

THREE PHASE

Brake Motors



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50 Hz.

INTRODUCTION

Brake motors are used for various applications where instantaneous stopping of the driven load is required. The operation of the brake is "FAIL SAFE TYPE" (USB & UMB series) and are NORMALLY ON (UFB). The brake is applied when power to the motor is switched off of power failure occurs.

CONSTRUCTION

- ❑ Brake Motor is combination of an AC induction motor and an electromagnetic DC fail safe brake. As shown in the figure brake motor consists of the following:
- ❑ AC induction motor (Foot/Flange)
- ❑ Electromagnetic DC fail safe brake type USB or UMB.
- ❑ Cooling fan after the brake for better heat dissipation and cooling of motor & brake as well.
- ❑ Rectifier units either can be provided near to motor terminal (for AC switching) or given separately to mount them in the control panel (for DC switching).
- ❑ Manual release is an optional feature and will be provided only with our UMB series brakes.

WORKING

When there is no power given to either motor or brake, the brake torque is provided by compression springs developing an axial force on the brake armature plate which ultimately presses it against mounting flange. In this condition a nominal air gap will be available and the rotor with the frictional surfaces remains sandwiched in between armature plate and mounting plate.

Release of the brake takes place when the power to the brake and motor is supplied at the same time. Power to the brake coil produces a magnetic field and pulls the armature plate against the compression spring force towards the stator (Brake Coil) over the air gap and rotor becomes free to rotate. The attraction of the armature plate and returning to its original position takes place instantaneously thus fail safe nature is ensured in case of power failure.

SPECIFICATIONS

- Frame Sizes : 80 TO 160
- Enclosure : IP 55
- Mounting Option : Foot (B3) Flange (B5)
- Duty Class : S1
- Terminal Box Position : Top
- Voltage : 2.2 kW and below 415 V
3.7 kW and below 415V
- Frequency : 50Hz
- Cooling : IC411
- Lubrication : Greased - for - life
- Insulation : Class F
- Temperature Rise : Class B
- DC Brake : Refer Brake Details
- Paint Shade : RAL 5009 AZURE BLUE.

FEATURES

- ❑ Fast engagement of brakes
- ❑ High starting torque with low starting current
- ❑ DC brake option.
- ❑ No separate terminal box for rectifier and DC supply required
- ❑ Lower maintenance and enhanced liner life
- ❑ Multi Mount
- ❑ Brake Kit

APPLICATIONS

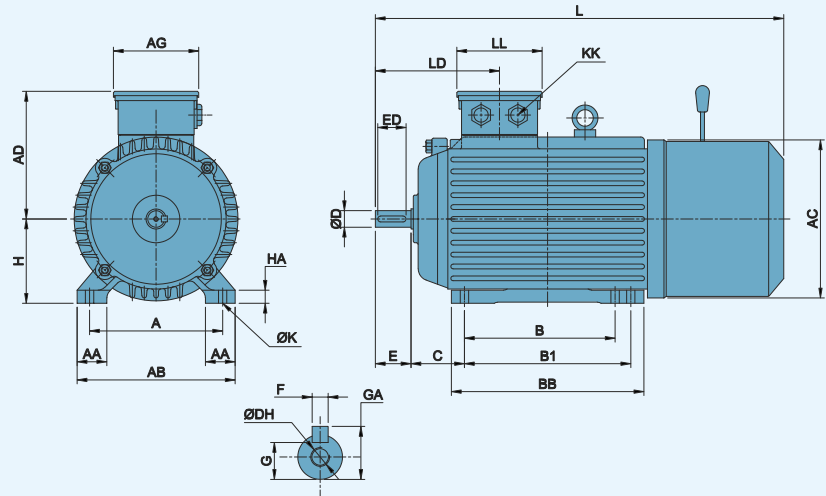
- ❑ Hoist and Crane
- ❑ Machine Tools
- ❑ Material Handling Equipments
- ❑ Textile Machinery
- ❑ Rolling Mills
- ❑ Leather Processing Machines
- ❑ Printing Machine
- ❑ Cable Reeling Drums

USB UMB SERIES FOR BRAKE MOTOR

HP	RPM	Frame Size	Torque	Safety Factor
1/0.75	1500	80	10	2.1
	1000	90S	20	2.79
1.5/1.1	1500	90S	20	2.79
	1000	90L	20	1.86
2/1.5	1500	90L	20	2.1
	1000	100L	35	2.44
3/2.2	1500	100L	35	2.44
	1000	112M	65	3.02
5/3.7	1500	112M	65	2.72
	1000	132S	65	1.82
7.5/5.5	1500	132S	85	2.37
	1000	132M	155	2.88
10/7.5	1500	132M	85	1.78
	1000	160M	155	2.16
12.5/9.3	1500	160M	155	2.6
	1000	160L	155	1.73
15.0/11.0	1500	160M	155	2.16
	1000	160L	250	2.33

FOOT MOUNTED (IM B3) MOTOR DIMENSIONAL DRAWING

IE 2, IE3

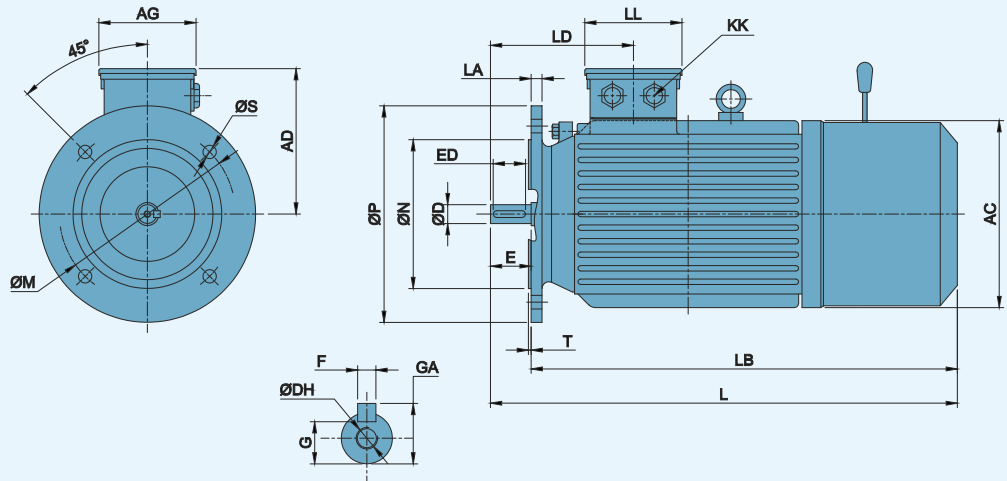


Frame	Pole	A	AA	AB	AC	AD	AG	B	B1	BB	C	D	DH	E	ED	F	G	GA	H	HA	K	KK	L	LD	LL
80L	4, 6	125	38	155	171	125	85	100	-	126	50	19	M6	40	34	6	15.5	21.5	80	10	10	1x3/4"	355	140	85
90S/L	4, 6	140	36	168	178	149	98	100	125	158	56	24	M8	50	42	8	20	27	90	13	10	2x3/4"	415	148	98
100L	4, 6	160	38	195	194	156	98	140	-	170	63	28	M10	60	52	8	24	31	100	14	12	2x3/4"	486	157	98
112M	4, 6	190	42	230	218	169	98	140	-	170	70	28	M10	60	52	8	24	31	112	14	12	2x3/4"	493	160	98
132S	4, 6	216	65	257	262	192	131	140	-	182	89	38	M12	80	68	10	33	41	132	18	12	2x1"	560	202	131
132S/M	4, 6	216	65	257	262	192	131	140	178	220	89	38	M12	80	68	10	33	41	132	18	12	2x1"	598	202	131
160M	4, 6	254	55	305	304	244	171	210	-	260	108	42	M16	110	96	12	37	45	160	19	15	2x1"	677	282	195

Note: All dimensions in mm unless otherwise noted.

"B" TYPE FLANGE MOUNTED (IM B5) MOTOR DIMENSIONAL DRAWING

IE 2, IE3



Frame	Pole	AC	AD	AG	D	DH	E	ED	F	G	GA	KK	L	LA	LB	LD	LL	M	N	P	S	T
80L	4, 6	171	140	98	19	M6	40	34	6	15.5	21.5	2x3/4"	355	10	315	140	98	165	130	200	12	3.5
90S/L	4, 6	178	149	98	24	M8	50	42	8	20	27	2x3/4"	415	10	365	169	98	165	130	200	12	3.5
100L	4, 6	194	156	98	28	M10	60	52	8	24	31	2x3/4"	486	11	426	157	98	215	180	250	15	4
112M	4, 6	218	169	98	28	M10	60	52	8	24	31	2x3/4"	493	12	433	160	98	215	180	250	15	4
132S	4, 6	262	192	131	38	M12	80	68	10	33	41	2x1"	560	13	480	202	131	265	230	300	15	4
132S/M	4, 6	262	192	131	38	M12	80	68	10	33	41	2x1"	598	13	418	202	131	265	230	300	15	4
160M	4, 6	304	244	171	42	M16	110	96	12	37	45	2x1"	677	13	467	282	195	300	250	350	19	5

Note: All dimensions in mm unless otherwise noted.

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