

MARINE ELECTRIC MOTOR

Y—H Fan-cooled Three-phase Squirrel-cage Marine Motor

Introduction Y—H Series are totally-enclosed, fan-cooled three-phase marine motors of the squirrel-cage type. The motors are suitable for driving various machines on ships such as pumps, blowers, separa...

- ISO9001 Supplier
- Class Certificate
- Export Supply



Key Highlights

Category	Marine Electric Motor
Standard	DIN
Material	The motors are suitable for driving various machines on ships such as pu...
Weight / Size	IEC60034 Rotating electrical machines IEC60068 Basic environmental testi...
Certificate	CCS/LR/DNV/KR

We can supply according to your requirement, drawings, class certificate needs, and delivery schedule.

Technical Specifications

Category	Marine Electric Motor	Model / SKU	Y-H-Fan-cooled-Three-phase-Squirrel-cage-Marine-Motor
Standard	DIN	Material	The motors are suitable for driving various machines on ships such as pumps, blowers, separators, hydraulic engines and other auxiliary equipment. The motors are designed accordance with National Standard GB755 "Rotating electrical machines-Rating and performance" and the existing "Rules for the construction of sea-going steel ships." The motors also comply with the relevant requirements of the following standards and specifications.
Weight / Size	IEC60034 Rotating electrical machines IEC60068 Basic environmental testing procedures IEC60072 Dimensions and output ratings for rotating electrical machines IEC60092 Electrical installation in ships The motors are also in conformity with part of the specifications of the following Ships Classification Societies. LR Lloyd's Register of Shipping GL Germanischer Lloyd NK Nippon Kaiji Kyokai BV Bureau Veritas ABS American Bureau of Shipping KR Korean Register of Shipping RINA Register Italiano Navale RS Russian Maritime Register of Shipping DNV Det Norske Veritas Type Designation The type designation consists of several letters and digits Table 1 Frame Size No.	Surface	VI Impregnation and Surface Treatment The motor winding impregnated and well treated to obtain the adequate damp-proof , anti-fungus and anti-salt-mist properties in accordance with the specifications for humid-tropic machines.
Certificate	CCS/LR/DNV/KR	Warranty	12 Months unless specified otherwise
Origin	China		

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Introduction

Y—H Series are totally-enclosed, fan-cooled three-phase marine motors of the squirrel-cage type. The motors are suitable for driving various machines on ships such as pumps, blowers, separators, hydraulic engines and other auxiliary equipment. The motors are designed accordance with National Standard GB755 "Rotating electrical machines-Rating and performance" and the existing "Rules for the construction of sea-going steel ships."

The motors also comply with the relevant requirements of the following standards and specifications.



IEC60034 Rotating electrical machines

IEC60068 Basic environmental testing procedures

IEC60072 Dimensions and output ratings for rotating electrical machines

IEC60092 Electrical installation in ships

The motors are also in conformity with part of the specifications of the following Ships **Classification Societies**.

LR Lloyd's Register of Shipping

GL Germanischer Lloyd

NK Nippon Kaiji Kyokai

BV Bureau Veritas

ABS American Bureau of Shipping

KR Korean Register of Shipping

RINA Register Italiano Navale

RS Russian Maritime Register of Shipping

DNV Det Norske Veritas

Type Designation

The type designation consists of several letters and digits



Table 1			
Frame Size	No. of Poles	Bearings	
		Driving end	Non-Driving end
		B3、 B5、 B35	V1
80	2, 4	6204-2RS/C3	6204-2RS/C3
90	2, 4, 6	6205-2RS/C3	6205-2RS/C3
100	2, 4, 6	6206-2RS/C3	6206-2RS/C3
112	2, 4, 6, 8	6206-2RS/C3	6206-2RS/C3
132	2, 4, 6, 8	6208-2RS/C3	6208-2RS/C3
160	2, 4, 6, 8	6309-2RS/C3	6309-2RS/C3
180	2, 4, 6, 8	6311/C3	6311/C3
200	2, 4, 6, 8	6312/C3	6312/C3
225	2/4, 6, 8	6312/C3/6313/C3	6312/C3
250	2/4, 6, 8	6313/C3/6314/C3	6313/Z2
280	2/4, 6, 8	6314/C3/6317/C3	6314/C3
315	2/4, 6, 8	6317/Z2/N319/Z2	7317ACJ/7319ACJ 6317/Z2/6319/Z2
355	2/4, 6, 8	6319/Z2/N322/Z2	7319ACJ/7322ACJ 6319/Z2/6322/Z2

Output

The output of the motors ranges from 0.55 to 315kW. Table2 shows the relations between frame size and output:

Table 2			
Frame size	Output: kW		
	2 — poles	4 — poles	6 — poles
			8 — poles

801	0.75	0.55	—	—
802	1.1	0.75		
90S	1.5	1.1	0.75	—
90L	2.2	1.5	1.1	—
100L1	3	2.2	1.5	—
100L2		3		
112M	4	4	2.2	—
132S1	5.5	5.5	3	2.2
132S2	7.5			
132M1	—	7.5	4	3
132M2			5.5	
160M1	11	11	7.5	4
160M2	15			5.5
160L	18.5	15	11	7.5
180M	22	18.5	—	—
180L	—	22	15	11
200L1	30	30	18.5	15
200L2	37		22	
225S	—	37	—	18.5
225M	45	45	30	22
250M	55	55	37	30
280S	75	75	45	37
280M	90	90	55	45
315S	110	110	75	55
315M	132	132	90	75
315L1	160	160	110	90
315L2	200	200	132	110
355M1	250	250	160	132
355M2	250	250	200	160
355L	315	315	250	200

Operating Conditions

Factors	Temperature of Ambient air	Altitude	Relative humidity	Dew	Salt mist	Oil mist	Fungus	Shock	Vibration	Inclination	Swing	Offshore oil platform
Operating Conditions	0°C ~45°C	0m	≤ 95%	exists	exists	exists	exists	exists	exists	±30°	±22.5°	workable

Voltage and Frequency

Rated Voltage 380V or 440V

Rated Frequency 50Hz or 60Hz

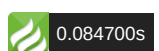
Connection

3kW or Less Y

more than 3kW Δ

Duty Type

Continuous



Insulation , Temperature Rise

Insulation B、 F or H

Temp.Rise of winding 75K、 100K or 120K

(resistance method)

Permissible working temp. of bearing 90°C

(thermometer method)

Type of starting

Direct on full-voltage starting for all sizes ; reduced voltage starting allowable at no-load or light load.

Driving Method

Pulley , spur or flexible coupling can be used for driving

Vibration

The limited values of vibration velocity , measured at the no-load conditions , does not exceed those given in table 3.

Table 3									
Mounting Type	80 ~ 132			160 ~ 280			315 ~ 355		
	Displacement / μ m	Speed /(mm/s)	Acceleration /(m/s ²)	Displacement / μ m	Speed /(mm/s)	Acceleration /(m/s ²)	Displacement / μ m	Speed /(mm/s)	Acceleration /(m/s ²)
Free hanging	25	1.6	2.5	35	2.2	3.5	45	2.8	4.4
Rigid Mounting	21	1.3	2	29	1.8	2.8	37	2.3	3.6

Mounting Arrangements

Mounting arrangements available for various frame sizes are shown in table 4.

B3 Horizontal , foot-mounted

B5 Horizontal , flange-mounted

B35 Horizontal , foot and flange mounted

V1 Vertical , flange mounted

Table 4	
Frame Size	Mounting Arrangements (IM)
80 ~ 225	B3. B5. B35, V1
250 ~ 315	B3. B35. V1

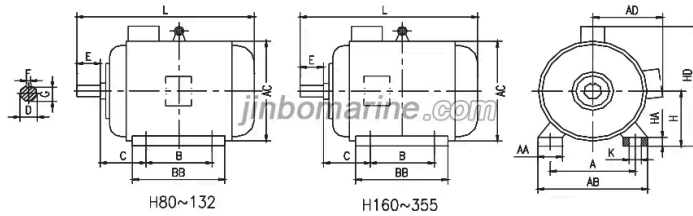
Impregnation and Surface Treatment

The motor winding impregnated and well treated to obtain the adequate damp-proof , anti-fungus and anti-salt-mist properties in accordance with the specifications for humid-tropic machines.

Model	Power /kW	Electric Current/ A		Rotating Speed/ r/min		Weight/ kg	Model	Power /kW	Electric Current/ A		Rotating Speed/ r/min		Weight/ kg
		380 V 50Hz Z	440V 60Hz	380 V 50Hz Z	440 V 60Hz Z				380 V 50Hz Z	440 V 60Hz Z			
Y801-2-H	0.75	1.8	1.6	2820	3460	17	Y315L2-4-H	200	361.3	319.0	1480	1790	1260

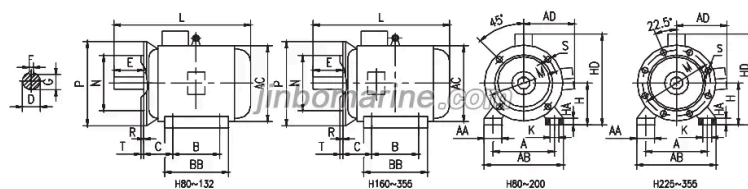
YSO2-2-H	1.1	2.6	2.2	2820	3460	19	Y355M-4-H	250	464.5	410.2	1480	1790	1600
Y90S-2-H	1.5	3.5	3.1	2810	3470	23	Y355L-4-H	315	582.1	514.0	1480	1790	1800
Y90L-2-H	2.2	4.9	4.3	2810	3470	26	Y90S-6-H	0.75	2.2	2.0	910	1130	20
Y100L-2-H	3	6.2	5.4	2880	3490	33	Y90L-6-H	1.1	3.2	2.9	910	1130	24
Y112M-2-H	4	8.2	7.2	2890	3500	46	Y100L-6-H	1.5	4.0	3.5	940	1150	33
Y132S1-2-H	5.5	11.0	9.6	2900	3520	78	Y112M-6-H	2.2	5.8	5.2	940	1150	45
Y132S2-2-H	7.5	14.6	12.9	2900	3520	90	Y132S-6-H	3	7.2	6.4	960	1170	66
Y160M1-2-H	11	21.6	18.7	2930	3540	120	Y132M1-6-H	4	9.5	8.2	960	1170	80
Y160M2-2-H	15	28.9	25.1	2930	3540	135	Y132M2-6-H	5.5	12.5	10.7	960	1170	90
Y160L-2-H	18.5	35.7	30.3	2930	3540	160	Y160M-6-H	7.5	17.1	14.8	970	1170	100
Y180NF2-H	22	42.2	36.9	2940	3550	180	Y160L-6-H	11	25.0	21.7	970	1170	125
Y200L1-2-H	30	57.9	50.3	2955	3560	215	Y180L-6-H	15	33.0	29.3	970	1180	195
Y200L2-2-H	37	69.4	60.3	2960	3565	245	Y200L1-6-H	18.5	37.6	32.7	980	1183	225
Y225M-2-H	45	85.9	76.3	2969	3572	330	Y200L2-6-H	22	44.7	38.9	980	1182	275
Y250M-2-H	55	103.2	91.7	2970	3570	400	Y225M-6-H	30	61.1	53.1	985	1187	325
Y280S-2-H	75	139.2	120.9	2970	3580	535	Y250M-6-H	37	71.0	61.3	980	1180	430
Y280M-2-H	90	167.1	143.5	2970	3580	550	Y280S-6-H	45	86.4	74.6	980	1190	505
Y315S-2-H	110	203.0	180.2	2970	3580	980	Y280M-6-H	55	103.2	89.7	980	1190	540
Y315M-2-H	132	242.3	215.1	2970	3580	1080	Y315S-6-H	75	141.1	124.0	980	1190	990
Y315L1-2-H	160	292.1	250.3	2970	3580	1160	Y315M-6-H	90	168.6	148.1	980	1190	1080
Y315L2-2-H	200	365.2	324.6	2970	3580	1260	Y315L1-6-H	110	205.5	180.5	980	1190	1150
Y355M-2-H	250	451.4	400.6	2970	3580	1600	Y315L2-6-H	132	245.8	215.9	980	1190	1210
Y355L-2-H	315	565.7	502.1	2970	3580	1800	Y355M1-6-H	160	302.0	265.3	980	1190	1500
Y801-4-H	0.55	1.5	1.4	1390	1710	17	Y355M2-6-H	200	376.7	330.9	980	1190	1700
YSO2-4-H	0.75	2.1	1.8	1390	1710	19	Y355L-6-H	250	468.9	411.9	980	1190	1900
Y90S-4-H	1.1	2.7	2.4	1400	1710	23	Y132S-8-H	2.2	5.8	5.2	710	860	66
Y90L-4-H	1.5	3.6	3.2	1400	1710	26	Y132M-8-H	3	7.6	6.8	710	860	80
Y100LW-H	2.2	5.0	4.5	1420	1730	36	Y160M1-8-H	4	10.5	9.1	720	870	93
Y100L2-4-H	3	6.8	5.9	1420	1730	39	Y160M2-8-H	5.5	13.4	11.5	720	870	105
Y112M-4-H	4	8.9	7.7	1440	1750	47	Y160L-8-H	7.5	17.7	15.5	720	870	130
Y132S-4-H	5.5	11.7	10	1440	1750	78	Y180L-8-H	11	25.6	22.2	730	880	175
Y132M-4-H	7.5	15.4	13.2	1440	1750	98	Y200L-8-H	15	33.3	29.2	729	882	255
Y160M-4-H	11	22.6	19.5	1460	1760	123	Y225S-8-H	18.5	40.3	35.6	735	886	300
Y160L-4-H	15	30.5	26.3	1460	1760	152	Y225M-8-H	22	47.4	41.7	734	886	320
Y180M-4-H	18.5	35.9	30.8	1470	1770	180	Y250M-8-H	30	64.7	57.1	730	890	420
Y180L-4-H	22	42.2	36.9	1470	1770	200	Y280S-8-H	37	79.8	68.9	740	890	515
Y200L-4-H	30	57.3	49.8	1476	1779	260	Y280M-8-H	45	94.8	80.8	740	890	550
Y225S-4-H	37	70.2	60.3	1481	1783	321	Y315S-78-H	55	113.5	98.6	740	890	1000
Y225M-4-H	45	84.0	73.4	1480	1783	355	Y315M-8-H	75	152.1	132.1	740	890	1100
Y250M-4-H	55	103.8	88.7	1480	1780	417	Y315L1-8-H	90	179.3	155.7	740	890	1160
Y280S-4-H	75	139.2	120.9	1480	1790	550	Y315L2-8-H	110	218.5	189.6	740	890	1230
Y280M-4-H	90	164.3	141.9	1480	1790	650	Y355M1-8-H	132	264.8	229.9	740	890	1500
Y315S-4-H	110	200.8	177.3	1480	1790	1000	Y355M2-8-H	160	320.3	278.1	740	890	1600
Y315M-4-H	132	239.7	211.6	1480	1790	1100	Y355L-8-H	200	399.1	346.5	740	890	1800
Y315L1-4-H	160	289.0	255.2	1480	1790	1160							

B3 The motor of frame with feet,end-shield without flange :



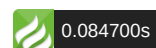
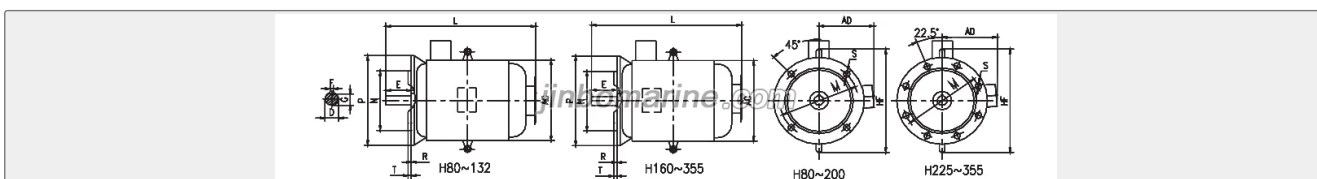
Frame	Poles	Mounting Dimension									Over Dimension							
		A	B	C	D	E	F	G	H	K	AA	BB	HA	AB	AC	AD	HD	L
80	2,4	125	100	50	19	40	6	15.5	80	10	34	130	10	165	175	160	240	295
90S	2.4,6	140	100	56	24	50	8	20	90	90	36	140	12	180	195	175	270	320
90L			125										165					
100L	2.4,6,8	160	140	63	28	60		24	100	12	40	176	14	205	215	185	290	385
112M			190	70						112		45	180	15	245	240	195	320
132S	2.4,6,8	216	140	89	38	80	10	33	132	132	55	186	18	280	275	245	365	480
132M			178										224					
160M	2.4,6,8	254	210	108	42	110	12	37	160	15	65	260	20	330	330	270	450	605
160L			254									304						
180M	2.4,6,8	279	241	121	48		14	42.5	180	180	70	311	22	355	380	290	480	670
180L			279										349					
200L	2.4,6,8	318	305	133	55		16	49	200	19	70	369	24	395	420	355	550	780
225S			4.8	356	286	149	60	140	18	53	225	225	75	368	28	435	470	370
225M	2	311		55	110	16	49				393		28					
	4,6,8			60	140	18	53											
250M	2	406	349	168	60		18	53	250	24	80	445	30	490	510	455	660	935
	4,6,8				65			58										
280S	2	457	368	190					280	280	85	485	35	550	580	470	730	1020
	4,6,8				75		20	67.5										
280M	2	419		65		18	58					536						1070
	4,6,8			75		20	67.5											
315S	2	508	406	216	65	170	18	58	315	28	120	570	45	711	645	576	875	1270
	4,6,8					80		22	71									
315M	2	457		65		18	58					680						1340
	4,6,8			80		22	71											
315L	2	508		65		18	58											1340
	4,6,8			80		22	71											
355M	2	610	560	254	75		20	67.5	355	355	116	750	52	740	750	680	1045	1570
	4,6,8					95		25	86									
355L	2	630		75		20	67.5											1570
	4,6,8			95		25	86											

B35 The motor of frame with feet,end-shield with flange (with through holes)



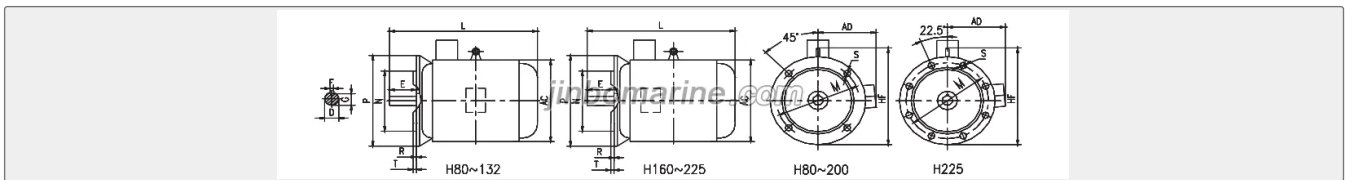
Frame	Poles	Mounting Dimension														Over Dimension										
		A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	A _A	B _B	H _A	A _B	A _C	A _D	H _D	L		
80	2,4	125	100	50	19	40	6	15.5	80	10	165	130	200	0	4- Φ12	3.5	34	130	10	165	175	160	240	295		
90S	2,4, 6	140	125	56	24	50	8	20	90	12	215	180	250	0	4- Φ15	4	36	140	12	180	195	175	270	320		
90L				165																						
100L	2,4, 6,8	216	178	63	28	60	10	24	100	15	300	250	350	0	4- Φ19	5	40	176	14	205	215	185	290	385		
112M				70																						
132S	2,4, 6,8	216	178	89	38	80	10	33	132	19	350	300	400	0	8- Φ19	6	55	186	18	280	275	245	365	480		
132M				254	210	108	42	110	12								37	160	15	300	250	350	0	4- Φ19	5	65
160M	2,4, 6,8	216	178	254	210	108	42	110	12	37	160	15	300	250	350	0	4- Φ19	5	65	260	20	330	330	270	450	605
160L				279	241	121	48		14	12.5	180										70	311	22	355	380	290
180M	2,4, 6,8	216	178	279	241	121	48		14	12.5	180								70	311	22	355	380	290	480	670
180L				318	305	133	55		16	49	200	19	350	300	400						70	349				
200L	2,4, 6,8	216	178	318	305	133	55		16	49	200	19	350	300	400				70	369	24	395	420	355	550	780
225S				4,8	356	286	149	60	140	18	53	225		400	350	450	0	8- Φ19		75	368	28	435	470	370	585
225M	2, 4,6, 8	356	286	149	55	110	16	49											368						825	
					4,6, 8	311		60	140	18	53											393				
250M	2, 4,6, 8	406	349	168						250	24	500	450	550				80	445	30	490	510	455	660	935	
					4,6, 8			65						58												
280S	2, 4,6, 8	457	368	190						280								85	485	35	550	580	470	730	1020	
					4,6, 8			75		20	57.5															
280M	2, 4,6, 8	457	368	190	65		18	58											536						1070	
					4,6, 8	419		75		20	57.5															
315S	2, 4,6, 8	508	406	216	65	170	18	58	315	28	600	550	660		8- Φ24	6	120	570	45	744	645	576	875	1270		
					4,6, 8			80		22	71															
315M	2, 4,6, 8	508	406	216	65		18	58										680							1340	
					4,6, 8	457		80		22	71															
315L	2, 4,6, 8,10	508	406	216	65		18	58																	1340	
					4,6, 8,10	508		80		22	71															
355M	2, 4,6, 8	610	560	254	75		20	57.5	355		740	680	800					116	750	52	740	750	680	1045	1570	
					4,6, 8			95		25	86															
355L	2, 4,6, 8	610	560	254	75		20	57.5																	1570	
					4,6, 8			95		25	86															

V1 The motor of frame without feet,end-shield with flange (with through holes)



Frame	Poles	Mounting Dimension										Over Dimension				
		D	E	F	G	M	N	P	R	S	T	AC	AD	HF	L	
80	2,4	19	40	6	15.5	165	130	200	0	4-Φ12	3.5	175	160	270	335	
90S	2,4,6	24	50	8	20							195	175		365	
90L						400										
100L	2,4,6,8	28	60	24	215	180	250	0	4-Φ15	4	215	185	300	410		
112M											240	195		320	450	
132S	2,4,6,8	38	80	10	33	265	230	300	0	4-Φ19	5	275	245	380	535	
132M												575				
160M	2,4,6,8	42	110	12	37	300	250	350	0	4-Φ19	5	330	270	450	660	
160L												705				
180M												380	290		500	730
180L												765				
200L												420	355		550	840
225S	4,8	60	140	18	53	400	350	450	0	8-Φ19	6	470	370	610	890	
225M	2	55	110	16	49							865				
250M	4,6,8	60	140	18	53	500	450	550	0	8-Φ19	6	510	455	650	995	
	2	65										58	915			
280S	2	75	140	20	67.5	500	450	550	0	8-Φ19	6	580	470	720	1090	
	4,6											1140				
280M	2	65	140	18	58	500	450	550	0	8-Φ19	6	580	470	720	1090	
	4,6,8	75										20	67.5		1140	
315S	2	65	170	18	58	600	550	660	0	8-Φ24	6	645	576	900	1390	
	4,6,8	80										22	71		1490	
315M	2	65	170	18	58	600	550	660	0	8-Φ24	6	645	576	900	1390	
	4,6,8	80										22	71		1490	
315L	2	65	170	18	58	600	550	660	0	8-Φ24	6	645	576	900	1390	
	4,6,8	80										22	71		1490	
355M	2	75	170	20	67.5	740	680	800	0	8-Φ24	6	750	680	1035	1675	
	4,6,8	95										25	86		1675	
355L	2	75	170	20	67.5	740	680	800	0	8-Φ24	6	750	680	1035	1675	
	4,6,8	95										25	86		1675	

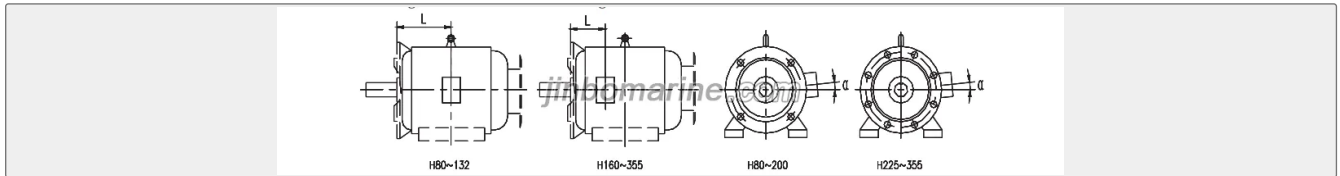
B5 The motor of frame without feet, end-shield with flange (with through holes)



Frame	Poles	Mounting Dimension										Over Dimension			
		D	E	F	G	M	N	P	R	S	T	AC	AD	HF	L

80	2,4	19	40	6	15.5	165	130	200	0	4-Φ12	3.5	175	160	235	295										
90S	2,4,6	24	50	8	20							195	175		320										
90L												360													
100L	2,4,6,8	28	60	10	24	215	180	250	0	4-Φ15	4	215	185	275	385										
112M												240	195		285	405									
132S												38	80		33	265	230	300	275	245	340	480			
132M	520																								
160M	2,4,6,8	42	110	12	37	300	250	350	0	4-Φ19	5	330	270	400	605										
160L															650										
180M															48	14	42.5	300	250	350	0	380	290	500	670
180L																									710
200L															55	16	49	350	300	400	0	420	355	550	780
225S	4,8	60	140	18	53	400	350	450	0	8-Φ19	470	370	610	825											
225M	2	55	110	16	49									825											
	4,6,8	60	140	18	53									850											

The mounting dimensions of the right for motor terminal box



Frame	L (mm)	α	Remark	Frame	L (mm)	α	Remark
Y80-H	100	7.5°	In the middle	Y180-H	161	5°	
Y90S-H	106	7.5°	In the middle	Y200L-H	186	0°	
Y90L-H	118.5	7.5°	In the middle	Y225-H	189	0°	
Y100L-H	133	7.5°	In the middle	Y250-H	207	0°	
Y112M-H	140	5°	In the middle	Y280-H	215.5	0°	
Y132S-H	159	4°	In the middle	Y315-H	257	0°	
Y132M-H	178	4°	In the middle	Y355-H	281	0°	
Y160-H	146	4°					