Capris MS Series Induction Motor Instruction Manual

CAPRI

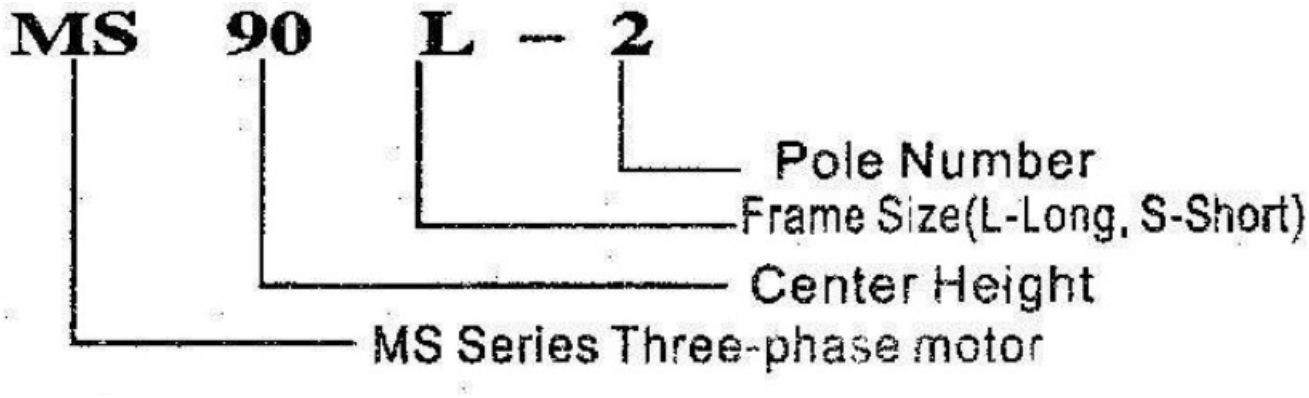
HOLDINGS LIMITED

MS SERIES THREE-PHASE
INDUCTION MOTOR
INSTRUCTION MANUAL

Thank you for your purchase the motors please read these instructions carefully before using and keep this manual in a safe place for future reference

Contents

Name of Model Declaration



General Description:

MS series motors an induction motor with copper stator winding and small squirrel cage. The protective class of motor housing is Ip44, cooling method is IC 0141
MS series motor should be operated as following conditions:
Ambient temperature not exceed 4°C
Height above sea level not more than 1000
Frequency: 50 HZ
Voltage and connection: HP and below, 220V connection with A ,380V
connection with Y, 5.5HP and over,380V connection with/,660v connection with Y.
Working method: SI(continues)
The value of temperature rise of stator winding(Resistance method): not over 105K.

Prepare work before mounting:

1. Please check whether the packing is damaged and wet or not before opening the packing box.
2. Please carefully clear off tbe dirt and antirust on the motor after opening th packing box.
3. Please check the data on the nameplate to see whether it is the same s demand;
4. Please cheek whether the motor is out of shape and damaged due ta long distance transportation, and also please remove the shaft of the otor to check whether the tight parts arc loosen and divorced or not.
5. Please measure the insulation resistance to see whether the value of the insulation is lower than 0.5 meg. If yes, the stator winding should be dried under the temperature not more than 120°C

Prepare work before mounting:

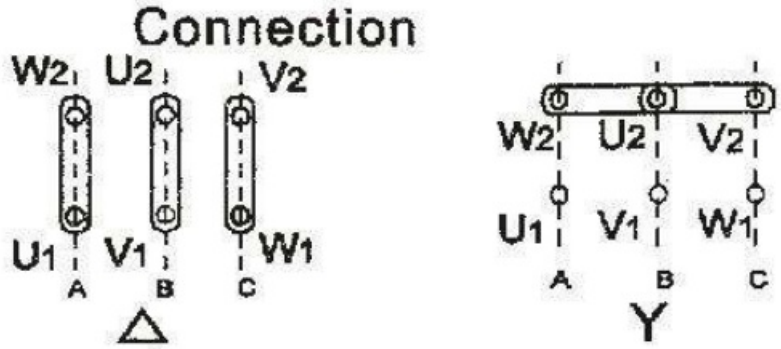
1. The motors are allowed to he driven by clutch, spur gear or pulley, 2.If the motor to be driven by V-belts, the shaft center line of the motor and the shaft center line of the loading parts should be of equal rank, the center line of belt and the center of shaft should be vertical;
2. The center line of the motor shaft and the center of loading parts shaft should be coincided when the motor is driven with clutch.
3. The motors should be mounted on the place where have good ventilation and it is easily to be cooled.

Operating of the motors

1. The motors earth unit which located on the terminal box should be well connected to the ground. If necessary. You can also get the screw bolt as earth unit connected between the earth and the frame foot or flange.
2. There are 6 connectors on the terminal box, they are separately marked as follows:

Phase sequence	A	B	C
Head	U1	V1	W1
Tail	U2	V2	W2

3. Please connect the motor to be or Y connection according to the connection method lisped on the nameplate.



When the power phase ABC are corresponding with the binding post U1, V1 ,W1, you will notice that the rotation of the motor is clock wise rotation from the main shaft end. If you change the power source phase sequence the rotation direction of the motor will be totally opposite.

4. 'The motors are allowed to be started with full voltage or to be stated with step-down voltage(with reaction machine or Y– start).But please note, When it is stated with full voltage there will be about 5to 7 times staring current than the rated current, when it is started with step–down voltage, the torque ls direct ration compare with the square of voltage. Please start the motor with step down voltage when the power source is not enough.

   Please start the motor with full voltage when the static loaded is on high side.

5. When the deviation of the frequency between the power source and the date marked on the nameplate is more than 1%, or the deviation of the voltage is more than 5%, the motor will not assure to continuously offer rated output. For the continuous working motor. Please don't make it over load.
6. The motor should not have the intermittent or unusual sound or vibration during the motor is on load or no load, the temperature of the bearing should not exceed 9 °C.

Maintenance and repair of the motors

1. The motor should be used and kept on the dry place, the surface of it should be kept clean, please don't make the part for fan to be influenced by the dust.
2. During operating, please assure the motor is in good lubricating Usually, after the motor have being operated 508 hours or so, you should add more or exchange the lubricating to it(To the closed)bearing, no need to change the lubricating, if motor is still in is its life.

   During the motor is on operating, if you found the bearing is over heat or the lubricating goes bad, please exchange the lubricating immediately, During exchange the lubricating, you should clear off the old lubricating, and also clean the bearing and bearing cover with gas, then put the ZL.–3 lithium case lubricating grease on the outside and inside of the bearing.

   For the 2pole motor, to put grease half of the inside and outside cavity of the bearing is enough, but for the 4pole, 6pole and 8pole motor, you should put the grease about 2/3 of the inside and outside cavities of the bearing.

3. When the bearing nearly end is life, the vibration and the noise of the motor's running will be absolutely

stronger than before, Checking the bearing, of you find radial lash has reached the below marked figure, please change the bearing.

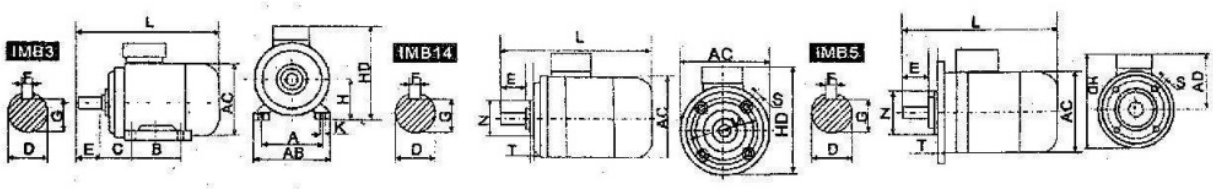
Bearing' s internal dieter	20-30	35-50	55-80	85-120
Limited frazzle lash	0.1	0,15	0.2	0.3

4. For taking-down the motor, to take out the rotor from the shaft end or the opposition both are permitted. If no need to take down the fan, it will be more convenient to take out the rotor from the fan end. When taking shaft from the rotor the rotor, please try to Avoid the winding and insulation of the rotor being damaged.
5. During exchange the winding please take note for the former winding's figuration, dimension, number of turns and gauge etc. If you lose these date, please contact with the manufacturer, If you change the former design on windings at will, it will make some or several performances of the motor worsen, even further, the motor could not be operated any more.

Technical Date

TYPE	Output		Voltage	Current	Speed	EFF(%)	Power	Tstart/Tn	Tstart/Tn	Ist/In
	KW	HP	(V)	(A)	r/min		Factor			(A)
MS561-2	0.09	0.12	220/380	0.57/0.33	2800	62	0.68	2.3	2.4	6
MS562-2	0.12	1/6	220/380	0.67/0.38	2800	67	0.71	2.3	2.4	6
MS631-2	0.18	1/4	220380	0.91/0.53	2800	69	0.75	2.2	2.4	6
MS632-2	0.25	1/3	220/380	1.17/1.68	2800	72	0.78	2.2	2.4	6
MS711-2	0.37	1/3	220/380	1.65/0.95	2800	73.5	0.80	2.2	2.4	6
MS712-2	0.55	3/4	220/380	2.33/1.35	2800	75.5	0.82	2.2	2.4	6
MS801-2	0.75	1	220/380	3.03/1.75	2800	76.5	0.85	2.2	2.4	6
MS802-2	1.10	1.5	220/380	4.42/2.55	2800	77	0.85	2.2	2.4	6
MS90S-2	1.50	2	220/380	6.01/3.48	2800	77	0.85	2.2	2.4	6
MS90L-2	2.20	3	220/380	8.61/4.98	2800	78	0.86	2.2	2.4	6
MS100L-2	3	4	220/380	11.1/6.4	2870	82	0.87	2.2	2.3	7
MS112M-2	4	5.5	380/660	8.2/4.7	2890	85.5	0.87	2.2	2.3	7
MS132S1-2	5.5	7.5	380/660	11/6.3	2900	85.5	0.88	2.0	2.2	7
MS132S2-2	7.5	10	380/660	15/8.6	2900	86.2	0.88	2.0	2.2	7
MS561-4	0.06	0.08	220/380	0.49/0.28	1400	56	0.58	2.3	2.4	6
MS562-4	0.09	0.12	220/380	0.67/0.39	1400	58	0.61	2.3	2.4	6
MS631-4	0.12	1/6	220/380	0.84/0.48	1400	60	0.63	2.2	2.4	6
MS632-4	0.18	1/4	220/380	1.12/0.65	1400	64	0.66	2.2	2.4	6
MS711-4	0.25	1/3	220/380	1.44/0.83	1400	67	0.68	2.2	2.4	6
MS712-4	0.37	1/2	220/380	1.94/1.12	1400	69.5	0.72	2.2	2.4	6
MS801-4	0.55	3/4	220/380	2.69/1.56	1400	73.5	0.73	2.2	2.4	6
MS802-4	0.75	1	220/380	3.48/2.01	1400	75.5	0.75	2.2	2.4	6
MS90S-4	1.10	1.5	220/380	4.74/2.75	1400	78	0.78	2.2	2.4	6
MS90L-4	1.50	2	220/380	6.31/3.65	1400	79	0.79	2.2	2.4	6
MS100L1-4	2.2	3	220/380	8.6/5.0	1430	81	0.82	2.2	2.3	7
MS100L2-4	3	4	220/380	11.7/6.8	1430	82.5	0.81	2.2	2.3	7
MS112M-4	4	5.5	380/660	8.8/5.1	1440	84.5	0.82	2.2	2.3	7
MS132S -4	5.5	7.5	380/660	12/6.9	1440	85.5	0.84	2.2	2.2	7
MS132M-4	7.5	10	380/660	15/8.6	1440	87	0.85	2.2	2.2	7
MS90S-6	0.75	1	220/380	4.0/2.3	910	72.5	0.70	2.2	2.2	5.5
MS90L-6	1.1	1.5	220/380	5.5/3.2	910	73.5	0.72	2.2	2.2	5.5
MS100L-6	1.5	2	220/380	6.9/4.0	940	77.5	0.74	2.2	2.2	6
MS112M-6	2.2	3	220/380	9.7/5.6	940	80.5	0.74	2.2	2.2	6
MS132S-6	3	4	220/380	12.4/7.2	960	83	0.76	2.0	2.0	6.5
MS132M1-6	4	5.5	380/660	9.4/5.4	960	84	0.77	2.0	2.0	6.5
MS132M2-6	5.5	7.5	380/660	13/7.5	960	85.3	0.78	2.0	2.0	6.5

Over all and Mounting Dimension



Frame size	Installation Size																	Overall Dimensions				
	IMB3									IMB14					IMB5									
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	M	N	P	S	T	AB	AC	AD	HD	L
56	90	71	36	9	20	3	7.2	56	5.8	65	50	80	M5	2.5	98	80	120	7	3.0	110	120	110	155	195
63	100	80	40	11	23	4	8.5	63	7	75	60	90	M5	2.5	115	95	140	10	3.0	130	130	115	165	230
71	112	90	45	14	30	5	11	71	7	85	70	105	M6	2.5	130	110	160	10	3.5	145	145	125	185	255
80	125	100	50	19	40	6	15.5	80	10	100	80	120	M6	3.0	165	130	200	12	3.5	160	165	135	215	295
90S	140	100	56	24	50	8	20	90	10	115	95	140	M8	3.0	165	130	200	12	3.5	180	185	145	235	335
90L	140	125	56	24	50	8	20	90	10	115	95	140	M8	3.0	165	130	200	12	3.5	180	185	145	235	360
100L	160	140	63	28	60	8	24	100	12	130	110	160	M8	3.5	215	180	250	15	4.0	205	215	170	255	380
112M	190	140	70	28	60	8	24	112	12	130	110	160	M8	3.5	215	180	250	15	4.0	145	240	180	285	400
132S	216	140	89	38	80	10	33	132	12	165	130	200	M10	4.0	265	230	300	15	4.0	280	275	195	325	475
132M	216	178	89	38	80	10	33	132	12	165	130	200	M10	4.0	265	230	300	15	4.0	280	275	195	325	515

Documents / Resources

	Capris MS Series Induction Motor [pdf] Instruction Manual MS Series Induction Motor, MS Series, Induction Motor, Motor