



AllianceMotori

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A-Y3B Series

- THREE PHASE BRAKE ASYNCHRONOUS MOTOR AND SUITABLE FOR INDUSTRIAL APPLICATIONS



A-Y3B SERIES

THREE PHASE BRAKE ASYNCHRONOUS MOTOR
AND SUITABLE FOR INDUSTRIAL APPLICATIONS



PRODUCT INFORMATION

A-Y3B Series motor is derived from Y3H series motor with fast braking, simple structure and high stability. It is widely used on mechanical equipment and driving machines where rapidly and accurate braking is demanded, such as lathe machine, packing machine, wood machine, food processing equipment, chemical engineering, textile machine, architectural machine, gear reducer, and so on.

SPECIFICATION

Standard | JB/T6456-2010
Frame Size | H80-250mm
Rated Power | 0.18kW-55kW
Degrees or Energy Efficiency | IE1 (IEC60034-30)
Voltage and Frequency | 380V / 50Hz
Degrees of Protections | IP55 (Motor), IP23 (Brake)
Degrees of Insulation / Temperature Rise | F/B
Installation Methods | B3/B5/B35/V1
Ambient Temperature | -15°C ~+ 40°C
Relative Humidity Should Be Less Than 90%
Altitude Should Be Lower Than 1000m Above Sea Level
Cooling Method | IC411
Brake Type | Brake after power loss

Note. Data May Change Without Notice

A-Y3B

THREE PHASE BRAKE ASYNCHRONOUS MOTOR
AND SUITABLE FOR INDUSTRIAL APPLICATIONS



A-Y3B

PERFORMANCE TABLE

PERFORMANCE PARAMETERS

A-Y3B SERIES

4-Pole, 1500 r/min Synchronous Speed

380V 50Hz

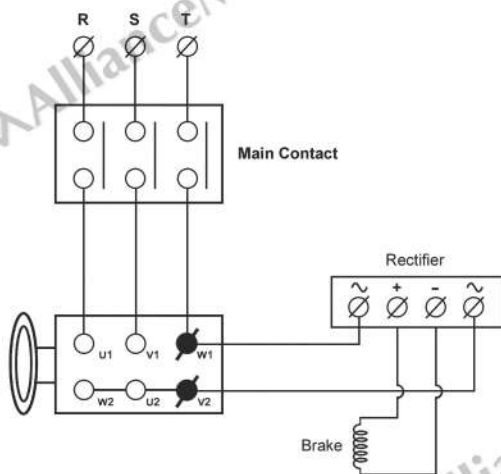
Motor Type	Rated Power	Rated Speed	Rated Current	Rated Eff.	Rated Factor	Rated Torque	Ist In	Tst Tn	Tmax Tn	Tmin Tn	LW	LW	Net Weight	
	kW	r/min	A	η %	$\cos \phi$	Nm					dB(A) No Load	dB(A) Load		Kg
205 VDC	80M1-4	0.55	1390	1.6	71.1	0.75	3.8	5.2	2.4	2.3	1.7	58	63	17
	80M2-4	0.75	1390	2.1	73.2	0.76	5.2	6.0	2.3	2.3	1.6	58	63	18
	90S-4	1.1	1400	2.8	76.3	0.77	7.5	6.0	2.3	2.3	1.6	61	66	20
	90L-4	1.5	1400	3.7	78.7	0.78	10.2	6.0	2.3	2.3	1.6	61	66	23
	100L1-4	2.2	1420	5.1	81.2	0.81	14.8	7.0	2.3	2.3	1.5	64	69	30
	100L2-4	3	1420	6.7	82.7	0.82	20.2	7.0	2.3	2.3	1.5	64	69	35
180 VDC	112M-4	4	1440	8.8	84.4	0.82	26.5	7.0	2.3	2.3	1.5	65	70	40
	132S-4	5.5	1440	11.7	86.0	0.83	36.5	7.0	2.3	2.3	1.4	71	76	60
	132M-4	7.5	1440	15.6	87.2	0.84	49.8	7.0	2.3	2.3	1.4	71	76	70
	160M-4	11	1460	22.5	88.5	0.84	72	7.0	2.2	2.3	1.4	75	79	110
	160L-4	15	1460	30	89.6	0.85	98.2	7.5	2.2	2.3	1.4	75	79	130
	180M-4	18.5	1470	36.2	90.2	0.86	120	7.5	2.2	2.3	1.2	76	80	165
	180L-4	22	1470	42.9	90.6	0.86	143	7.5	2.2	2.3	1.2	76	80	180
	200L-4	30	1470	58	91.6	0.86	195	7.2	2.2	2.3	1.2	79	83	240
	225S-4	37	1480	70	92.2	0.87	239	7.2	2.2	2.3	1.2	81	85	280
	225M-4	45	1480	84.8	92.7	0.87	291	7.2	2.2	2.3	1.1	81	85	310
250M-4	55	1480	103	93.2	0.87	355	7.2	2.2	2.3	1.1	83	86	400	

205 VDC [Input AC - 220 VAC | Output DC - 205 VDC]

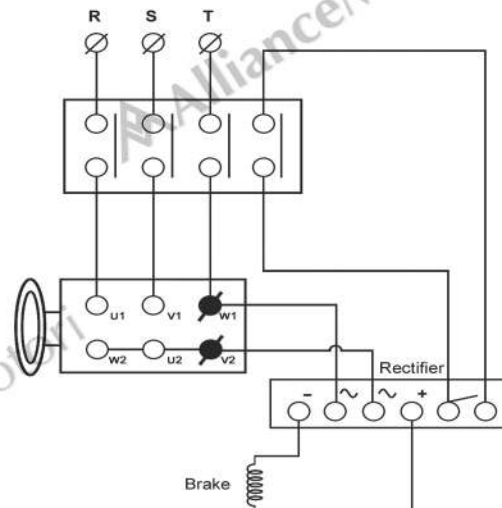
180 VDC [Input AC - 280 VAC | Output DC - 180 VDC]

RECTIFIER DIAGRAMS | A-Y3B SERIES

Type SRB270 - 270V ~ 0.75A
Delayed Braking



Type RB270 - 270V ~ 0.75A
Instantaneous Braking



Note. Data May Change Without Notice

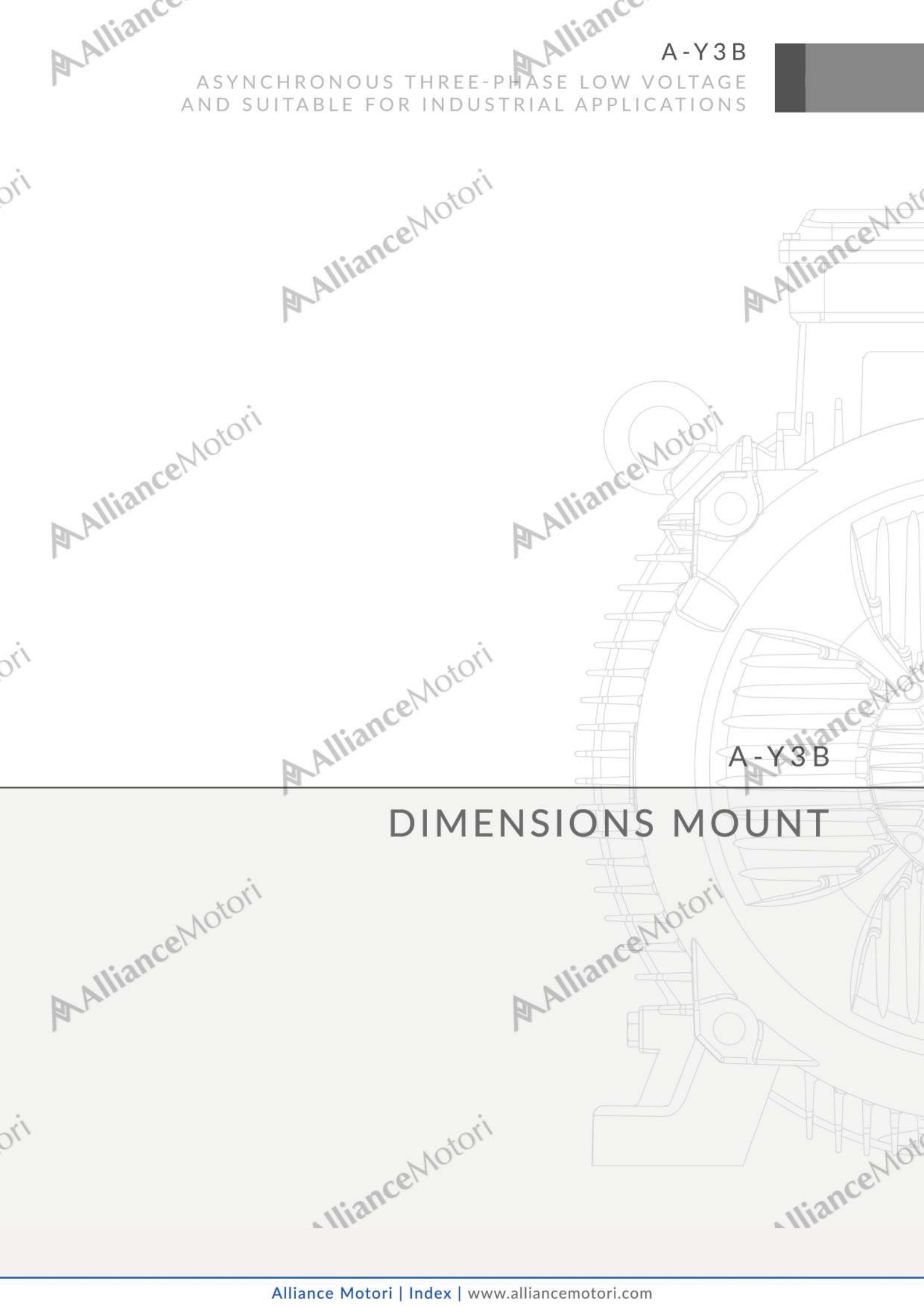
Rated & Holding Torque

Frame Size	Power	Motor Torque	Rated Torque (Nm)	Holding Torque (Nm)	Frame Size	Power	Motor Torque	Rated Torque (Nm)	Holding Torque (Nm)
A-Y3B-63M1-4	0.12		4	6					
A-Y3B-63M2-4	0.18		4	6	A-Y3B-71M1-6	0.18		4	6
A-Y3B-71M1-4	0.25		4	6	A-Y3B-71M2-6	0.25		4	6
A-Y3B-71M2-4	0.37		4	6	A-Y3BX-80M1-6	0.37	4	8	12
A-Y3BX-80M1-4	0.55	3.8	8	12	A-Y3BX-80M2-6	0.55	5.9	8	12
A-Y3BX-80M2-4	0.75	5.2	8	12	A-Y3BX-90S-6	0.75	7.9	16	23
A-Y3BX-90S-4	1.1	7.5	16	23	A-Y3BX-90L-6	1.1	11.5	16	23
A-Y3BX-90L-4	1.5	10.2	16	23	A-Y3BX-100L-6	1.5	15.6	32	46
A-Y3BX-100L1-4	2.2	14.8	32	46	A-Y3BX-112M-6	2.2	22.4	32	46
A-Y3BX-100L2-4	3	20.2	32	46	A-Y3BX-132S-6	3	29.9	60	80
A-Y3BX-112M-4	4	26.5	60	80	A-Y3BX-132M1-6	4	39.8	80	105
A-Y3BX-132S-4	5.5	36.5	80	105	A-Y3BX-132M2-6	5.5	54.7	80	105
A-Y3BX-132M-4	7.5	49.8	80	105	A-Y3BX-160M-6	7.5	73.9	150	200
A-Y3BX-160M-4	11	72	150	200	A-Y3BX-160L-6	11	108	150	200
A-Y3BX-160L-4	15	98.2	150	200	A-Y3BX-180L-4	15	148	260	345
A-Y3BX-180M-4	18.5	120	260	345	A-Y3BX-200L1-6	18.5	182	260	345
A-Y3BX-180L-4	22	143	260	345	A-Y3BX-200L2-6	22	217	400	630
A-Y3BX-200L-4	30	195	400	630	A-Y3BX-225M-6	30	293	600	1000
A-Y3BX-225S-4	37	239	600	1000	A-Y3BX-250M-6	37	361	600	1000
A-Y3BX-225M-4	45	291	600	1000					

Note. Data May Change Without Notice

A-Y3B

ASYNCHRONOUS THREE-PHASE LOW VOLTAGE
AND SUITABLE FOR INDUSTRIAL APPLICATIONS



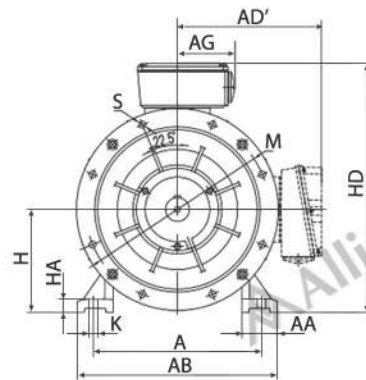
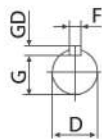
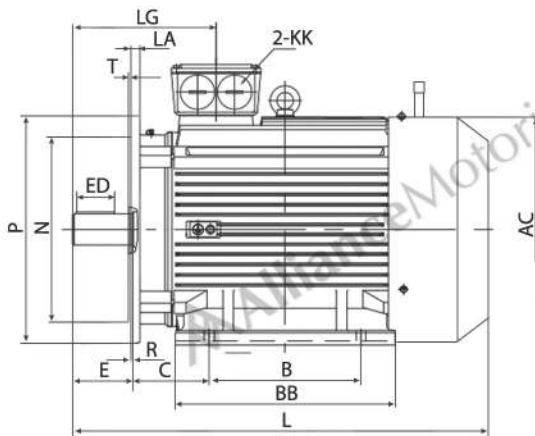
A-Y3B

DIMENSIONS MOUNT

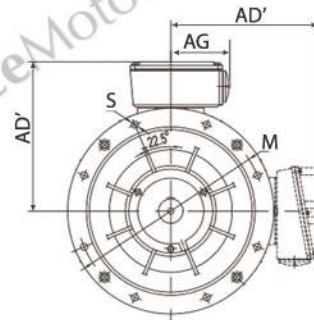
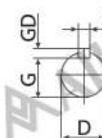
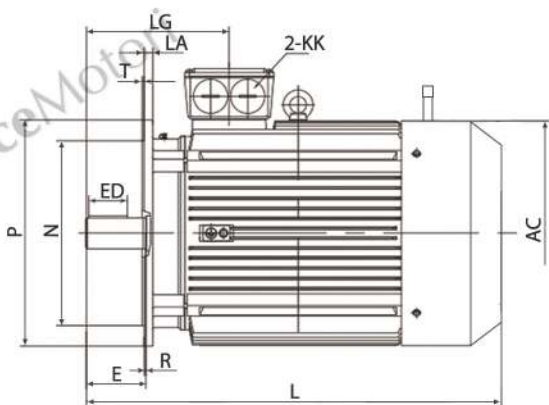
DIMENSIONS MOUNT

A-Y3B SERIES

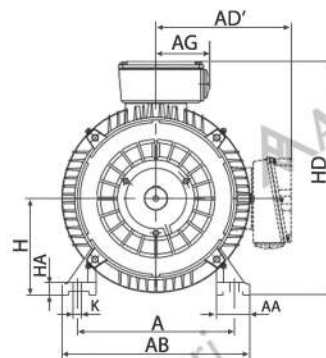
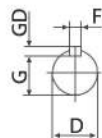
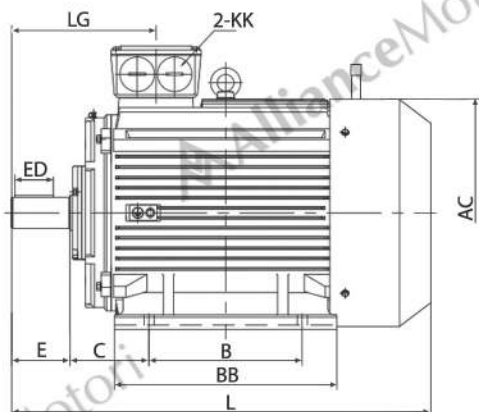
B35



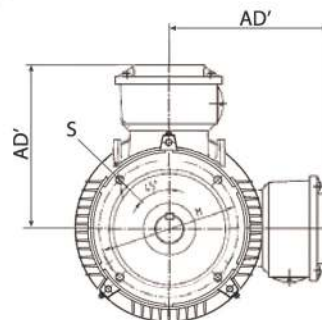
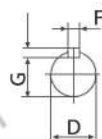
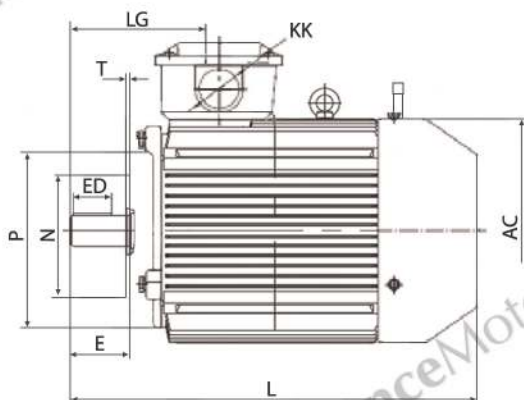
B5 / V1



B3



B14



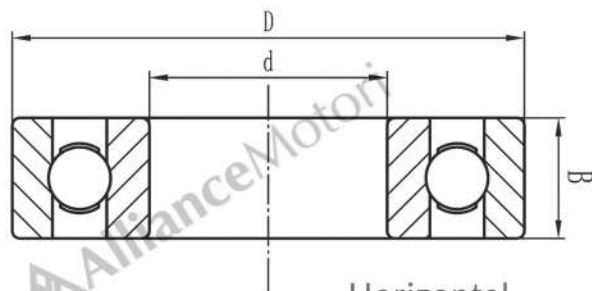
Note. Data May Change Without Notice

Frame	B5																	B35											
	A	AA	AB	AC	AD'	B	BB	C	D	E	ED	F	G	GD	H	HA	HD	K	KK	L	LG	LA	M	N	P	S	T	LM	
80M	125	34	160	175	150	100	130	50	19	40	22	6	15.5	6	80	10	230	10	M25x1.5	350	106	12	165	130	200	12	3.5	390	
90S	140	36	180	190	165	100	135	56	24	50	32	8	20	7	90	12.5	260	10	M25x1.5	390	124	12	165	130	200	12	3.5	430	
90L	140	36	180	190	165	125	160	56	24	50	32	8	20	7	90	12.5	260	10	M25x1.5	415	124	14	165	130	200	12	3.5	455	
100L	160	40	200	215	170	140	182	63	28	60	40	8	24	7	100	14	275	12	M25x1.5	445	140	14	215	180	250	14.5	4	495	
112M	190	45	230	236	195	140	195	70	38	60	40	8	24	7	112	14	310	12	M32x1.5	475	145	14	215	180	250	14.5	4	525	
132M	216	52	265	275	215	140	205	89	38	80	56	10	33	8	132	16	350	12	M32x1.5	550	169	14	265	230	300	14.5	4	600	
132M	216	52	265	275	215	178	245	89	38	80	56	10	33	8	132	16	350	12	M32x1.5	590	169	15	265	230	300	14.5	4	640	
160M	254	65	320	330	265	210	260	108	42	110	80	12	37	8	160	19	425	14.5	M40x1.5	715	270	15	300	250	350	18.5	5	770	
160L	254	65	350	330	265	254	305	108	42	110	80	12	37	8	160	19	425	14.5	M40x1.5	760	270	15	300	250	350	18.5	5	815	
180M	279	70	350	380	280	241	285	121	48	110	80	14	42.5	9	180	22	440	14.5	M40x1.5	790	277	15	300	250	350	18.5	5	860	
180L	279	70	350	380	280	279	325	121	48	110	80	14	42.5	9	180	22	440	14.5	M40x1.5	830	277	17	300	250	350	18.5	5	900	
200L	318	80	390	420	315	305	355	133	55	10	80	16	49	10	200	25	505	18.5	M50x1.5	895	298	20	350	300	400	18.5	5	965	
225S(4-8P)	356	75	435	465	335	286	350	149	60	140	100	18	53	11	225	28	550	18.5	M50x1.5	970	340	20	400	350	450	18.5	5	1040	
225M(2P)	356	75	435	465	335	311	375	149	55	110	80	16	49	10	225	28	550	18.5	M50x1.5	965	310	22	400	350	450	18.5	5	1035	
225M(4-8P)	356	75	435	465	335	311	375	149	60	140	100	18	53	11	225	28	550	18.5	M50x1.5	995	340	22	400	350	450	18.5	5	1065	
250M(2P)	406	100	485	520	375	349	450	168	60	140	100	18	53	11	250	33	635	24	M63x1.5	1075	357	24	500	450	550	18.5	5	1155	
250M(4-8P)	406	100	485	520	375	349	450	168	65	140	100	18	58	11	250	33	635	24	M63x1.5	1075	357	24	500	450	550	18.5	5	1155	
280S(2P)	457	105	550	570	405	368	490	190	65	140	100	18	58	11	280	35	695	24	M63x1.5	1135	350	24	500	450	550	18.5	5	1215	
280S(4-8P)	457	105	550	570	405	368	490	190	75	140	100	20	67.5	12	280	35	695	24	M63x1.5	1155	350	25	500	450	550	18.5	5	1235	
280M(2P)	457	105	550	570	405	419	540	190	65	140	100	18	58	11	280	35	695	24	M63x1.5	1190	350	25	500	450	550	18.5	5	1270	
280M(4-8P)	457	105	550	570	405	419	540	190	75	140	100	20	67.5	12	280	35	695	24	M63x1.5	1210	350	25	500	450	550	18.5	5	1290	
315S(2P)	508	125	630	650	500	406	515	216	65	140	100	18	58	11	315	45	810	28	M63x1.5	1335	387	25	600	550	660	24	6	1435	
315M(2P)	508	125	630	650	500	457	625	216	65	140	100	18	58	11	315	45	810	28	M63x1.5	1445	387	25	600	550	660	24	6	1545	
315L(2P)	508	125	630	650	500	508	625	216	65	140	100	18	58	11	315	45	810	28	M63x1.5	1445	387	25	600	550	660	24	6	1545	
315S(4-8P)	508	125	630	650	500	406	515	216	80	170	130	22	71	14	315	45	810	28	M63x1.5	1365	417	25	600	550	660	24	6	1465	
315M(4-8P)	508	125	630	650	500	457	625	216	80	170	130	22	71	14	315	45	810	28	M63x1.5	1475	417	25	600	550	660	24	6	1575	
315L(4-8P)	508	120	630	650	500	508	625	216	80	170	130	22	71	14	315	45	810	28	M63x1.5	1475	417	25	600	550	660	24	6	1575	
355M(2P)	610	125	735	735	645	560	850	254	75	140	110	20	67.5	12	355	49	1000	28	M63x1.5	1850	420	25	740	680	800	24	6	1950	
355L(2P)	610	125	735	735	645	630	850	254	75	140	110	20	67.5	12	355	49	1000	28	M63x1.5	1850	450	25	740	680	800	24	6	1950	
355M(4-8P)	610	125	735	735	645	560	850	254	95	170	140	25	86	14	355	49	1000	28	M63x1.5	1880	450	25	740	680	800	24	6	1980	
355L(4-8P)	610	125	735	735	645	630	850	254	95	170	140	25	86	14	355	49	1000	28	M63x1.5	1880	450	25	740	680	800	24	6	1980	

Note. Data May Change Without Notice

BEARING

ALLIANCE MOTORI HEAVY DUTY



Vertical

Frame Size	DE	NDE	d	D	B
80	6204 ZZ	6204 ZZ	20	47	14
90	6205 ZZ	6205 ZZ	25	52	15
100	6206 ZZ	6206 ZZ	30	62	16
112	6306 ZZ	6306 ZZ	30	72	19
132	6308 ZZ	6308 ZZ	40	90	23
160	6309	6309	45	100	25
180	6311	6311	55	120	29
200	6312	6312	60	130	31
225	6313	6313	65	140	33
250	6314	7314	70	150	35
280 - 2P	6314	7314	70	150	35
280 - 4 - 8P	6317	7317	85	180	41
315 - 2P	6316	7316	80	170	39
315 - 4 - 10P	6319	7319	95	200	45
355 - 2P	6319	7319	95	200	45
355 - 4 - 10P	6322	7322	110	240	50
355L3 - 4P, L2-6P	NU324	7324	120	260	55

Horizontal

Frame Size	DE	NDE	d	D	B
80	6204 ZZ	6204 ZZ	20	47	14
90	6205 ZZ	6205 ZZ	25	52	15
100	6206 ZZ	6206 ZZ	30	62	16
112	6306 ZZ	6306 ZZ	30	72	19
132	6308 ZZ	6308 ZZ	40	90	23
160	6309	6309	45	100	25
180	6311	6311	55	120	29
200	6312	6312	60	130	31
225	6313	6313	65	140	33
250	6314	6314	70	150	35
280 - 2P	6314	6314	70	150	35
280 - 4 - 8P	6317	6317	85	180	41
315 - 2P	6316	6316	80	170	39
315 - 4 - 10P	6319	6319	95	200	45
355 - 2P	6319	6319	95	200	45
355 - 4 - 10P	6322	6322	110	240	50
355L3 - 4P, L2-6P	NU324	6324	120	260	55

BEARING TYPE AND LUBRICATION INTERVAL TABLE

Notes: Motor H80 ~ 132 with sealed bearings need not to grease, motors whose frames dimensions are greater than H160 are equipped with grease filling and draining devices.

For vertical motor, if unspecified, the interval is half of the above value. The above value is based on bearing temperature of 80°C and environment temperature of +25°C. The environment temperature changes will affect the bearing temperature. The interval shall be half every 15°C increased of the bearing temperature, while double the interval every 15°C reduced of bearing temperature.

The standard motor use HTHS grease. Please do not mix other brand and type of grease to avoid damage to the bearing which can be caused by incompatible of different grease.

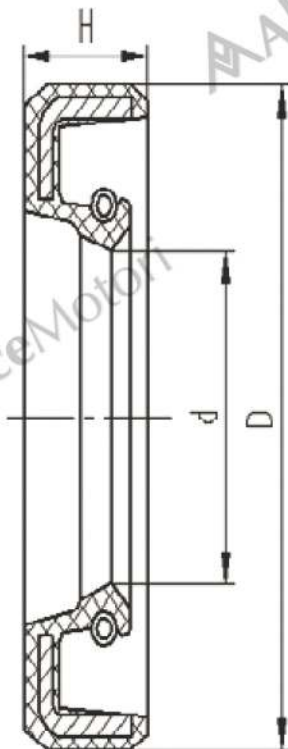
Frame Size	Frame Size		Grease Amount G	Interval (hour)		
	DE	NDE		<3600rpm	<1800rpm	<1000rpm
160	6309	6309	30	3000	4000	5000
180	6311	6311	50	3000	4000	5000
200	6312	6312	60	3000	4000	5000
225	6313	6313	80	3000	4000	5000
250	6314	6314	80	2000	4000	5000
280 - 2P	6314	6314	80	2000	-	-
280 - 4 - 8P	6317	6317	120	-	4000	5000
315 - 2P	6316	6316	100	2000	-	-
315 - 4 - 10P	6319	6319	120	-	2000	4000
355 - 2P	6319	6319	120	1000	-	-
355 - 4 - 10P	6322	6322	220	-	2000	4000
355L3 - 4P, L2-6P	Nu324	6324	240	-	2000	4000

Note. Data May Change Without Notice

OIL SEALING



Frame Size	Type	d	D	h	H
80	RB20*35*4.0	Ø20	Ø35	3	6
90	RB25*40*4.0	Ø25	Ø40	3	6
100	RB30*47*4.5	Ø30	Ø47	3.5	6
112	RB30*47*4.5	Ø30	Ø47	3.5	6
132	RB40*57*4.5	Ø40	Ø57	3.5	6.5
160	RB45*62*4.5	Ø45	Ø62	3.5	6.5
180	RB55*75*5.5	Ø55	Ø75	4.5	6.5
200	RB60*80*5.5	Ø60	Ø80	4.5	6.5
225	RB65*85*5.5	Ø65	Ø85	4.5	8
250	RB70*90*5.5	Ø70	Ø90	4.5	8
280-2	RB70*90*5.5	Ø70	Ø90	4.5	8
280-4	RB85*105*5.5	Ø85	Ø105	4.5	8
315-2	RB80*100*5.5	Ø80	Ø100	4.5	8
315-4	RB95*115*5.5	Ø95	Ø115	4.5	8
355-2	RB95*115*5.5	Ø95	Ø115	4.5	8
355-4	RB110*130*5.5	Ø110	Ø130	4.5	8



Frame Size	Type	d	D	H
80	(F)B20X42X5	Ø20	Ø42	5
90	(F)B25X47X5	Ø25	Ø47	5
100	(F)B30X52X7	Ø30	Ø52	7
112	(F)B30X52X7	Ø30	Ø52	7
132	(F)B40X62X5	Ø40	Ø62	5
160	(F)B45X70X8	Ø45	Ø70	8
180	(F)B55X80X8	Ø55	Ø80	8
200	(F)B60X85X8	Ø60	Ø85	8
225	(F)B65X90X10	Ø65	Ø90	10
250	(F)B70X95X10	Ø70	Ø95	10
280-2	(F)B70X95X10	Ø70	Ø95	10
280-4.6.8	(F)B85X110X12	Ø85	Ø110	12
315-2	(F)B80X105X10	Ø80	Ø105	10
315-4.6.8	(F)B95X120X12	Ø95	Ø120	12
355-2	(F)B95X120X12	Ø95	Ø120	12
355-4.6.8	(F)B110X140X12	Ø110	Ø140	12
355L3-4P, L2-6P	(F)B120X150X12	Ø120	Ø150	12

Note. Data May Change Without Notice

THE MOUNTING ARRANGEMENTS

A-Y3B SERIES

The Mounting arrangements of the motors comply with IEC34-7 Recommendation. Three are four basic arrangements shown as the following tables and figures.

Fundamental arrangement	B3					
Mounting arrangement	B3	B6	B7	B8	V5	V6
Diagram						
Range of Manufacture (framesize)	56-400			56-160		

Fundamental arrangement	B5			B35		
Mounting arrangement	B5	V1	V3	B35	V15	V36
Diagram						
Range of Manufacture (framesize)	56-280	56-355	56-160	56-400	56-160	

Fundamental arrangement	B14					
Mounting arrangement	B14	B34	V18	V58	V19	V69
Diagram						
Range of Manufacture (framesize)	56-132					

Note. Data May Change Without Notice



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