TEMICO

TECO

IE2 & IE3
Motors

LV MOTOR CATALOGUE

AESV/AESU/AESV-LA SERIES: Squirrel Cage Induction Motor
AESV2S/AESU2S/AESV2S-LA (IE2): High Efficiency
AESV3S/AESU3S/AESV3S-LA (IE3): Premium Efficiency

TEMICO MOTOR INDIA PRIVATE LIMITED
Joint Venture of Teco Electric & Machinery Ltd. Taiwan and Mitsui & Co. Japan

CONTENT

About TEMICO

M/s. TEMICO Motor India Private Limited is incorporated on 21.02.2020 under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares.It is the Joint Venture of M/s. TECO Motor Technology, Taiwan and M/s. Mitsui & Co., Japan. Both the conglomerates have their International Branches all over the Globe.

M/s. TEMICO Motor India being set up at TIIP (Technology Innovation and International Park), High-Tech Defense and Aerospace Park, Bengaluru, B.K. Halli, Yelahanka Taluk, Bangalore – 562149, (5 Kms. from Bangalore International Air Port, Devanahalli)in 4.56 Acres (18472) land area with the intention of manufacturing A.C. Induction Motors (Energy Efficient Electric Motors) and Electric Vehicle Motors.

The Production Plant is a State of the Art where the vast knowledge of TECO Technical Team is put in and the World Class latest technology, processes and machineries being introduced and incorporated in the Production System, where highest possible Plant Utilization being achieved & and Quality is given the paramount importance. In India, 3 phase induction motors in range 7.5 KW to 55 KW (Foot, Flange & Foot cum Flange) are made in their Bangalore Plant.

Introduction to IEC 60034-30-1

Electric motor application in the industry consumes between 30% and 40% of the generated electrical energy worldwide. Improving efficiency of the complete drive system is therefore a major concern in the energy-efficiency efforts.

Many different energy efficiency standards for cage induction motors from different countries were already in use (NEMA, EPACT, CSA, CEMEP, COPANT, AS/NZS, JIS, GB and others) before IEC came up with an efficiency standard.

It became increasingly difficult for manufactures to design motors for a global market and for customers to understand differences and similarities of standards in different countries, therefore IEC 60034-30-1 was developed for global standards for easy reference. IEC 60034-30-1: Efficiency classes of single-Speed, Three Phase, Cage-induction motor (IE-code). As part of a concerted effort worldwide to reduce energy consumption, CO2 emissions and the impact of industrial operations on the environment, TECO is committed to produce International Energy-Efficiency Class (IE) motors in order to reduce the energy consumed and in turn reduce greenhouse gas emissions.

TECO's V-series are designed, manufactured and tested to meet latest European and International standard. The New V Series, which comprise of full range of Efficiency Classes IE2 & IE3 Motors.

Additional Specifications of IS 12615

The motors are capable of delivering rated output with, a) terminal voltage differing from its rated value by not more than ± 10%, or b) frequency differing from its rated value by not more than ± 5%, or c) the sum of absolute percent variations of (a) & (b) not exceeding 10% The fixing dimensions and shaft extensions of motors are conforming to the values specified in IS 1231 and IS 2223.

The relationship between output, in kW and frame number are according to IS 1231. Apart from efficiency, Indian Standard defines following performance parameters for IE2 & IE3 motors 1) Full load Speed 2) Full load Current 3) Breakaway Torque 4) Breakaway Current.

ELECTRICAL DESIGN

Type: Squirrel Cage Induction Motor

Ratings: 7.5kW ~ 75 Kw

Duty Rating
All motors have a maximum continuous duty rating of S1 under rated load. For duty cycles other than S1 please refer to TEMICO.

Supply Voltage
Stock motors are designed for operation as: 415V±10%, 3 phase /50Hz

Insulation System
All motors are design with Class F insulation and Class B temperature rise at ambient temperature of 50º C. For any other insulation system other than standard Class F insulation or Class B temperature rise at higher ambient temperature than standard 50º C, please refer to TECO.

Inverter Duty
All motors are design to be suitable for Inverter use, comply with IEC 60034-17: 2006. For intensive use of Inverter duty operations complying to IEC60034-25,
please refer to TECO.

Standards
IEC 60034-1 Rotating electrical machines
Part 1: Rating and performance.

IEC 60034-2-1 Rotating electrical machines
Part 2-1: Standard methods for determining losses and efficiency from tests

IEC 60034-5 Rotating electrical machines
Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) - classification.

IEC 60034-6 Rotating electrical machines
Part 6: Methods of cooling (IC code).

IEC 60034-7 Rotating electrical machines
Part 7: Classification of types of enclosures and mounting arrangements (IM code).

IEC 60034-8 Rotating electrical machines
Part 8: Terminal markings and direction of rotation.

IEC 60034-9 Rotating electrical machines
Part 9: Noise limits.

IEC 60034-11-1 Rotating electrical machines
Part 11-1: Thermal protection.

IEC 60034-12 Rotating electrical machines
Part 12: Starting performance of single-speed three-phase cage induction motors.

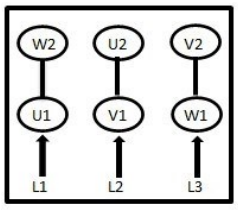
IEC 60034-14 Rotating electrical machines
Part 14: Mechanical vibration of certain machines - Limits of vibration.

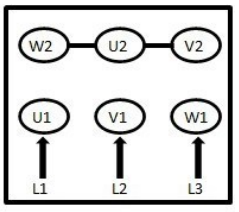
IEC 60034-17 : 2006 Rotating electrical machines
Part 17: Cage induction motors when fed from converters - Application guide.

IEC 60034-30-1 Rotating electrical machines
Part 30: Efficiency classes for single-speed three - phase cage induction motors.

CONNECTION DIAGRAM

Direct-On-Line :
For motor rating 0.37 kw to 2.2 kw
Voltage: 415 ±10% V
For motor rating 3.7 kW and above:
Voltage: 415 ±10% V





TYPE OF TESTS IN INDUCTION MOTOR AS PER IEC 60034-2-1

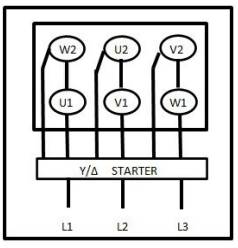
Routine Test :

- Insulation Resistance • High Voltage Test
- Winding Resistance Measurement • No Load Test
- Locked Rotor Test • Noise Test
- Vibration Test • Over Speed Test

Type Test :

- Temperature Rise Test • Load Test
- Starting Torque Test • Starting Current Test
- POT Test • Momentary Over Load Test
- Torque Speed Characteristics

Star-Delta :
Connect U1,V1,W1,U2,V2 &W2 to Star-Delta starter panel. Power Supply Voltage (L1,L2,L3) to be connected to voltage indicated in Delta configuration column on the motor nameplate.



MECHANICAL DESIGN

Type: Squirrel Cage Induction Motor

Frame: 160M to 250MC

Enclosure: Totally Enclosed Fan Cooled (TEFC), Totally Enclosed Air Over (TEAO)

Ingress Protection
Stock motors are design to meet Ingress Protection of IP55, Other special requirement please refer to TEMICO.

Drive Method
Stock motors are design for both Direct Coupling and Belt Drive use from frame size 160M to 250MC. However, for 2 Pole Motor design for both Direct Coupling and Belt Drive is from Frame size160M to 200L only. For belt drive application for other frame size, please refer to TEMICO.

Bearings
High Quality Deep Groove Ball Sealed Bearings are used for our stock motor from frame size 160M to 225M and Vacuum De-Gassed High Quality Deep Groove Ball Open Bearings are used for stock motor from frame Size 250M and above. Any special bearings, please refer to TEMICO.

Lubrication Both our sealed and open type bearing are grease lubricated.

Construction
Frame: High Grade Cast Iron;
End Bracket: High Grade Cast Iron;
External Fan: Polypropylene;
Fan Cover: Pressed Steel;
Shaft: Carbon Steel;
Lead: 6 Leads;
Iron Core: High Grade, Insulated, Cold Rolled, Electro Magnetic Steel Plate

Terminal Box
Stock motor are fitted with pressed steel T-Box for Frame 160M to 180M and Cast-Iron T-Box for Frame 200L to 250M. T-Box are designed for provision of rotation by 90º to every direction that enable cable entry from 4 directions.

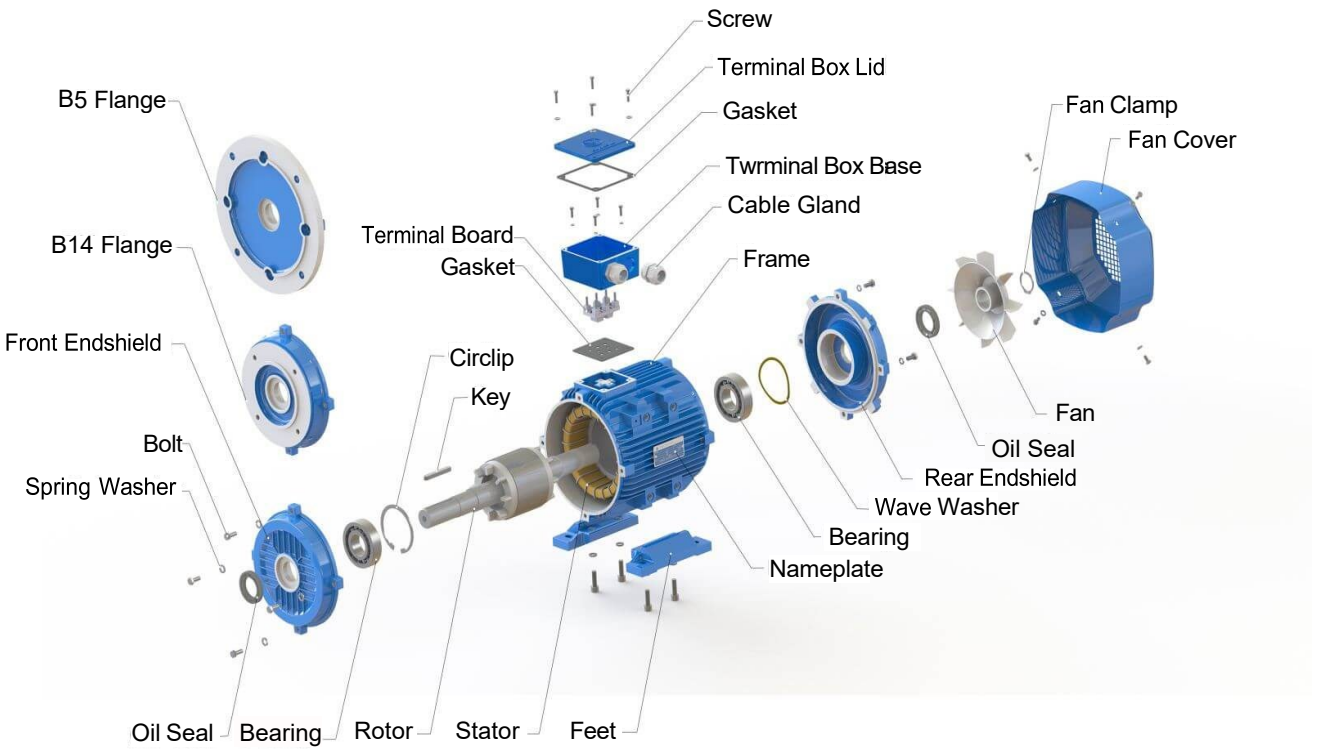
Finishing
Stock motor are completed with Phenolic Rust Proof Base Plus Lacquer Surface Finished Painting as standard:
Blue Color (Munsell 5PB 3/8) (IE 2)
Green Color (Munsell 7.5GY 4.5/3.5) (IE 3)
Any other color finishing, please refer to TEMICO.

Lifting Device
All motor from Frame Size 90 and above comes with lifting lugs for lifting purposes.

Standards
IEC 60072-1 Dimensions and output series for rotating electrical machines - Part 1: Frame numbers 56 to 400 and flange numbers 55 to 1080.

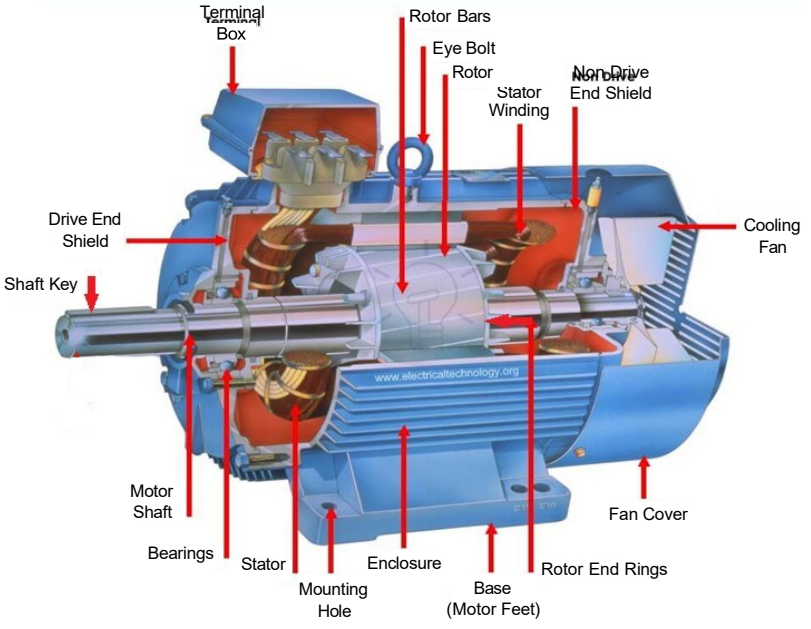
MECHANICAL DESIGN

General Exploded View of 3 Phase Induction Motor



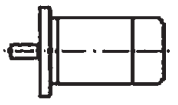
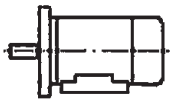
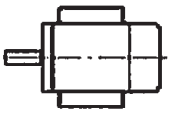
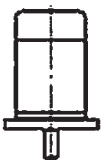
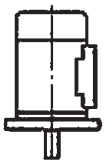
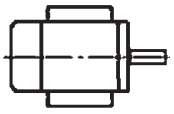
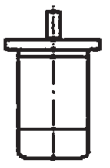
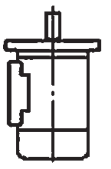
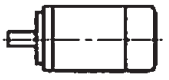
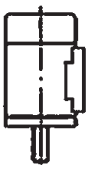
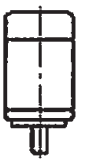
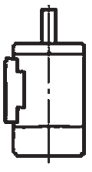
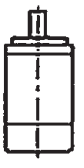
NOTE: As Per The Temico Design Exploded View Will Vary.

General Cross-Sectional View of 3 Phase Induction Motor



NOTE: As Per The Temico Design The Cross-Sectional View Will Vary

INTERNATIONAL MOUNTING CODE (IM)

Foot Mounted		Flange Mounted		Foot / Flange Mounted	
IM 1001 (IM B3) Horizontal Shaft. Foot mounted.		IM 3001 (IM B5) Horizontal Shaft. 'D' type flange at D.E. No feet.		IM 2001 (IM B35) Horizontal Shaft. 'D' type flange at D.E. Foot mounted.	
IM 1051 (IM B6) Horizontal Shaft. Foot wall mounted with feet on left-side when viewed from D.E.		IM 3011 (IM V1) Vertical Shaft. 'D' type flange at D.E. Shaft down. No feet.		IM 2011 (IM V15) Vertical Shaft. 'D' type flange at D.E. Wall mounted. Shaft down.	
IM 1061 (IM B7) Horizontal Shaft. Foot wall mounted with feet on right-side when viewed from D.E.		IM 3031 (IM V3) Vertical Shaft. 'D' type flange at D.E. Shaft up. No feet.		IM 2031 (IM V36) Vertical Shaft. 'D' type flange at D.E. Wall mounted. Shaft up.	
IM 1071 (IM B8) Horizontal Shaft, Ceiling mounted see with a otebmovor t .		IM 3601 (IM B14) Horizontal Shaft. 'C' type flange at D.E. No feet.		IM 2101 (IM B34) Horizontal Shaft. 'C' type flange at D.E. Foot mounted.	
IM 1011 (IM V5) Vertical Shaft. Wall mounted. Shaft down.		IM 3611 (IM V18) Vertical Shaft. 'C' type flange at D.E. Shaft down. No feet.		IM 2111 Vertical Shaft. 'C' type flange at D.E. Wall mounted. Shaft down.	
IM 1031 (IM V6) Vertical Shaft. Wall mounted. Shaft up.		IM 3631 (IM V19) Vertical Shaft. 'C' type flange at D.E. Shaft up. No feet.		IM 2131 Vertical Shaft. 'C' type flange at D.E. Wall mounted. Shaft up.	

It is important to nominate the "IM" code at enquiry and order stage to ensure that drain holes are in the correct position and bearing arrangement is checked for suitability if the "IM" code differs from standard.

IE2

MOTOR PERFORMANCE DATA (2,4,6 POLE)

Product Code	Rated Power		Frame	Full Load Current (in Amps.)			FL Speed	Efficiency %			Power Factor			D.O.L Starting			GD ²
	KW	HP		380 V	400 V	415 V	RPM	FL	¾ L	½ L	FL	¾ L	½ L	SCC % FLT	STT % FLT	POT % FLT	Kgm²
2 Pole = 3000 Synchronous RPM																	
11KX2	11	15	160M	20.7	19.6	18.9	2950	89.4	89.3	88.1	90.5	87.5	80.5	230	180	305	0.154
15KX2	15	20	160L	27.0	25.6	24.7	2930	90.3	91.0	91.2	93.5	92.5	89.0	245	165	280	0.192
18.5KX2	18.5	25	180M	33.2	31.6	30.4	2925	90.9	91.5	91.7	93.0	91.5	88.0	260	185	310	0.237
22KX2	22	30	180L	40.0	38.0	36.6	2930	91.3	91.2	90.5	91.5	90.0	85.5	215	185	300	0.283
30KX2	30	40	200L	54.7	52.0	50.1	2945	92.0	92.2	91.3	90.5	89.5	86.0	210	150	300	0.521
37KX2	37	50	225S	66.4	63.1	60.8	2945	92.5	92.9	92.7	91.5	90.5	87.5	175	130	260	0.663
45KX2	45	60	225M	80.9	76.8	74.1	2965	92.9	92.5	91.3	91.0	88.5	82.5	170	140	300	1.074
55KX2	55	75	250M	96.9	92.1	88.8	2970	93.2	93.2	92.6	92.5	91.5	88.0	165	150	300	1.343
4 Pole = 1500 Synchronous RPM																	
11KX4	11	15	160M	21.5	20.4	19.7	1465	89.8	90.6	90.7	86.5	83.0	74.5	220	180	300	0.296
15KX4	15	20	160L	29.1	27.6	26.6	1470	90.6	91.3	91.2	86.5	82.5	73.5	220	185	300	0.427
18.5KX4	18.5	25	180M	36.0	34.2	33.0	1475	91.2	91.7	91.6	85.5	83.0	76.5	200	185	300	0.654
22KX4	22	30	180L	42.7	40.5	39.1	1470	91.6	92.4	92.2	85.5	83.5	77.5	195	155	250	0.77
30KX4	30	40	200L	56.4	53.6	51.7	1470	92.3	92.9	92.9	87.5	84.5	77.0	230	180	300	1.217
37KX4	37	50	225S	69.3	65.8	63.5	1475	92.7	93.3	93.3	87.5	86.0	80.0	220	175	260	1.649
45KX4	45	60	225M	85.4	81.1	78.2	1480	93.1	93.3	92.9	86.0	82.5	75.0	210	170	300	1.979
55KX4	55	75	250M	102	97.0	93.5	1485	93.5	93.7	93.3	87.5	85.0	79.0	245	180	300	3.621
6 Pole = 1500 Synchronous RPM																	
7.5KX6	7.5	10	160M	15.9	15.1	14.6	960	87.2	88.2	87.7	82.0	77.0	66.5	210	195	260	0.363
11KX6	11	15	160L	23.1	22.0	21.2	965	88.7	89.2	88.6	81.5	76.0	65.0	245	205	300	0.558
15KX6	15	20	180L	30.8	29.3	28.2	975	89.7	90.4	90.2	82.5	77.5	67.5	210	195	300	1.337
18.5KX6	18.5	25	200L	39.1	37.2	35.8	975	90.4	91.0	90.9	79.5	75.0	65.5	215	195	300	1.604
22KX6	22	30	225S	45.4	43.1	41.6	980	90.9	91.4	91.8	81.0	77.5	68.5	210	180	255	1.912
30KX6	30	40	225M	57.8	54.9	52.9	980	91.7	92.4	92.2	86.0	83.0	76.0	210	190	285	2.442
37KX6	37	50	250M	70.5	67.0	64.5	980	92.2	92.3	91.7	86.5	83.0	74.0	210	185	275	3.373

NOTE:

1. The above are typical values based on test according to IS:12615:2018; IEC 60034-2-1 :2014.
2. Tolerance according to IEC 60034-1.
3. Breakdown & Locked rotor torques are shown as average expected voltages
4. Efficiency, Power Factor, Speed and Torque are the same for other voltages. Current values vary inverselywith voltage
5. Noise according to IEC 60034-9.
6. Terminologies: SCC-Starting Current, STT-Starting Torque & POT- Pull Out Torque.

IE3

MOTOR PERFORMANCE DATA (2,4,6 POLE)

Product Code	Rated Power		Frame	Full Load Current (in Amps.)			FL Speed	Efficiency %			Power Factor			D.O.L Starting			GD ²
	KW	HP		380 V	400 V	415 V	RPM	FL	¾ L	½ L	FL	¾ L	½ L	SCC % FLT	STT % FLT	POT % FLT	Kgm²
2 Pole = 3000 Synchronous RPM																	
11KY2	11	15	160M	20.4	19.3	18.6	2935	91.2	92.0	92.0	90.0	89.0	83.5	230	185	300	0.183
15KY2	15	20	160L	27.9	26.5	25.5	2935	91.9	92.0	92.0	89.0	85.5	77.5	275	230	330	0.205
18.5KY2	18.5	25	180M	33.8	32.1	30.9	2930	92.4	93.0	93.0	90.0	89.5	84.0	245	200	300	0.237
22KY2	22	30	180L	41.4	39.4	38.0	2940	92.7	92.7	92.5	87.0	85.0	77.0	225	180	300	0.283
30KY2	30	40	200L	54.3	51.6	49.7	2950	93.3	93.5	92.5	90.0	90.0	86.5	200	145	300	0.602
37KY2	37	50	225S	65.9	62.6	60.4	2955	93.7	94.5	94.0	91.0	90.5	87.0	210	145	300	0.753
45KY2	45	60	225M	79.9	75.9	73.2	2960	94.0	94.0	93.5	91.0	91.0	88.0	170	140	300	1.187
55KY2	55	75	250M	96.8	92.0	88.7	2970	94.3	94.5	94.0	91.5	90.0	86.5	165	130	315	1.544
4 Pole = 1500 Synchronous RPM																	
11KY4	11	15	160M	21.5	20.4	19.7	1460	91.4	92.0	91.5	85.0	81.0	71.0	230	185	300	0.366
15KY4	15	20	160L	29.1	27.7	26.7	1460	92.1	92.5	92.5	85.0	81.5	71.4	250	195	300	0.46
18.5KY4	18.5	25	180M	35.7	33.9	32.7	1475	92.6	94.0	93.0	85.0	82.4	75.0	215	160	280	0.704
22KY4	22	30	180L	42.3	40.2	38.7	1475	93.0	93.5	93.0	85.0	81.9	74.1	210	145	275	0.789
30KY4	30	40	200L	56.6	53.8	51.8	1470	93.6	94.5	94.5	86.0	84.5	77.0	250	205	300	1.451
37KY4	37	50	225S	70.0	66.5	64.1	1480	93.9	94.5	94.0	85.5	82.0	73.0	210	175	300	1.896
45KY4	45	60	225M	85.4	81.1	78.2	1480	94.2	94.5	94.0	85.0	80.0	70.4	210	175	300	1.979
55KY4	55	75	250M	101	95.9	92.4	1485	94.6	94.6	94.0	87.5	84.5	77.0	210	185	295	3.911
6 Pole = 1500 Synchronous RPM																	
7.5KY6	7.5	10	160M	16.2	15.4	14.8	970	89.1	90.0	89.0	79.0	73.0	61.0	235	210	300	0.483
11KY6	11	15	160L	23.7	22.5	21.7	970	90.3	91.0	90.5	78.0	72.0	60.5	295	255	300	0.628
15KY6	15	20	180L	30.5	29.0	27.9	970	91.2	92.0	92.0	82.0	78.0	68.0	215	165	255	1.337
18.5KY6	18.5	25	200L	38.1	36.2	34.9	975	91.7	92.5	92.5	80.5	76.0	66.5	220	185	265	1.829
22KY6	22	30	225S	44.5	42.3	40.7	975	92.2	93.0	93.5	81.5	77.0	68.0	210	185	265	2.078
30KY6	30	40	225M	58.8	55.8	53.8	980	92.9	93.5	93.5	83.5	80.0	76.5	210	160	240	3.023
37KY6	37	50	250M	70.9	67.3	64.9	980	93.3	94.0	94.0	85.0	81.5	75.0	230	200	280	4.194

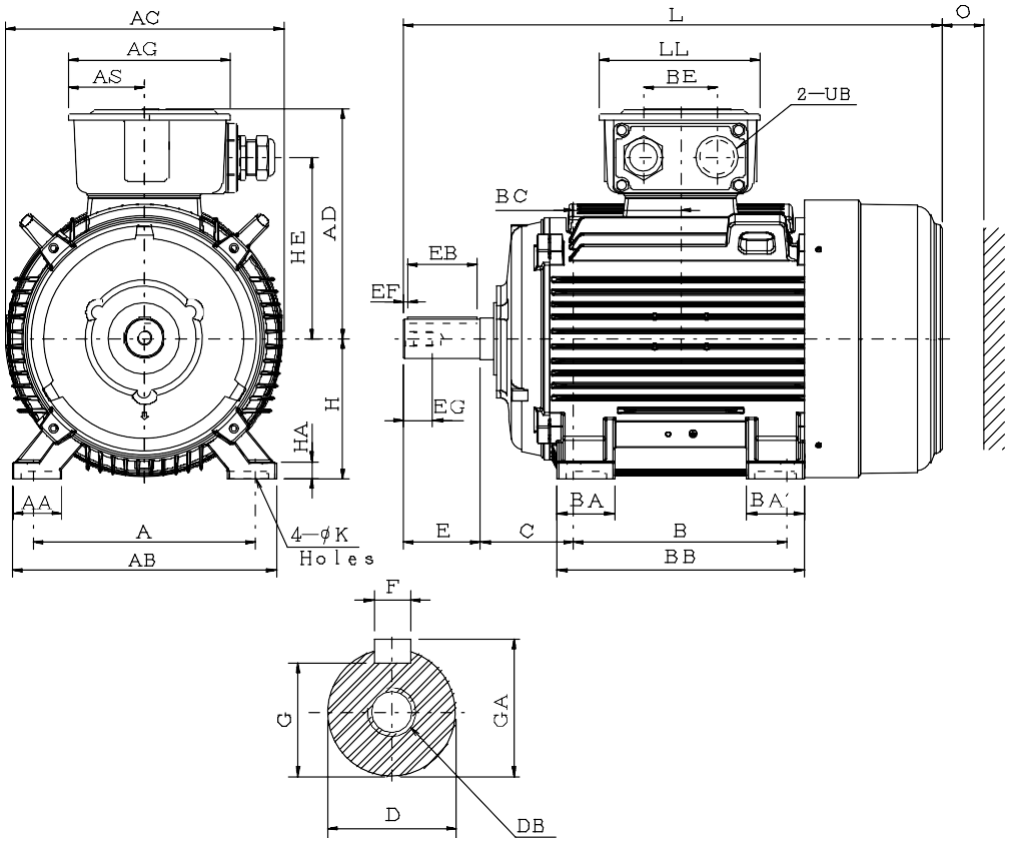
NOTE:

1. The above are typical values based on test according to IS:12615:2018; IEC 60034-2-1 :2014.
2. Tolerance according to IEC 60034-1.
3. Breakdown & Locked rotor torques are shown as average expected voltages.
4. Efficiency, power factor, speed and torque are the same for other voltages. Current values vary inversely with voltage.
5. Noise according to IEC 60034-9.
6. Terminologies: SCC-Starting Current, STT-Starting Torque & POT- Pull Out Torque.

B3

MOUNTED OUTLINE DIMENSION: 2 POLE

Foot Mounted (B3): Motor Type: AESV2S / AESV3S; Frame Size: 160M to 250M (2 POLE)



FRAME	A	B	C	D	E	F	G	H	K	L	DB	EG	EF	B'	AA	AB	AC	BA	BB	EB	GA	HA	O
160M	254	210	108	42	110	12	37	160	14.5	608	M16	36	5	-	60	300	317	57	250	100	45	18	60
160L	254	254	108	42	110	12	37	160	14.5	652	M16	36	5	210	60	300	317	97	294	100	45	18	60
180M	279	241	121	48	110	14	42.5	180	14.5	672	M16	36	5	-	65	300	354	65	292	100	51.5	20	70
200L	318	305	133	55	110	16	49	200	18.5	770	M20	42	5	-	70	378	398	82	353	100	59	24	80
225MA	356	311	149	55	110	16	49	225	18.5	811	M20	42	5	286	75	431	449	110	396	100	59	28	90
250MA	406	349	168	60	140	18	53	250	24	921	M20	42	7.5	-	85	480	499	499	425	125	64	30	105

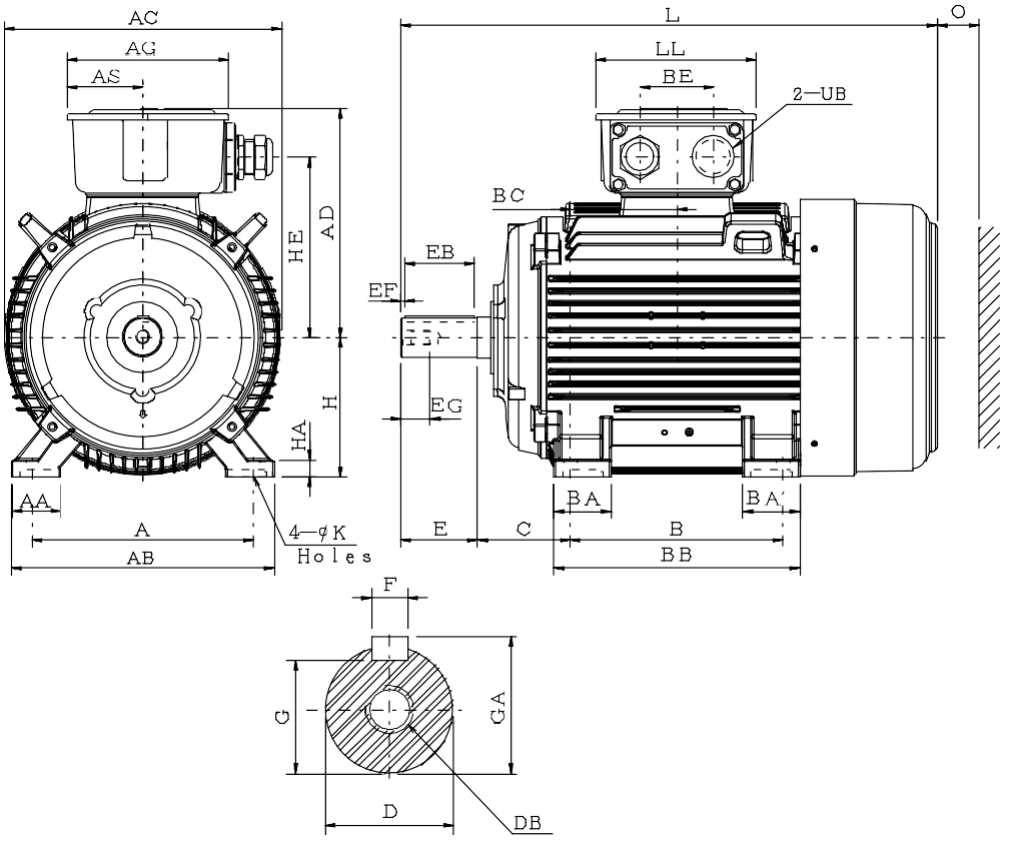
NOTE:

1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of shaft center height H : +0, -0.5
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.

B3

MOUNTED OUTLINE DIMENSION: 4 POLE

Foot Mounted (B3): Motor Type: AESV2S/ AESV3S; Frame Size: 160M to 250M (4 POLE)



FRAME	A	B	C	D	E	F	G	H	K	L	DB	EG	EF	B'	AA	AB	AC	BA	BB	EB	GA	HA	O
160M	254	210	108	42	110	12	37	160	14.5	608	M16	36	5	-	60	300	317	57	250	100	45	18	60
160L	254	254	108	42	110	12	37	160	14.5	652	M16	36	5	210	60	300	317	97	294	100	45	18	60
180M	279	241	121	48	110	14	42.5	180	14.5	672	M16	36	5	-	65	300	354	65	292	100	51.5	20	70
180L	279	279	121	48	110	14	42.5	180	14.5	710	M16	36	5	241	65	300	354	115	330	100	51.5	20	70
200L	318	305	133	55	110	16	49	200	18.5	770	M20	42	5	-	70	378	398	82	353	100	59	24	80
225SC	356	286	149	60	140	18	53	225	18.5	816	M20	42	7.5	-	75	431	449	98.5	371	125	64	28	90
225MC	356	311	149	60	140	18	53	225	18.5	841	M20	42	7.5	286	75	431	449	110	396	125	64	28	90
250MC	406	349	168	65	140	18	58	250	24	921	M20	42	7.5	-	85	480	499	499	425	125	69	30	105

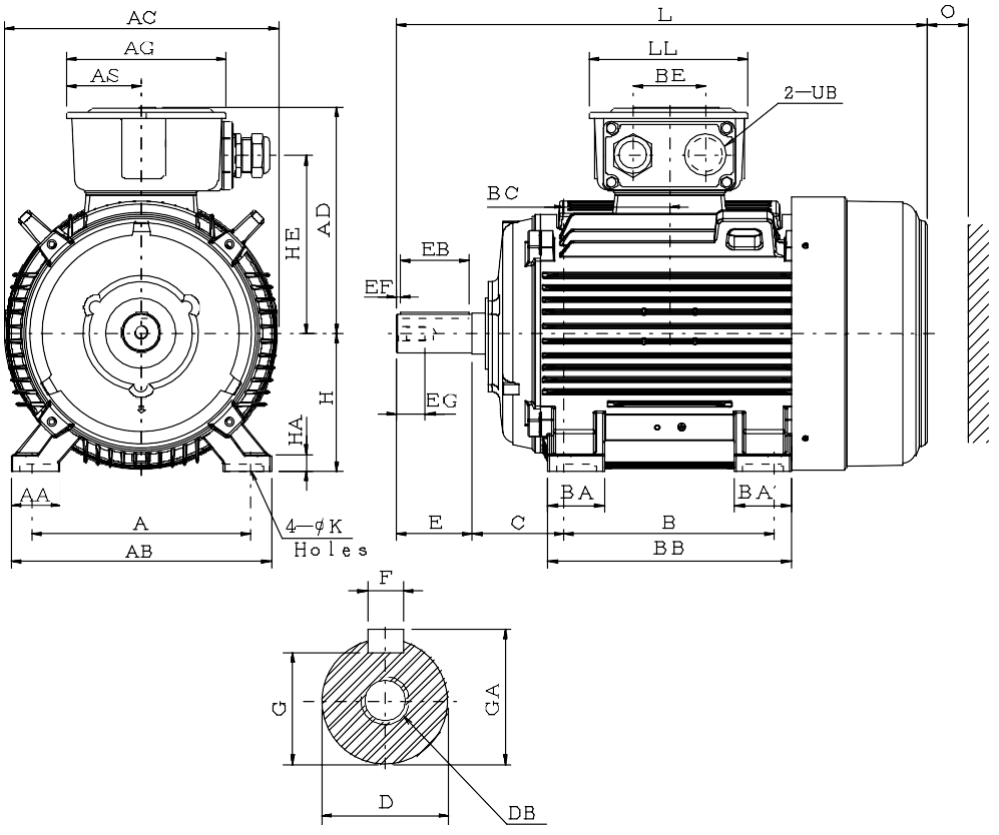
NOTE:

1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of shaft center height H : +0, -0.5
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.

B3

MOUNTED OUTLINE DIMENSION: 6 POLE

Foot Mounted (B3): Motor Type: AESV2S / AESV3S; Frame Size: 160M to 250M (6 POLE)



FRAME	A	B	C	D	E	F	G	H	K	L	DB	EG	EF	B'	AA	AB	AC	BA	BB	EB	GA	HA	O
160M	254	210	108	42	110	12	37	160	14.5	608	M16	36	5	-	60	300	317	57	250	100	45	18	60
160L	254	254	108	42	110	12	37	160	14.5	652	M16	36	5	210	60	300	317	97	294	100	45	18	60
180L	279	279	121	48	110	14	42.5	180	14.5	710	M16	36	5	241	65	300	354	115	330	100	51.5	20	70
200L	318	305	133	55	110	16	49	200	18.5	770	M20	42	5	-	70	378	398	82	353	100	59	24	80
225MC	356	311	149	60	140	18	53	225	18.5	841	M20	42	7.5	286	75	431	449	110	396	125	64	28	90
250MC	406	349	168	65	140	18	58	250	24	921	M20	42	7.5	-	85	480	499	499	425	125	69	30	105
225MC	356	311	149	60	140	18	53	225	18.5	841	M20	42	7.5	286	75	431	449	110	396	125	64	28	90
250MC	406	349	168	65	140	18	58	250	24	921	M20	42	7.5	-	85	480	499	499	425	125	69	30	105

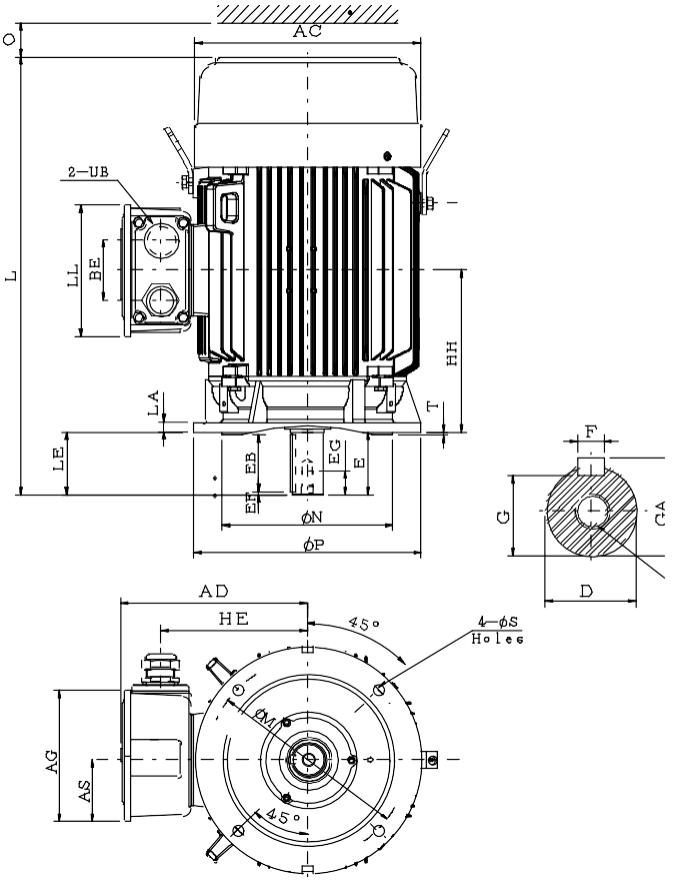
NOTE:

1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of shaft center height H : +0, -0.5
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.

V1

MOUNTED OUTLINE DIMENSION: 2 POLE

Flange Mounted (V1) Motor Type: AESU2S/AESU3S; Frame Size: 160M to 250M (2 pole)



FRAME	D	E	F	G	L	M	N	P	S	T	AD	AC	EB	GA	LA	HH	LE	DB	EG	EF	O	HA	O
160M	42	110	12	37	608	300	250	350	18.5	5	237	317	100	45	15	213	110	M16	36	5	60	18	60
160L	42	110	12	37	652	300	250	350	18.5	5	237	317	100	45	15	235	110	M16	36	5	60	18	60
180M	48	110	14	42.5	672	300	250	350	18.5	5	263.5	354	100	51.5	15	241.5	110	M16	36	5	70	20	70
200L	55	110	16	49	770	350	300	400	18.5	5	329	398	100	59	17	285.5	110	M20	42	5	80	24	80
225MA	55	110	16	49	811	400	350	450	18.5	5	355	450	100	59	20	304.5	110	M20	42	5	90	28	90
250MA	60	140	18	53	921	500	450	550	18.5	5	397	550	125	64	22	342.5	140	M20	42	7.5	105	30	105
225MC	356	311	149	60	140	18	53	225	18.5	841	M20	42	7.5	286	75	431	449	110	396	125	64	28	90
250MC	406	349	168	65	140	18	58	250	24	921	M20	42	7.5	-	85	480	499	499	425	125	69	30	105

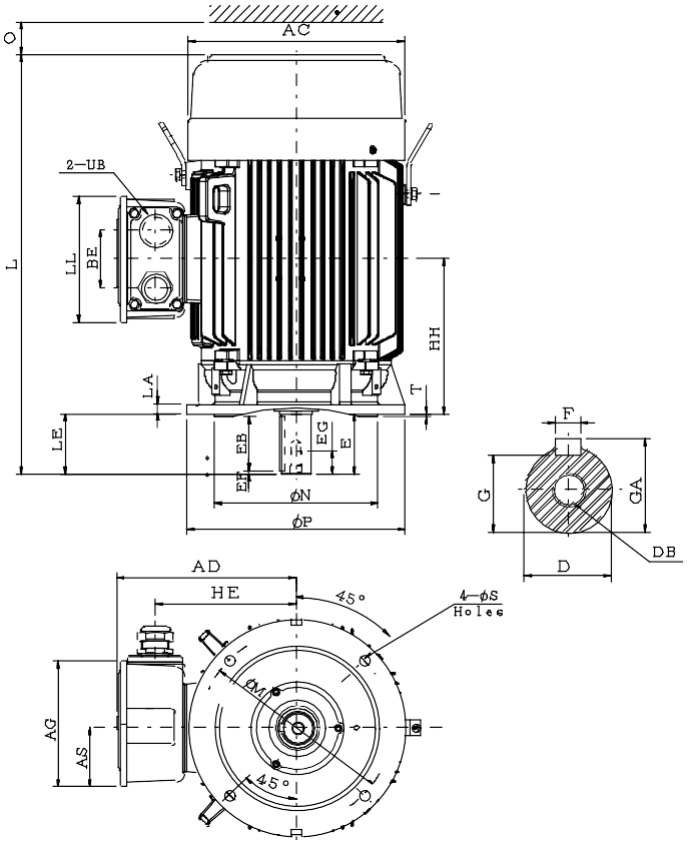
NOTE:

1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of N ø250~ø450j6.
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.
8. No of holes on flange : 160 to 200 - 4 No.s ; 225 to 250 - 8 No.s Equipted.

V1

MOUNTED OUTLINE DIMENSION: 4 POLE

Flange Mounted (V1): Motor Type: AESU2S / AESU3S ;Frame Size: 160M to 250M (4 POLE)



FRAME	D	E	F	G	L	M	N	P	S	T	AD	AC	EB	GA	LA	HH	LE	DB	EG	EF	O	HA	O
160M	42	110	12	37	608	300	250	350	18.5	5	237	317	100	45	15	213	110	M16	36	5	60	18	60
160L	42	110	12	37	652	300	250	350	18.5	5	237	317	100	45	15	235	110	M16	36	5	60	18	60
180M	48	110	14	42.5	672	300	250	350	18.5	5	263.5	354	100	51.5	15	241.5	110	M16	36	5	70	20	70
180L	48	110	14	42.5	710	300	250	350	18.5	5	263.5	354	100	51.5	15	260.5	110	M16	36	5	70	24	80
200L	55	110	16	49	770	350	300	400	18.5	5	329	398	100	59	17	285.5	110	M20	42	5	80	28	90
225SC	60	140	18	53	816	400	350	450	18.5	5	355	450	125	64	20	292	140	M20	42	7.5	90	30	105
225MC	60	140	18	53	841	400	350	450	18.5	5	355	450	125	64	20	304.5	140	M20	42	7.5	90	28	90
250MC	65	140	18	58	921	500	450	550	18.5	5	397	550	125	69	22	342.5	140	M20	42	7.5	105	30	105

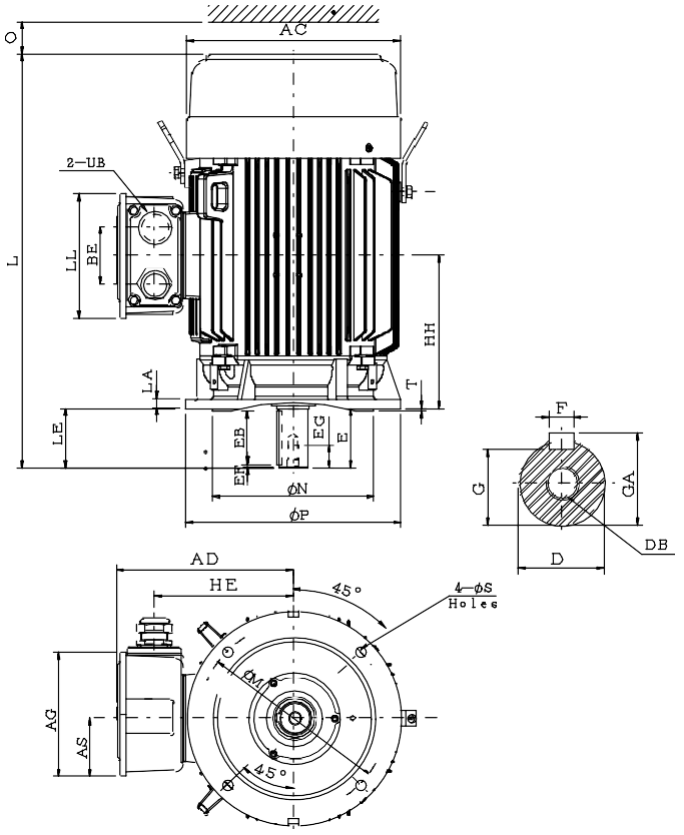
NOTE:

1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of N ø250~ø450j6.
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.
8. No of holes on flange : 160 to 200 - 4 No.s ; 225 to 250 - 8 No.s Equipted.

V1

MOUNTED OUTLINE DIMENSION: 6 POLE

Flange Mounted (V1)Motor Type: AESU2S / AESU3S ;Frame Size: 160M to 250M (6 POLE)



FRAME	D	E	F	G	L	M	N	P	S	T	AD	AC	EB	GA	LA	HH	LE	DB	EG	EF	O	HA	O
160M	42	110	12	37	608	300	250	350	18.5	5	237	317	100	45	15	213	110	M16	36	5	60	18	60
160L	42	110	12	37	652	300	250	350	18.5	5	237	317	100	45	15	235	110	M16	36	5	60	18	60
180L	48	110	14	42.5	710	300	250	350	18.5	5	263.5	354	100	51.5	15	260.5	110	M16	36	5	70	20	70
200L	55	110	16	49	770	350	300	400	18.5	5	329	398	100	59	17	285.5	110	M20	42	5	80	24	80
225MC	60	140	18	53	841	400	350	450	18.5	5	355	450	125	64	20	304.5	140	M20	42	7.5	90	28	90
250MC	65	140	18	58	921	500	450	550	18.5	5	397	550	125	69	22	342.5	140	M20	42	7.5	105	30	105
225MC	60	140	18	53	841	400	350	450	18.5	5	355	450	125	64	20	304.5	140	M20	42	7.5	90	28	90
250MC	65	140	18	58	921	500	450	550	18.5	5	397	550	125	69	22	342.5	140	M20	42	7.5	105	30	105

NOTE:

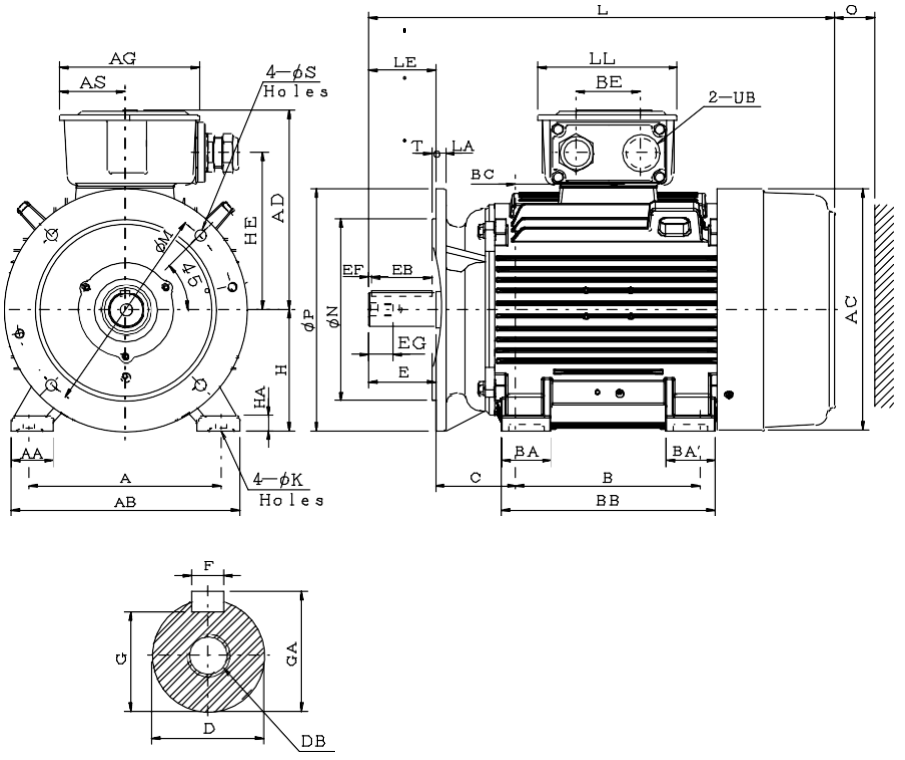
1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of N ø250~ø450j6.
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.
8. No of holes on flange : 160 to 200 - 4 No.s ; 225 to 250 - 8 No.s Equipted.

B35

MOUNTED OUTLINE DIMENSION: 2 POLE

Foot & Flange Mounted (B35)

Motor Type: AESV2S-LA / AESV3S-LA ;Frame Size: 160M to 250M (2 POLE)



FRAME	A	B	C	D	E	F	G	H	K	L	M	N	P
160M	254	210	108	42	110	12	37	160	14.5	608	300	250	350
160L	254	254	108	42	110	12	37	160	14.5	652	300	250	350
180M	279	241	121	48	110	14	42.5	180	14.5	672	300	250	350
200L	318	305	133	55	110	16	49	200	18.5	770	350	300	400
225MA	356	311	149	55	110	16	49	225	18.5	811	400	350	450
250MA	406	349	168	60	140	18	53	250	24	921	500	450	550

S	T	AD	AC	EB	GA	LA	HH	LE	DB	EG	EF	O
18.5	5	237	317	100	45	15	213	110	M16	36	5	60
18.5	5	237	317	100	45	15	235	110	M16	36	5	60
18.5	5	264	354	100	51.5	15	241.5	110	M16	36	5	70
18.5	5	329	398	100	59	17	285.5	110	M20	42	5	80
18.5	5	355	450	100	59	20	304.5	110	M20	42	5	90
18.5	5	397	550	125	64	22	342.5	140	M20	42	7.5	105

NOTE:

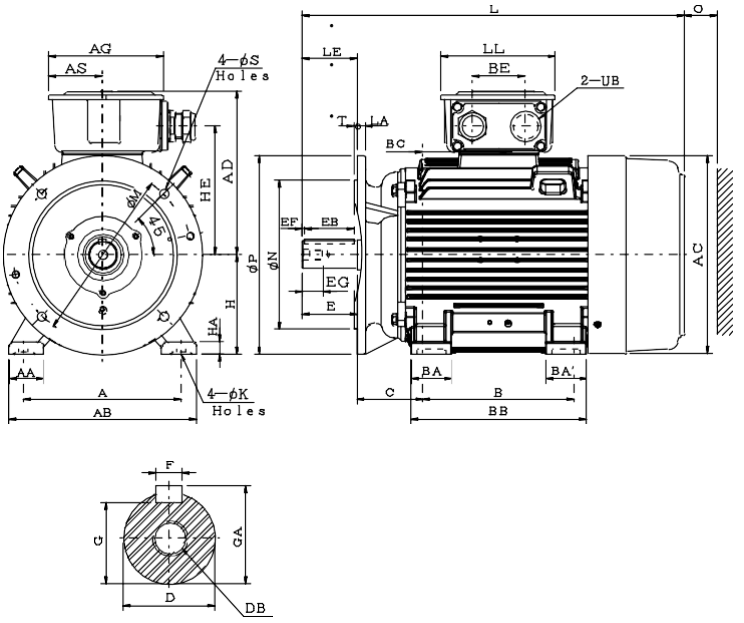
1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of N ø250~ø450j6.
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.
8. Tolerance of shaft center height H : +0, -0.5
9. No of holes on flange : 160 to 200 - 4 No.s ; 225 to 250 - 8 No.s Equipted.

B35

MOUNTED OUTLINE DIMENSION: 4 POLE

Foot & Flange Mounted (B35)

Motor Type: AESV2S-LA / AESV3S-LA ;Frame Size: 160M to 250M (4 POLE)



FRAME	A	B	C	D	E	F	G	H	K	L	M	N	P
160M	254	210	108	42	110	12	37	160	14.5	608	300	250	350
160L	254	254	108	42	110	12	37	160	14.5	652	300	250	350
180M	279	241	121	48	110	14	42.5	180	14.5	672	300	250	350
180L	279	279	121	48	110	14	42.5	180	14.5	710	300	250	350
200L	318	305	133	55	110	16	49	200	18.5	770	350	300	400
225SC	356	286	149	60	140	18	53	225	18.5	816	400	350	450
225MC	356	311	149	60	140	18	53	225	18.5	841	400	350	450
250MC	406	349	168	65	140	18	58	250	24	921	500	450	550

S	T	AD	AC	EB	GA	LA	HH	LE	DB	EG	EF	O
18.5	5	237	317	100	45	15	213	110	M16	36	5	60
18.5	5	237	317	100	45	15	235	110	M16	36	5	60
18.5	5	264	354	100	51.5	15	241.5	110	M16	36	5	70
18.5	5	264	354	100	51.5	15	260.5	110	M16	36	5	70
18.5	5	329	398	100	59	17	285.5	110	M20	42	5	80
18.5	5	355	450	125	64	20	292	140	M20	42	7.5	90
18.5	5	355	450	125	64	20	304.5	140	M20	42	7.5	90
18.5	5	397	550	125	69	22	342.5	140	M20	42	7.5	105

NOTE:

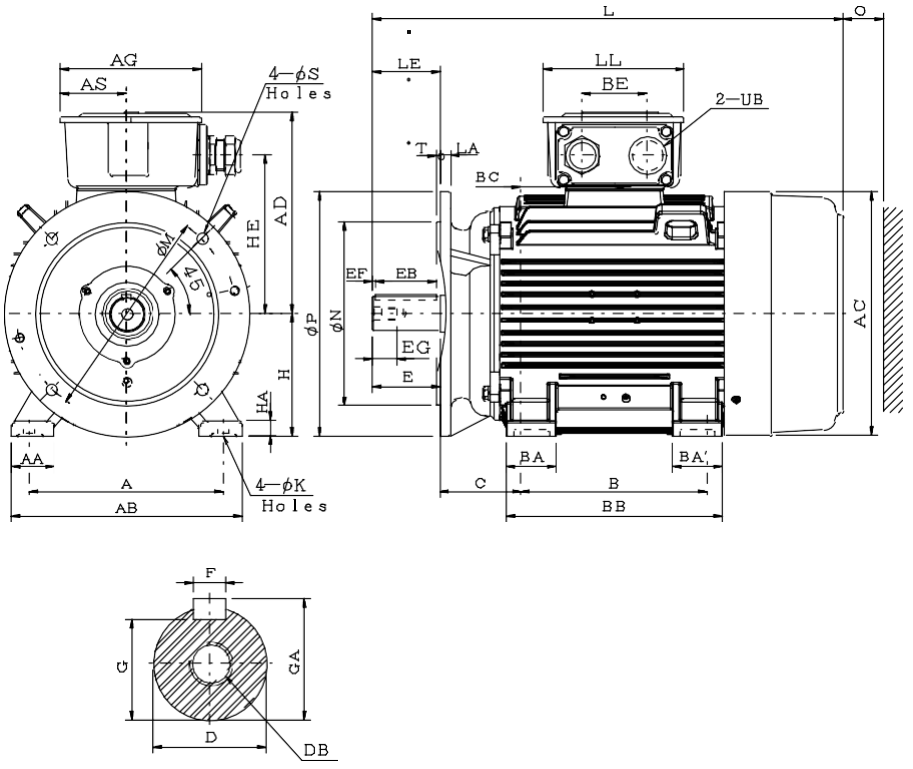
1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of N ø250~ø450j6.
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.
8. Tolerance of shaft center height H : +0, -0.5
9. No of holes on flange : 160 to 200 - 4 No.s ; 225 to 250 - 8 No.s Equipted.

B35

MOUNTED OUTLINE DIMENSION: 6 POLE

Foot & Flange Mounted (B35)

Motor Type: AESV2S-LA / AESV3S-LA ; Frame Size: 160M to 250M (6 POLE)



FRAME	A	B	C	D	E	F	G	H	K	L	M	N	P
160M	254	210	108	42	110	12	37	160	14.5	608	300	250	350
160L	254	254	108	42	110	12	37	160	14.5	652	300	250	350
180L	279	279	121	48	110	14	42.5	180	14.5	710	300	250	350
200L	318	305	133	55	110	16	49	200	18.5	770	350	300	400
225MC	356	311	149	60	140	18	53	225	18.5	841	400	350	450
250MC	406	349	168	65	140	18	58	250	24	921	500	450	550

S	T	AD	AC	EB	GA	LA	HH	LE	DB	EG	EF	O
18.5	5	237	317	100	45	15	213	110	M16	36	5	60
18.5	5	237	317	100	45	15	235	110	M16	36	5	60
18.5	5	264	354	100	51.5	15	260.5	110	M16	36	5	70
18.5	5	329	398	100	59	17	285.5	110	M20	42	5	80
18.5	5	355	450	125	64	20	304.5	140	M20	42	7.5	90
18.5	5	397	550	125	69	22	342.5	140	M20	42	7.5	105

NOTE:

1. All dimensions are in mm.
2. Pre-packed shielded ball bearing for frame size 160M to 225M.
3. Lifting Lugs provided for frame 160M to 250M.
4. Tolerance of shaft end diameter D : a) ø42 ~ ø48: k6, b) ø55~ø65 : m6
5. Tolerance of N ø250~ø450j6.
6. Data are subject to change without prior notice.
7. Grease Nipples (inlet and outlet) are applicable for Frame 250 and above.
8. Tolerance of shaft center height H : +0, -0.5
9. No of holes on flange : 160 to 200 - 4 No.s ; 225 to 250 - 8 No.s Equipted.

ENQUIRY FORM

TEMICO

Customer Name :

Contact Number :

Company :

Motor Specification Required

Efficiency Class (IE)	:	☐ IE 2	☐ IE 3
Output	:	_____ kW / HP	
Voltage	:	_____ Volts	Frequency: _____ Hz
Poles : 2 4 6 Others	:		
Location	:	☐ Indoor	☐ Outdoor _____ Application : _____
Mounting	:	_____ (Eg. B3,V1,B35)	
Ingress Protection	:	☐ IP55	☐ IP56 _____Others : _____
Insulation Class	:	☐ Class F (155 °C)	☐ Class H (180 °C)
Ambient Temperature	:	_____ °C	
Temperature Rise	:	☐ Class B (80 °C)	☐ Class F (105 °C)
Starting Method	:	☐ Direct-On-Line	☐ Star-Delta ☐ Inverter
Inverter	:	☐ IEC 60034-17:2006	☐ Torque: Constant / Variable
		☐ IEC 60034-25	Speed Range:From: _____ To:_____ Hz
Drive Method	:	Direct Coupling	☐ Belt drive ☐ o thers: _____
Quantity	:	_____	

TEMICO

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