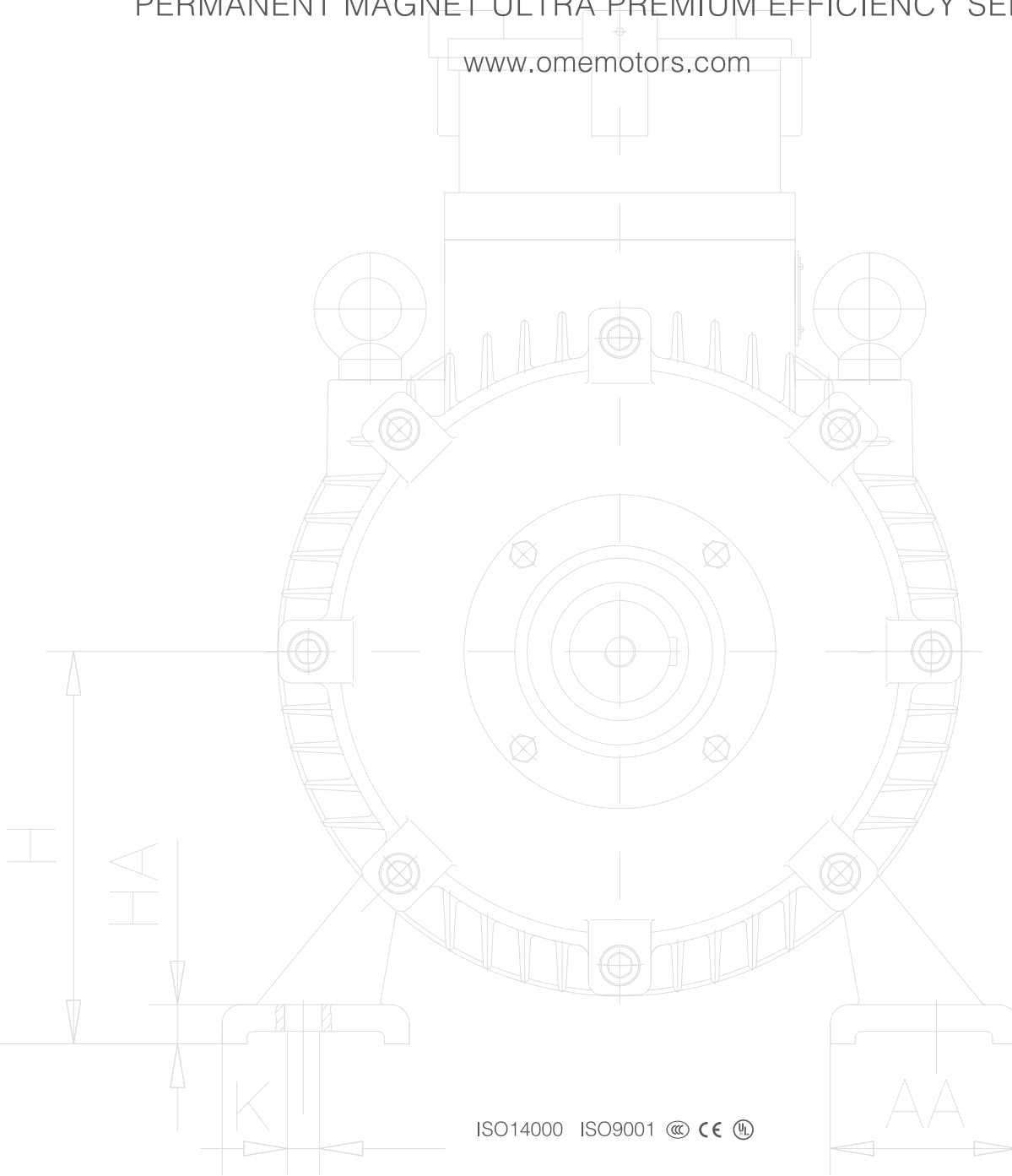




OMPM

PERMANENT MAGNET ULTRA PREMIUM EFFICIENCY SERIES

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OMPM SERIES PERMANENT MAGNET ULTRA PREMIUM EFFICIENCY



Magnet drive System • Precise control at low speed • Compact design

- Standard low voltage motors - or IEC motors - designed and manufactured by OME are low voltage motors that offer high efficiency and at the same time effective energy savings, in line with environmental regulations.

- OME high efficiency motors ensure significant optimisation of energy consumption, safeguarding the environment and ensuring substantial savings in operating costs.



OME Electric Motors

OME IEC low voltage motors are suitable for all industrial sectors and applications, complying with national and international mandatory efficiency rules.

OME's motors help our customers increase their productivity, save energy, improve quality and generate power.

- High quality components including superior copper, metal cable glands and SKF bearings. Thanks to their high quality, OME electric motors are perfectly suitable for heavy duty applications, with Long lasting performances.



- OME also pays exceptional care and to the design attention of its electric motors. This increase the cooling efficiency and also the looking of the product.



- Customized packaging that provides increased protection during transport and an easier handling.





OME Electric Motors and Orsatti Group

OME is a well-established global reality born from the Orsatti family's long experience in the electrical machinery sector and characterized by a history in continuous evolution.

The key points that distinguish the Orsatti Group are in particular:

- Technical experience of over 50 years
- The continuous research for new solutions to increase the performance of our electric motors
- Development of technical solutions in compliance with current standards
- The tailor-made service to customize the motors on customer request
- The wide range of production to meet any market need
- The constant research for suitable solutions to increase the efficiency of our electric motors
- Compliance with the standards required for energy saving and environmental protection

MISSION

Our mission is to be a leading company in the production of electric motors at an international level.

VISION

Our vision is to design and manufacture highly customized motors, meeting the most varied customer requirements, managing to make competitive even the smallest realities.

VALUES

- The high quality of production, sales, service and maintenance;
- Intelligent and low costs logistics;
- Providing motors, services and expertise to save energy and improve customer processes throughout the life cycle of our products and beyond.



Series OMPM

PERMANENT MAGNET ULTRA PREMIUM EFFICIENCY SERIES

- The OMPM series motors by Ome Motors are self-ventilated three-phase motors equipped with IC 81W cooling systems with air-water exchanger.

These are highly efficient devices, with a light and compact structure that can successfully adapt to the most diverse work situations, offering high performance.

Permanent Magnets Motors: the Best for Efficiency and Performance.

The OMPM series permanent magnet motors designed and built by OME Motors are the best model for efficiency, power and size among those available on the market. These are special synchronous electric motors with magnetic bars added to the rotor, which increase thrust and make these devices more efficient in terms of performance and energy savings.

Therefore, permanent magnet motors are even more powerful than standard motors - low voltage IE4: with the same power, in fact, the OMPM series devices have smaller dimensions and greater efficiency. Thanks to their low weight and low volume, in addition, permanent magnet synchronous motors save space, taking advantage of a large condensed power. The permanent magnet motors designed and made to measure by OME Motors are controlled and operate through a frequency inverter, which guarantees constant torque over a wide speed range, operating even at the lowest levels with superior efficiency. Therefore, these devices can also be defined as direct current motors with permanent magnets.

• Main features

- Simple and reliable structure, encoder-free vector control, speed is stepless adjustable from 0 to 1.2 times rated speed, and unlimited times start/stop is available.
- High protection: the IP55 protection can prevent the permanent magnet from attracting iron impurities in air-gap of motor
- High coercivity: adopts interior permanent magnet rotor and higher working point of demagnetization
- Higher power-density, smaller size: the magnetic field of the rotor synchronously rotates with the rotating magnet field of the stator, no slip loss. The stator winding doesn't need to absorb idle current to excite, thus greatly reducing the loss and temperature rise. At the same power/torque, the OMPM motor's size can 70% be smaller, and the center height can reduce 1-2 stages.
- Ultra-high efficiency: it's real ultra-high efficiency, the efficiency is higher than IE4 (stray loss calculated according to the recommendation of method 112B). Efficiency grade IE5 or even higher than IE5 is available upon requirements. Meanwhile, the motor's efficiency keeps high with full range speed/power.
- The electric performance and mounting dimension is comply with GB and IEC standard, it has very good interchangeability with 3 phase asynchronous motors. It's very convenient for the user to change the traditional 3 phase induction motor to more energy-saving OMPM motors.

- Rated power: KW 0,55-KW 315
- Ambient temperature: -15+40°C
- Altitude: lower than 1000 meters above sea level
- Rated voltage: V.230/400, V. 400/690
- Rated frequency: HZ.50 HZ.60
- Connection: Delta connection
- Duty: Continuous(S1)
- Insulation class: F
- Protection class: IP54/IP55
- Cooling method: IC 411
- The series has a self starting capability within 25-120% load range, relative to the same standard asynchronous motors. have a higher efficiency, wide range of economic operation, with significant energy savings.
- Motor temperature low, at rated load, the motor temperature at 30-50K.

• Basic configuration

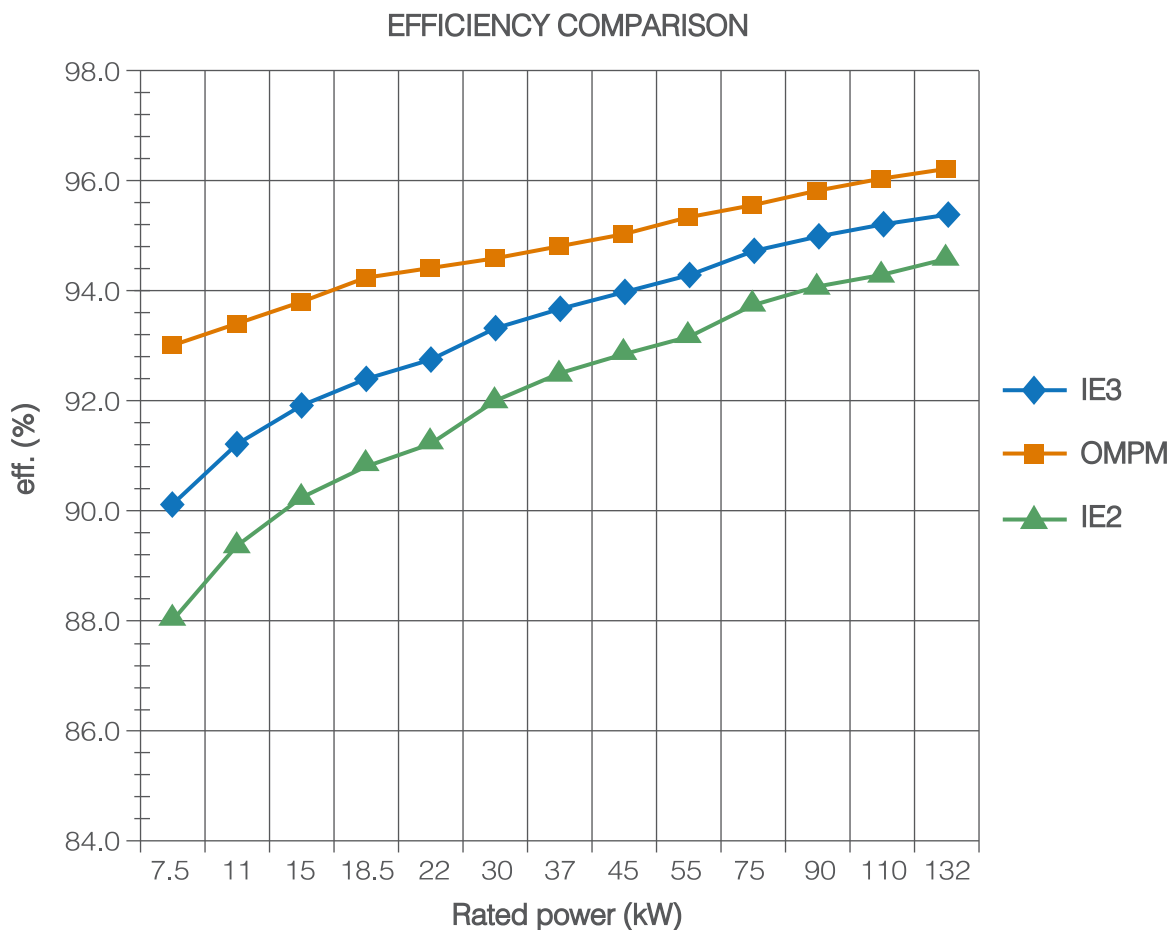
- Frame material: Cast Iron
- Permanent magnet: NdFeP, maximum working temperature 180°C
- Standard color: RAL 5001 (Blue green)
- Rated power output: 0.55 kW ~ 355 kW
- All motors' efficiency reaches grade 2 according to GB18613-2020 and efficiency class IE4 (50Hz) according to IEC 60034-30 2014
- Optimized compact style construction
- Standard mounting construction according to IEC 60034-7: IM B3, B5, IM B35, B14, B34 and etc.
- All motors are designed to IP55 degree of protection (IEC 60034-5), and higher protection degree (IP68 the highest) is available by

- Costumers request

- Re-greasing devices for frame size 280 and above as standard, and for frame size 100~250 as option.
- Insulation system is designed for temperature class 155 (F).
At rated output with line-fed operation, the motors can be used in temperature class 130 (B).
- Self ventilated motors with radial-flow fans (cooling method IC 411 according to IEC 60034-6) as standard, forced air cool with external separately driven fans as option.

- Efficiency Comparison with Three Phase Asynchronous Motor

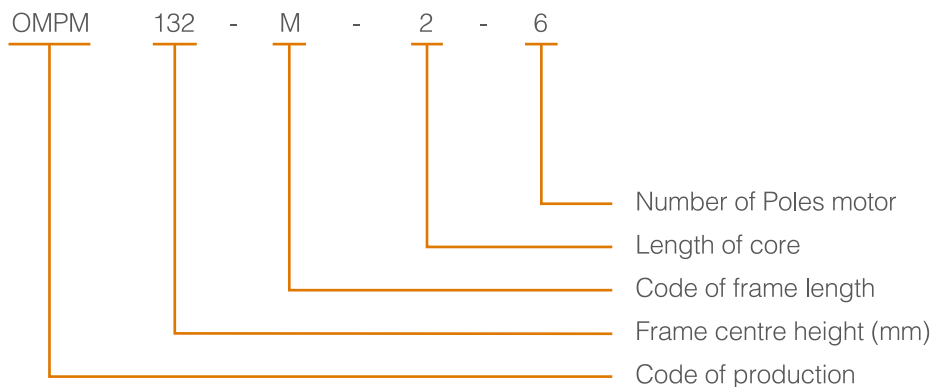
Compare with 3 phase asynchronous motors, the OMPM's rotor is consist of permanent magnet, it don't need rotor winding nor to absorb reactive current to excite, thus greatly reduce the rotor copper loss and iron loss, so the same size OMPM has more higher efficiency than 3 phase asynchronous motors.



Reference standards

Title	IEC Standard	Chinese Standard
Rotating electrical machines - Part1: Rating and performance	IEC60034-1	GB755
Minimum allowable values of energy efficiency and energy efficiency grades for permanent magnet synchronous motors		GB30253
Test procedures for three- phase permanent magnet synchronous machines		GB/T22669
Rotating electrical machines - Part 2-1: Standard methods for determining	IEC60034-2	GB/T1032
Rotating electrical machines - Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification	IEC60034-5	GB/T4942.1
Rotating electrical machines - Part 6: Methods of cooling (IC Code)	IEC60034-6	GB/T1993
Rotating electrical machines - Part 7: Classification of types of construction, mounting arrangements and terminal box position (IM Code)	IEC60034-7	GB/T 997
Rotating electrical machines - Part 8: Terminal markings and direction of	IEC60034-8	GB/T1971
Rotating electrical machines - Part 3: Noise limits	IEC60034-9	GB 10069.3
Rotating electrical machines - Part 14: Mechanical vibration of certain machines with shaft heights 56 mm and higher - Measurement, evaluation and limits of vibration severity	IEC60034-14	GB 10068
Rotating electrical machines - Part1: Frame numbers 56 to 400 and flange numbers 55 to 1080	IEC60072-1	GB/T4772.1
Safety requirements of small and medium size rotating electrical machines	IEC60085	GB 14711
Electrical insulation - Thermal classification	IEC60085	GB/T11021
Classification of environmental conditions Part 2-1: Environmental conditions appearing in nature - Temperature and humidity	IEC60721-2-1	GB/T4797.1
Standard voltages	IEC60038	GB/T156

• Meaning of type code



• Nameplate





Permanent Magnet Synchronous Motor

MODEL		KW	IM	Sr.No.		IEC
V.	HZ.	A.	RPM		EFF.	COS ϕ
IP		ISOL. CL.		DUTY	KG.	DATE
BEARING DE		NDE		AMB. TEMP.		COOLING:
PROTECTION:		COOLING:		ALTITUDE:		ENCODER:
MADE IN ITALY						

OME srl

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• Working environment

Degrees of motor protection IP55 (IEC 60034-5).

Altitude shall not exceed 1000m above sea-level (IEC 60034-1).

Allowed air temperature between -20°C and +40°C (IEC 60034-1).

Permitted relative humidity:

-20°C ≤ T ≤ 20°C: 100 %

20°C ≤ T ≤ 30°C: 95 %

30°C ≤ T ≤ 40°C: 55 %

For higher coolant temperatures and/or site altitudes higher than 1000m above sea level, the specified motor output must be reduced by using the factor k_{HT}

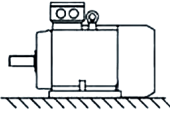
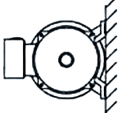
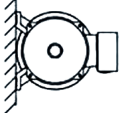
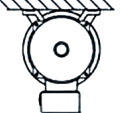
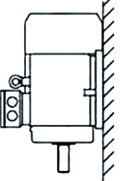
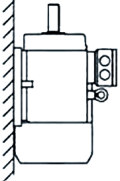
The results in an admissible output

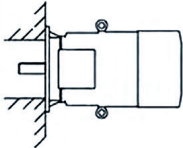
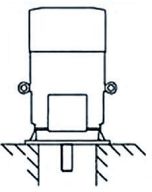
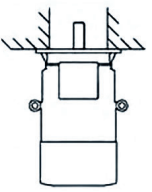
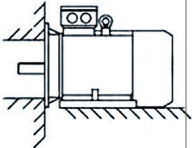
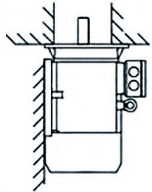
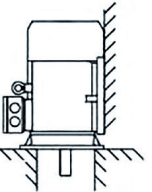
(P_{adm}) of the motor: $P_{adm} = P_{rated} \cdot k_{HT}$

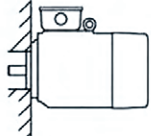
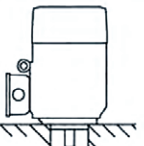
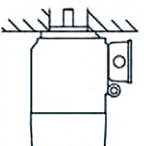
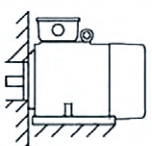
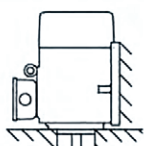
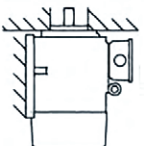
Factor k_{HT} for different site altitudes and / or coolant temperature

Ambient temperature	Site altitude above sea level					
	1000 m	1500 m	2000 m	2500 m	3000 m	4000 m
<30°C	1.07	1.04	1.00	1.96	0.92	0.82
30~40 °C	1.00	0.97	0.94	0.90	0.86	0.77
45 °C	0.96	0.93	0.90	0.86	0.82	0.74
50 °C	0.92	0.89	0.86	0.83	0.79	0.71
55 °C	0.87	0.84	0.82	0.78	0.75	0.67
60 °C	0.82	0.79	0.77	0.74	0.70	0.63

• Construction and mounting type

Construction type	With feet and without flange on the end-shield (DE)					
Mounting type	IM B3 FS 80~355	IM B6 FS 80~315	IM B7 FS 80~315	IM B8 FS 80~315	IM V5 FS 80~315	IM V6 FS 80~315
Diagram						

Construction type	Without feet and with flange on the end-shield (DE)			With feet and with flange on the end-shield (DE)		
Mounting type	IM B5 FS 80~315	IM V1 FS 80~355	IM V3 FS 80~315	IM B35 FS 80~355	IM V15 FS 80~315	IM V35 FS 80~315
Diagram						

Construction type	Without feet and with e-flange on the end-shield (DE)			With feet and with e-flange on the end-shield (DE)		
Mounting type	IM B14 FS 80~160	IM V18 FS 80~160	IM V19 FS 80~160	IM B34 FS 80~160	IM V17 FS 80~160	IM V37 FS 80~160
Diagram						

- Degree of protection

All motors are designed to IPSS degree of protection (IEC 60034-5), and higher protection degree (IP68 the highest) is available by customers' request

The IP code consists of IP code letters and two obligatory digits, meaning:

The first digit (protection from introduction of solid foreign matter)		The second digit (protection against penetration of water and its harmful effects)	
IP	Definition	IP	Definition
0	No protection	0	No protection
1	Diameter $\geq 50\text{mm}$	1	Dropping vertically
2	Diameter $\geq 12.5\text{mm}$	2	Dropping (up to 15°)
3	Diameter $\geq 2.5\text{mm}$	3	Sprayed
4	Diameter $\geq 1.0\text{mm}$	4	Splashed
5	Limited protection against dust	5	In stream
6	Dust tight	6	In strong steam
		7	Under short-time immersion
		8	Under permanent immersion

- Bearing system

OMPM series motors are supplied with the ball bearing as standard. These bearings are either of the sealed or re-greaseable type.

For FS 80 ~ 160, the floating bearings are assembled;

for FS 180 ~ 355, floating bearing at DE, and fixed bearing at NDE assembled.

As standard, Frame size 80 ~ 132 motors are net with regreasing device, but 160 and above motors with regreaseable bearing and regreasing device. If necessary, frame size 100 ~ 250 motor can be configured with regreaseable bearing and regreasing.

- Bearing size

Frame size	Driving end		Non-driving end	
	3000 rpm	<1500 rpm	3000 rpm	≤1500 rpm
80	6204ZZ	6204ZZ	6204ZZ	6204ZZ
90	6205ZZ/C3	6205ZZ/C3	6205ZZ/C3	6205ZZ/C3
100	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3	6206ZZ/C3
112	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3	6306ZZ/C3
132	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3	6308ZZ/C3
160	6309C3	6309C3	6309C3	6309C3
180	6311C3	6311C3	631163	6311C3
200	6312C3	6312C3	6312C3	6312C3
225	6313C3	6313C3	6313C3	6313C3
250	6314C3	6314C3	6314C3	6314C3
280	6314C3	6317C3	6314C3	6317C3
315	6317C3	6319C3	6317C3	6319C3
355	6319C3	6322C3	6319C3	6322C3

Bearing lifetime (nominal lifetime)

Generally, the bearing lifetime is defined by the bearing size, the bearing load, the operating condition, the speed and the grease lifetime.

The nominal bearing lifetime of OMPM series motor is defined according standardized calculation procedures (ISO 281) and is reached or even exceeded for 90% of the bearings when the motors are operated in compliance with the data provide in the catalog.

The bearing lifetime of motors with horizontal type of construction is at least 40,000 hours if there is no additional axial loading at the coupling output and at least 20,000 hours with the maximum admissible loads. This assumes that the motor is operated at 50Hz.

When the motor runs outside of normal conditions, the bearing life will be reduced, such as the following conditions.

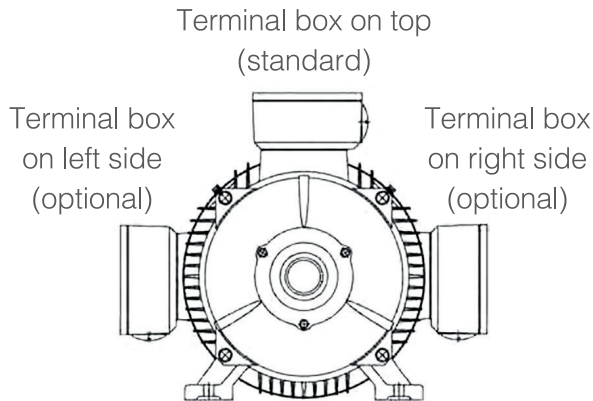
- When motor runs beyond the rated speed, the increase of motor vibration will result in the extra radial and axial force on bearing. This will reduce the life of bearing;
- When the motor vibration increase due to the environment or other equipment, the bearing also will endure more radial and axial force. This also will reduce the life of bearing;
- If the coolant temperature is increased by 10°C, the grease lifetime and regreasing interval is halved.

- Regrease information

In general, if the motor storage duration is less than 1 year, there's no special measures to be taken for the grease. Whole, if it is longer than 1 year, it is suggested to change grease before operation. Please consider the interval table below:

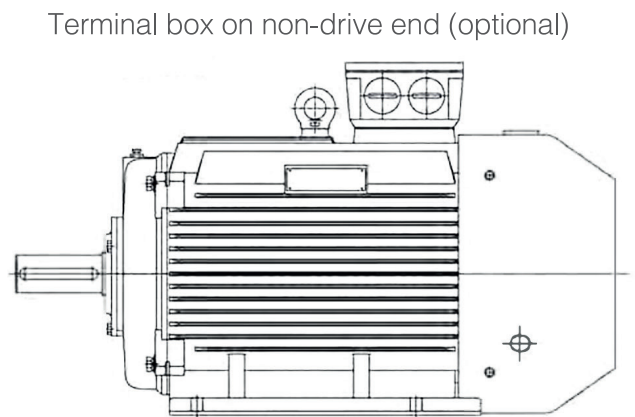
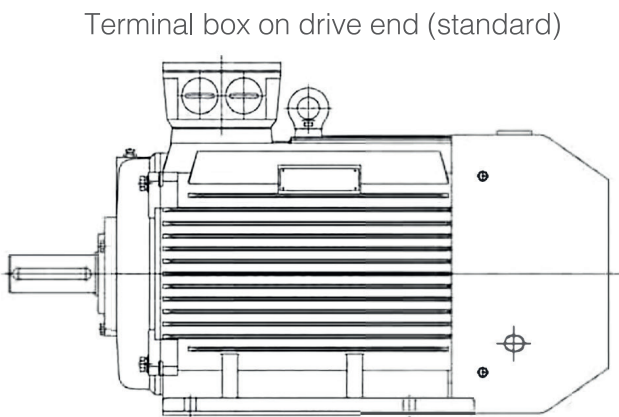
Frame size	3000 rpm		1500 rpm		1000 rpm		750 rpm	
	Interval (h)	Quantity (g)	Interval (h)	Quantity (g)	Interval (h)	Quantity (g)	Interval (h)	Quantity (g)
160	7500	20	15000	20	22500	20	29000	20
180	6000	30	13000	30	19500	40	26500	30
200	5700	40	11500	40	17000	40	23000	40
225	5700	40	10000	40	16000	50	21000	40
250	4000	50	9000	50	13500	70	18000	50
280	4000	50	8000	70	12000	70	16000	70
315	3000	70	7000	70	10000	70	14500	70
355	2000	45	2000	60	4000	60	5000	60

• Location of the terminal box



The terminal box position of OMPM series motor is on the top of house, drive end (standard position). It can also be located on right or left side of the house.

If there is interfere between the terminal box and other components, the terminal box can be moved from the drive end (DE) to non-drive end (NDE)



The terminal box can be rotated by 90°, so it is easy to adjust the cable entry to left right, drive end or non-drive end.

• Cooling and ventilation

The OMPM standard motors are fitted with a radial flow fan, the fan is bi-directional rotation, the cooling method is IC411 in accordance with IEC 60034-6.

Backward curved fan is optional to reduce the ventilation noise. In this case the motor could rotate in only one direction.

For some special application, separately driven fan should be considered to be configured.

- The use of a separately driven fan is recommended to increase motor utilization at low speed;

- When motor speed significantly higher than the synchronous speed, the separately fan is also recommended to be used. It can help reduce the motor noise.

For some application like fan, the motor without fan is optional. In this case the motor must be cooled by the air overflowed its surface, the cooling method is IC418.

Electrical design

• Rated output

The rated output power of OMPM series motors means that the motor runs under continuous duty S1 (IEC 60034 - 1) operation when operated at ambient temperature from -20°C to 40°C and at altitudes of up to 1000m over sea.

• Tolerance for electrical data

No.	Quantity	Tolerance
1	Efficiency η P_{rated} ≤ 150 kW $P_{rated} \geq 150$ kW	-15% of $(1 - \eta)$ -10% of $(1 - \eta)$
2	Power factor	-1/6 $(1 - \cos\phi)$ Minimum absolute value: 0.02 Maximum absolute value: 0.07

• Overload times

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

• Insulation system

OMPM series motors are designed for insulation class F (155°C) with temperature rise class B (80K) if the motor works at high ambient temperature, or there's factors affect the motor cooling, insulation class H is optional to increase the motor's reliability.

• Driving of motor

Because of the design, a variable frequency driver is necessary to drive the PMSM. JEMEC recommend using JEMEC variable frequency driver (please refer to P 22).

• Motor protection

- Winding protection

When motors encounter failures such as overload, over/under voltage, shortage, phase loss etc, the motor's winding temperature may exceed its insulation maximum withstand temperature, cause the motor damage. To use of thermal protectors and thermal detectors incorporated into the stator windings in order to protect them against serious damage due to thermal overloads.

- PTC thermistors protection

A PTC thermistors is a typical thermally sensitive semi-conductor resistors, when exceeds the certain temperature (Curie temperature), the resistance increase significant with temperature. When a limit temperature is reached (nominal tripping temperature), the resistance of PTC thermistors will have a step change. This is evaluated by a tripping unit and can be used to open auxiliary circuits. Motor winding is protected with PTC thermistors with 3 embedded temperature sensors for tripping, the tripping temperature is optional. For OMPM series motor wltH class F insulation, the tripping temperature is 150°C

- Motor winding is protected with two sets of three temperature sensors, one set is for warning, another set for tripping. For OMPM series motor with class F insulation, the warning temperature is 140°C, and tripping temperature is 150°C.

- PT100 resistance thermometers protection

PT100 platinum thermometers are a high precision, high sensitivity, better linear temperature resistance, more stable performance, and high reliability sensor. For OMPM series motors whose frame size above 280, PT100s are optional. Normally each phase winding equips 2 PT100, 6 PT100s for 3 phase windings. Of which 3 for operation, 3 for spare.

- Bearing protection

Overheating is a major indicator of an underlying problem affecting a bearing, so it is an important measure to keep the motor running safe by monitoring the bearings' temperature. The temperature is monitored through PT100 resistance 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. It is optional for OMPM series frame size 280 and above motors.

- Anti-condensation heater

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. Anti-condensation heaters must be switched off during operation. When motor shut down, the heaters must be switched on. Anti-condensation heater is optional for all OMPM series electric motors.

Main electric specification

- Rated speed 3000 rpm

Type	Rated power (kW)	Rated voltage (V)	Efficiency (%)	Rated speed (r/min)	Rated current (A)	power factor (cosΦ)	Rated frequency (Hz)	Service factor	Weight (Kg)
OMPM0.75-3000-Z80S6	0.55	380	87.3	3000	1.01	0.95	150	1.0	15
OMPM0.75-3000-780S6	0.75		88.6		1.35				16
OMPM1.1-3000-Z80M6	1.1		89.8		1.96				17
OMPM1.5-3000-Z90S6	1.5		90.9		2.64				20
OMPM2.2-3000-Z90L6	2.2		91.8		3.83				22
OMPM3-3000-Z100L6	3		92.6		5.18				31
OMPM4-3000-Z100L6	4		93.3		6.86				33
OMPM5.5-3000-Z112M6	5.5		94.0		9.36				43
OMPM7.5-3000-Z112M6	7.5		94.5		12.7				48
OMPM11-3000-Z132S6	11		95.0		18.5				65
OMPM15-3000-Z132M6	15		95.3		25.2				76
OMPM18.5-3000-Z132M6	18.5		95.6		30.9				83
OMPM22-3000-Z160M6	22		95.9		36.7				117
OMPM30-3000-Z160L6	30		96.1		49.9				139
OMPM37-3000-Z180M8	37		96.3		61.4		164		
OMPM45-3000-Z180L8	45		96.4		74.7		187		
OMPM55-3000-Z200L8	55		96.5		91.1		226		
OMPM75-3000-7200L8	75		96.6		124		249		
OMPM90-3000-Z225S8	90		96.7		149		308		
OMPM110-3000-Z250M8	110		96.7		182		411		
OMPM132-3000-Z280S8	132		96.7		218		573		
OMPM160-3000-Z280M8	160		96.7		264		639		
OMPM185-3000-Z315S8	185		96.7		306		904		
OMPM200-3000-Z315M8	200		96.8		331		942		
OMPM220-3000-Z315L8	220		96.8		364		983		
OMPM250-3000-Z315L8	250		96.9		413		1024		
OMPM280-3000-Z315L8	280		96.9		463		1107		
OMPM315-3000-Z315L8	315		97.0		519		1173		

• Rated speed 1500 rpm

Type	Rated power (kW)	Rated voltage (V)	Rated current (A)	Rated speed (r/min)	Efficiency (%)	power factor (cosΦ)	Rated frequency (Hz)	Service factor	Weight (Kg)
OMPM0.55-1500-Z80S6	0.55	380	1.03	1500	85.6	0.95	75	1.0	17
OMPM0.75-1500-Z80M6	0.75		1.40		85.6				18
OMPM1.1-1500-Z80M6	1.1		2.01		87.4				19
OMPM1.5-1500-Z90S6	1.5		2.72		88.1				23
OMPM2.2-1500-Z90L6	2.2		3.92		89.7				26
OMPM3-1500-Z100L6	3		5.31		90.3				37
OMPM4-1500-Z112M6	4		7.04		90.9				48
OMPM5.5-1500-Z112M6	5.5		9.55		92.1				53
OMPM7.5-1500-Z132S6	7.5		13.0		92.6				64
OMPM11-1500-Z132M6	11		18.8		93.6				87
OMPM15-1500-Z160M6	15		25.5		94.0				108
OMPM18.5-1500-Z160M6	18.5		31.4		94.3				141
OMPM22-1500-Z180M8	22		37.2		94.7		154		
OMPM30-1500-Z180L8	30		50.5		95.0		179		
OMPM37-1500-Z200L8	37		62.1		95.3		217		
OMPM45-1500-Z200L8	45		75.3		95.6		225		
OMPM55-1500-Z225S8	55		91.8		95.8		282		
OMPM75-1500-Z225M8	75		125		96.0		320		
OMPM90-1500-Z250M8	90		150		96.2		427		
OMPM110-1500-Z250M8	110		182		96.4		480		
OMPM132-1500-Z280S8	132		219		96.6		686		
OMPM160-1500-Z280M8	160		264		96.8		759		
OMPM185-1500-Z315S8	185		305		97.0		1002		
OMPM200-1500-Z315M8	200		330		97.0		1100		
OMPM220-1500-Z315L8	220		363		97.0		1133		
OMPM250-1500-Z315L8	250		411		97.2		1265		
OMPM280-1500-Z355M1	280		461		97.3		150		1602
OMPM315-1500-Z355L12	315		517		97.3				1687
OMPM355-1500-Z355L12	355		583		97.3				1815

- Rated speed 1000 rpm

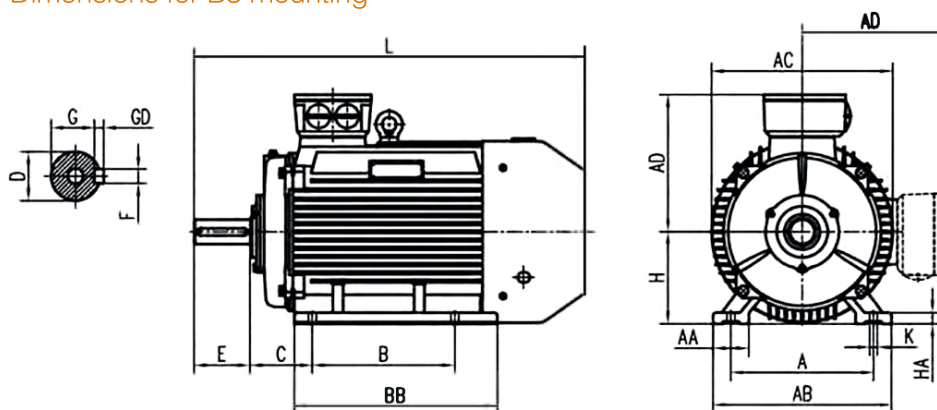
Type	Rated power (kW)	Rated voltage (V)	Rated current (A)	Rated speed (r/min)	Efficiency (%)	power factor (cosΦ)	Rated frequency (Hz)	Service factor	Weight (Kg)
OMPM0.55-1000-Z80M6	0.55	380	1.02	1000	85.9	0.95	50	1.0	18
OMPM0.75-1000-Z80M6	0.75		1.37		87.4				19
OMPM1.1-1000- Z90S6	1.1		1.98		88.7				24
OMPM1.5-1000-Z90L6	1.5		2.67		89.9				26
OMPM2.2-1000-Z100L6	2.2		3.87		90.9				37
OMPM3-1000-Z112M6	3.0		5.23		91.8				49
OMPM4-1000-Z112M6	4.0		6.90		92.7				53
OMPM5.5-1000-Z132S6	5.5		9.42		93.4				72
OMPM7.5-1000-Z132M6	7.5		12.8		94.0				83
OMPM11-1000-Z160M6	11		18.6		94.5				127
OMPM15-1000-Z160M6	15		25.3		94.9				151
OMPM18.5-1000-Z180M8	18.5		31.0		95.3		182		
OMPM22-1000-Z180M8	22		36.8		95.6		205		
OMPM30-1000-Z200L8	30		50.1		95.8		246		
OMPM37-1000-Z225S8	37		61.6		96.0		324		
OMPM45-1000-Z225S8	45		74.8		96.2		355		
OMPM55-1000-Z250M8	55		91.3		96.3		402		
OMPM75-1000-Z250M8	75		124		96.4		489		
OMPM90-1000-Z280M8	90		149		96.5		606		
OMPM110-1000-Z280M8	110		182		96.7		930		
OMPM132-1000-Z315M8	132		218		96.9		1100		
OMPM160-1000-Z315L8	160		264		97.0		1199		
OMPM185-1000-Z315L8	185		305		97.0		1282		
OMPM200-1000-Z355M12	200		330		97.0		1471		
OMPM220-1000-Z355L12	220		363		97.0		1520		
OMPM250-1000-Z355L12	250		412		97.0		1772		
OMPM280-1000-Z355M12	280		462		97.0		1921		
OMPM315-1000-Z355L12	315		519		97.0		2049		

• Rated speed 750 rpm

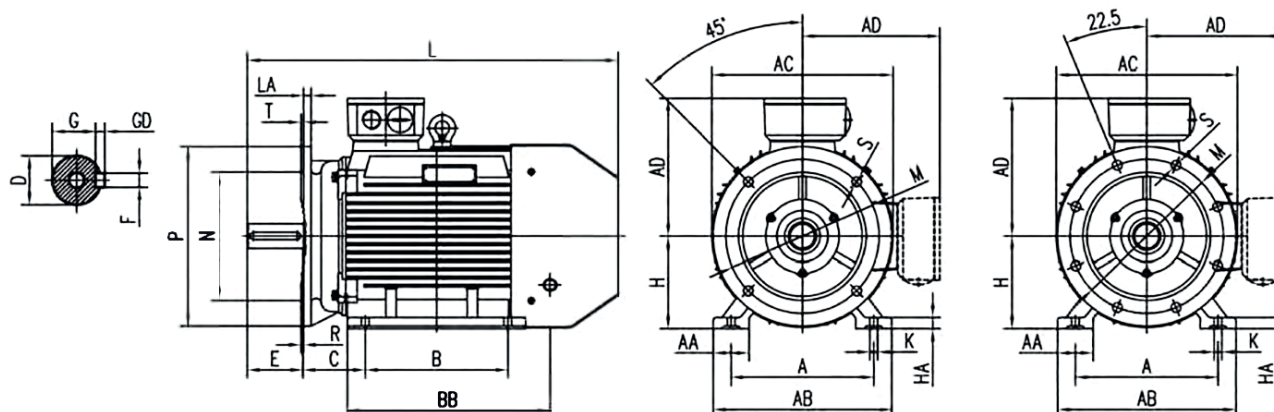
Type	Rated power (kW)	Rated voltage (V)	Rated current (A)	Rated speed (r/min)	Efficiency (%)	power factor (cosΦ)	Rated frequency (Hz)	Service factor	Weight (Kg)
OMPM0.55-750-Z80M6	0.55	380	1.05	750	83.9	0.95	37.5	1.0	20
OMPM0.75-750-Z80M6	0.75		1.41		84.9				21
OMPM1.1-750-Z90S6	1.1		2.05		86.0				26
OMPM2.2-750-Z100L6	1.5		2.75		87.2				37
OMPM3-750-Z112M6	2.2		3.99		88.1				50
OMPM3-750-Z132S6	3.0		5.39		89.0				65
OMPM4-750-Z132S6	4.0		7.09		90.2				76
OMPM5.5-750-Z160M6	5.5		9.68		90.9				114
OMPM7.5-750-Z160M6	7.5		13.1		91.5				116
OMPM11-750-Z180M8	11		19.0		92.7		154		
OMPM15-750-Z180M8	15		25.7		93.3		179		
OMPM18.5-750-Z200L8	18.5		31.5		94.0		217		
OMPM22-750-Z200L8	22		37.2		94.5		225		
OMPM30-750-Z225M8	30		50.7		94.7		295		
OMPM37-750-Z225M8	37		62.3		95.0		355		
OMPM45-750-Z250M8	45		75.6		95.2		410		
OMPM55-750-Z250M8	55		92.2		95.4		480		
OMPM75-750-Z280M8	75		125		95.6		651		
OMPM90-750-Z280M8	90		151		95.6		875		
OMPM110-750-Z315S8	110		182		96.6		1133		
OMJPM132-750-Z315M8	132		218		96.7		1265		
OMPM160-750-Z355L12	160		264		96.8		1166		
OMPM185-750-Z355L12	185		305		97.9		1587		
OMPM200-750-Z355M12	200		330		97.0		1836		
OMPM220-750-Z355L12	220		363		97.0		1921		
OMPM250-750-Z355L12	250		412		97.0		2049		

• Dimension drawing

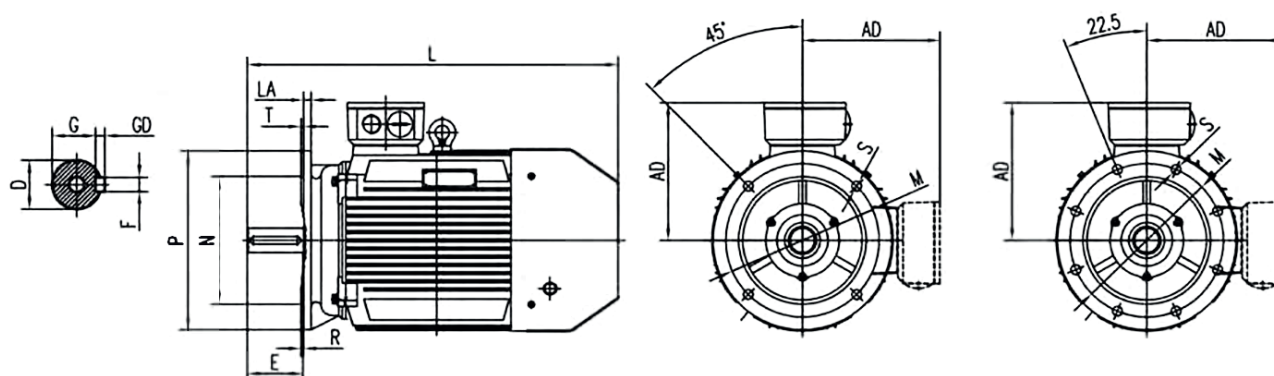
Dimensions for B3 mounting



Dimensions for B35 mounting



Dimensions for B5 mounting



• Mechanical Data

	Universal Dimensions (shaft extension)										B35/B5/VI Dimensions							
Frame size	D		E		F		G		GD		N	M	P	S	T	R	LA	HF
	3000	Other	3000	Other	3000	Other	3000	Other	3000	Other								
80	19	19	40	40	6	6	15.5	15.5	6	6	130	165	200	12	3.5	0	12	---
90S	24	24	50	50	8	8	20	20	7	7	130	165	200	12	3.5	0	12	---
9L	24	24	50	50	8	8	20	20	7	7	130	165	200	12	3.5	0	12	---
100L	28	28	60	60	8	8	24	24	7	7	180	215	250	14.5	4	0	13	---
112M	28	28	60	60	8	8	24	24	7	7	180	215	250	14.5	4	0	14	---
132S	38k6	38k6	80	80	10	10	33	33	8	8	230j6	265	300	14.5	4	0	14	---
132M	38k6	38k6	80	80	10	10	33	33	8	8	230j6	265	300	14.5	4	0	14	---
160M	42k6	42k6	110	110	12	12	37	37	8	8	250j6	300	350	19	5	0	15	---
160L	42k6	42k6	110	110	12	12	37	37	8	8	250j6	300	350	19	5	0	15	---
180M	48k6	48k6	110	110	14	14	42.5	42.5	9	9	250j6	300	350	19	5	0	15	500
180L	48k6	48k6	110	110	14	14	42.5	42.5	9	9	250j6	300	350	19	5	0	15	500
200L	55m6	55m6	110	110	16	16	49	49	10	10	300j6	350	400	19	5	0	17	550
225S	---	60m6	---	140	---	18	---	53	---	11	350j6	400	450	19	5	0	20	610
225M	55m6	60m6	110	140	16	18	49	53	10	11	350j6	400	450	19	5	0	20	610
250M	60m6	65m6	140	140	18	18	53	58	11	11	450j6	500	550	19	5	0	22	650
280S	65m6	75m6	140	140	18	20	58	67.5	11	12	450j6	500	550	19	5	0	22	720
280M	65m6	75m6	140	140	18	20	58	67.5	11	12	450j6	500	550	19	5	0	22	720
315S	65m6	80m6	140	170	18	22	58	71	11	14	550j6	600	660	24	6	0	25	860
315M	65m6	80m6	140	170	18	22	58	71	11	14	550j6	600	660	24	6	0	25	860
315L	65m6	80m6	140	170	18	22	58	71	11	14	550j6	600	660	24	6	0	25	860
355M	75m6	95m6	140	170	20	25	67.5	86	12	14	680j6	740	800	24	6	0	30	980
355L	75m6	95m6	140	170	20	25	67.5	86	12	14	680j6	740	800	24	6	0	30	980

	B3/B35 Dimensions										Universal Dimensions			
Frame size	A	AA	AB	B	BB	HA	HD	H	K	C	AC	AD	L	
													3000	Other
80	125	37	165	100	135	10	220	80	10	50	165	145	295	295
90S	140	37	180	100	140	12	250	90	10	56	195	155	315	315
9L	140	37	180	125	165	12	250	90	10	56	195	155	340	340
100L	160	42	205	140	185	14	270	100	12	63	215	180	385	385
112M	190	52	230	140	185	15	300	112	12	70	240	190	400	400
132S	216	63	270	140	228	20	345	132	12	89	275	213	508	508
132M	216	63	270	178	266	20	345	132	12	89	275	213	546	546
160M	254	73	320	210	318	20	420	160	15	108	330	260	659	659
160L	254	73	320	254	362	20	420	160	15	108	330	260'	714	714
180M	279	73	355	241	349	22	455	180	15	121	380	280	738	738
180L	279	73	355	279	387	22	455	180	15	121	380	280	778	778
200L	318	73	395	305	375	25	505	200	19	133	400	305	770	770
225S	356	83	435	286	375	28	560	225	19	149	470	335	---	820
225M	356	83	435	311	400	28	560	225	19	149	470	335	815	845
250M	406	88	490	349	450	30	615	250	24	168	510	370	910	910
280S	457	93	550	550	490	35	680	280	24	190	547	400	985	985
280M	457	93	550	550	540	35	680	280	24	190	547	400	1035	1035
315S	508	120	635	635	575	45	845	315	28	216	645	530	1185	1215
315M	508	120	635	635	685	45	845	315	28	216	645	530	1295	1325
315L	508	120	635	635	685	45	845	315	28	216	645	530	1295	1325
355M	610	120	730	730	750	52	1010	355	28	254	710	655	1500	1530
355L	610	120	730	730	750	52	1010	355	28	254	710	655	1500	1530

- Frequency Inverter for Permanent Magnet Synchronous Motor



ES500 series variable frequency driver is a kind of high-performance vector control variable frequency driver, supports encoder-free vector control and close-loop vector control, high-reliability, easy operation, multi-functional, supports various kind encoder and communication interface, it supports to drive induction motor as well.

• ES 500 series

Driver Type	Power capacity (k VA)	Input current (A)	Output current (A)	Motor power (kW)	Motor power (HP)
Single phase: 220V(-15%~+20%) S0/60Hz					
ES500-2S 0.4GB	1	5.4	2.3	0.4	0.75
ES500-2S 0.75GB	1.5	8.2	4	0.75	1
ES500-2S 1.5GB	3	14	7	1.5	2
ES500-2S 2.2GB	4	23	9.6	2.2	3
Three phase: 220V(-15%~+20%)50/60Hz					
ES500-2T 0.4GB	1.5	3.4	2.1	0.4	0.5
ES500-2T 0.75GB	3	5	3.8	0.75	1
ES500-2T 1.5GB	4.5	7.8	6.8	1.5	2
ES500-2T 2.2GB	5.9	10.5	9	2.2	3
ES500-2T 3.7GB	8.9	14.6	13	3.7	5
ES500-2T 5.5GB	17	26	25	5.5	7.5
ES500-2T 7.5GB	21	35	32	7.5	10
ES500-2T 11GB	30	46.5	45	11	15
ES500-2T 15G	40	62	60	15	20
ES500-2T18.5G	57	76	75	18.5	25
ES500-2T 22G	69	92	91	22	30
ES500-2T 30G	85	113	112	30	40
ES500-2T 37G	114	157	150	37	50
ES500-2T 45G	134	180	176	45	60
ES500-2T 55G	160	214	210	55	75
ES500-2T 75G	23	307	304	75	100
Three phase: 380V(-15%~+20%)50/60Hz					
ES500-4T 0.4GB	1	2.4	1.2	0.4	0.75
ES500-4T 0.75GB	1.5	3.4	2.1	0.75	1
ES500-4T 1.5GB	3	5	3.8	1.5	2
ES500-4T 2.2GB	4	5.8	5.1	2.2	3
ES500-4T 3.7GB	5.9	10.5	9	3.7	5
ES500-4T5.5GB	8.9	14.6	13	5.5	7.5
ES500-4T 5.5PB	8.9	14.6	13	5.5	7.5
ES500-4T 7.5GB	11	20.5	17	7.5	10
ES500-4T 7.5PB	11	20.5	17	7.5	10
ES500-4T 11GB	17	26	25	11	15
ES500-4T 11PB	17	26	25	11	15

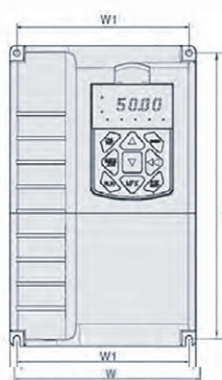
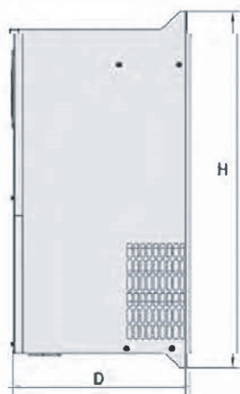
Driver Type	Power capacity (k VA)	Input current (A)	Output current (A)	Motor power (kW)	Motor power (HP)
ES500-4T 15GB	21	35	32	15	20
ES500-4T 15PB	21	35	32	15	20
ES500-4T 18.5GB	24	38.5	37	18.5	25
ES500-4T 18.5PB	24	38.5	37	18.5	25
ES500-4T 22GB	30	46.5	45	22	30
ES500-4T 22PB	30	46.5	45	22	30
ES500-4T 30G	40	62.5	60	30	40
ES500-4T 30PB	40	62.5	60	30	40
ES500-4T 37G	57	76	75	37	50
ES500-4T 37P	57	76	75	37	50
ES500-4T 45G	69	92	91	45	60
ES500-4T 45P	69	92	91	45	60
ES500-4T 55G	85	113	112	55	75
ES500-4T 55P	85	113	112	55	75
ES500-4T 75G	114	157	150	75	100
ES500-4T 75P	114	157	150	75	100
ES500-4T 90G	134	180	176	90	125
ES500-4T 90P	134	180	176	90	125
ES500-4T 110G	160	214	210	110	150
ES500-4T 110P	160	214	210	110	150
ES500-4T 132G	192	256	253	132	200
ES500-4T 132P	192	256	253	132	200
ES500-4T 160G	231	307	304	160	250
ES500-4T 160P	231	307	304	160	250
ES500-4T 185G	242	350	340	185	275
ES500-4T 185P	242	350	340	185	275
ES500-4T 200G	250	385	377	200	300
ES500 4T 200P	250	385	377	200	300
ES500-4T 220G	280	430	426	220	300
ES500 4T 220P	280	430	426	220	300
ES500-4T 250G	355	468	465	250	400
ES500 4T 250P	355	468	465	250	400
ES500-4T 280G	396	525	520	280	370
ES500 4T 280P	396	525	520	280	370
ES500-4T 315G	445	590	585	315	500
ES500 4T 315P	445	590	585	315	500
ES500-4T 350G	500	665	650	350	420
ES500 4T 350P	500	665	650	350	420
ES500-4T 400G	565	785	725	400	530
ES500 4T 400P	565	785	725	400	530

- Outline and mounting dimension of ES500 metal plate series

	Outline (mm)			Mounting dimension (mm)			
Product power	W	H	D	W1	H1	W11	Install hole Diameter (mm)
15kW-18.5kW	217	335	184	140	324	N/A	Φ4
22kW	228	361	203.5	139	349	N/A	Φ6
30kW-37kW	285	463	224	235	447	N/A	Φ6
45kW-75kW	305	613	294	200	592	N/A	Φ10
90kW-132kW	400	753	293	280	731.5	N/A	Φ10
160kW-220kW	520	865	343	380	836.5	190	Φ12
250kW-355kW	800	1172	412	600	1143	300	Φ14

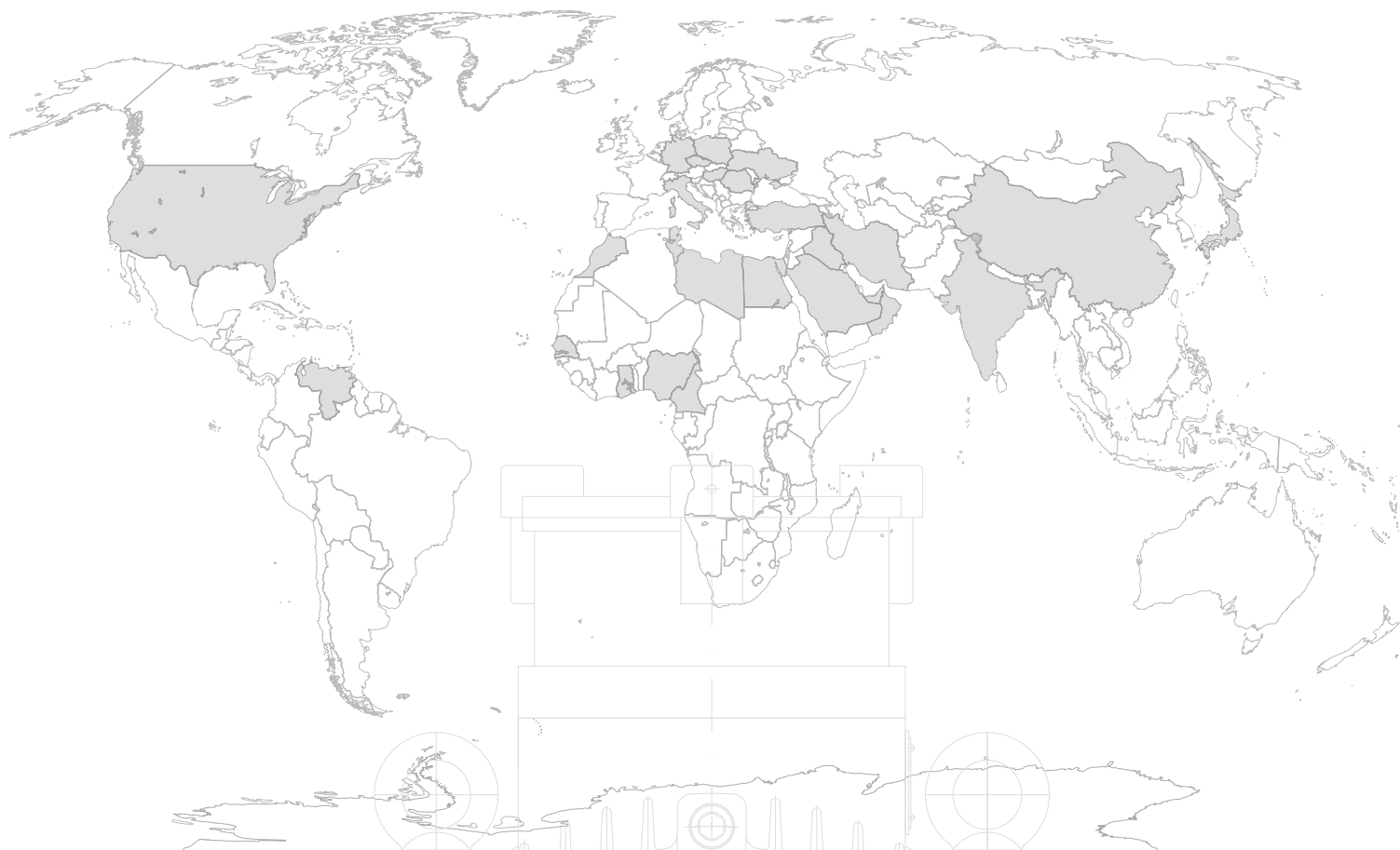
- Outline and mounting dimension of ES500 plastic house series

	Outline (mm)			Mounting dimension (mm)		
Product power	W	H	D	W1	H1	Install hole Diameter (mm)
0~3.7kW	118	185	156.7	106.6	175.3	Φ4
5.5kW~11kW	160	247	178.1	148	235	Φ5



CATALOGUE

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