

THREE PHASE INDUCTION MOTOR

SUPER LINE Q SERIES

Multi-purpose energy saving for all needs

15~75HP 4P(160~225Fr.)



SF- Q 15HP 4P



SF- QV 20HP 4P



SF- Q 50HP 4P

- Motor efficiency class IE1 conformed with IEC 60034-30-1
- Same installation based on IEC standard
- Inverter operation matching
- Efficient coating ensure safety parts
- Shaft end with tapping



ENERGY SAVING FOR A GREEN WORLD

Feature and Benefits

Inverter operation matching

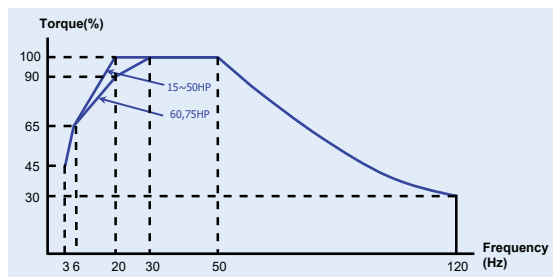


Motor



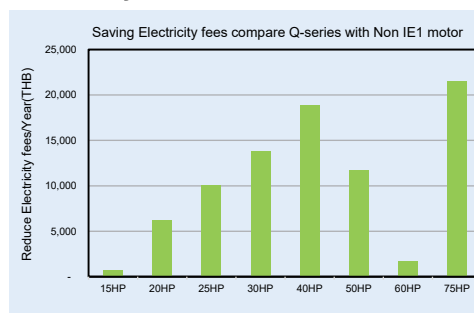
Inverter

- Reinforced insulation is applied to winding, to protect damage from surge voltage occurred by inverter operation.
- 100% constant torque operation is available for V/F control mode under wide frequency range(20-50Hz or 30-50Hz, up to each model)



Remark : Evaluate with Mitsubishi Electric Inverter FR-A740 or A840 by V/F control mode and base 380V 50Hz.

Electricity fees



CALCULATED CONDITION
 Rate : 380V 50Hz
 Load : 100%
 Q'ty : 1 Unit
 Run time : 8Hr. / Day , 30 Days / Month
 Electricity fees :
 • 0-150units = 3.25 THB/Unit
 • 150-400 units = 4.22 THB/Unit
 • > 400unit = 4.42 THB/Unit
 *Electricity fees refer Electricity authority announcement electricity rate modification effective since Jan 2023.

Efficient coating ensure safety parts

Fan cover and Terminal box are applied with EDP (Electro Deposition Painting) under coating process, ensure long time rust prevention of safety parts structure.

Fan cover Terminal box



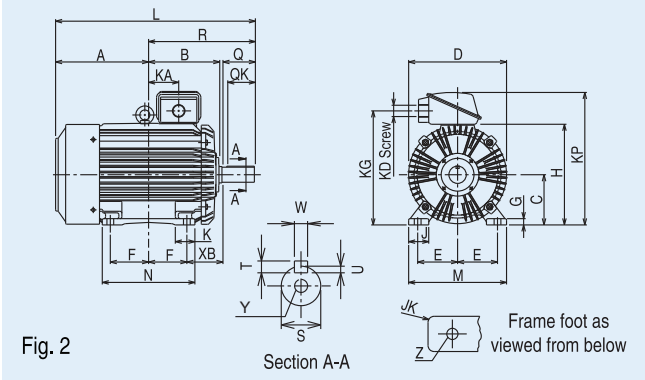
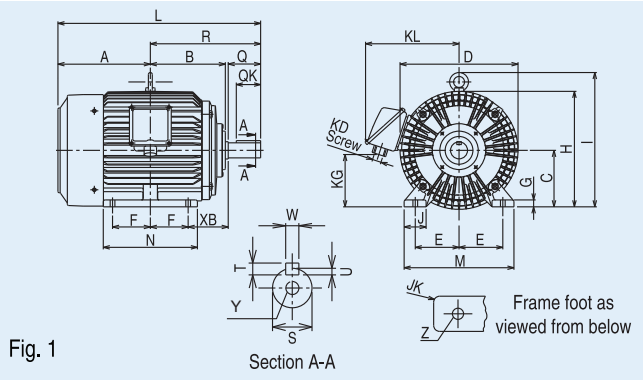
(Reference picture of EDP part after test)
 By EDP under coating, after Salt spray test according to JIS Z 2371 for 192 Hours, there is no rust occurred.

Characteristics and performance

Type	Rated power		Frame No.	Hz	Volt	100% Load					Torque(%)		Is (A)
	HP	kW				I (A)	Eff (%)	PF	Speed (min ⁻¹)	Torque (kg·m)	Tm	Ts	
HT	15	11	160M	50	380 415	22.7 22.1	87.6 87.9	0.84 0.79	1455 1465	7.36 7.31	328 394	302 363	151 165
	20	15	160L	50	380 415	30.1 29.3	89.2 89.5	0.85 0.80	1455 1465	10.04 9.97	369 442	361 433	232 254
	25	18.5	180M	50	380 415	37.6 37.4	89.9 89.8	0.83 0.77	1470 1480	12.25 12.17	355 425	285 341	281 306
	30	22	180M	50	380 415	44.2 43.7	90.2 90.0	0.84 0.78	1470 1475	14.57 14.52	350 419	282 337	327 358
	40	30	180L	50	380 415	58.9 56.2	90.7 90.7	0.85 0.82	1465 1470	19.93 19.87	311 373	254 305	395 432
	50	37	200L	50	380 415	73.6 72.0	91.2 91.2	0.84 0.78	1475 1480	24.42 24.34	309 370	213 256	452 494
	60	45	200L	50	380 415	88.3 85.9	91.7 91.7	0.84 0.79	1470 1475	29.80 29.70	301 366	210 254	540 590
	75	55	225S	50	380 415	106.8 103.3	92.2 92.2	0.85 0.80	1475 1480	36.30 36.17	335 401	228 273	672 733
LT	15	11	160M	50	220 380 415	39.0 22.5 21.7	87.6 87.6 87.7	0.84 0.85 0.80	1455 1455 1465	7.36 7.36 7.31	327 327 393	305 305 366	255 150 164
	20	15	160L	50	220 380 415	52.1 30.1 28.8	89.0 89.0 89.5	0.85 0.85 0.81	1455 1455 1465	10.04 10.04 9.97	359 359 431	354 354 325	384 225 246
	25	18.5	180M	50	220 380 415	66.1 38.2 39.2	89.9 89.9 89.3	0.82 0.82 0.74	1475 1475 1480	12.21 12.21 12.17	385 385 460	315 315 376	499 298 326
	30	22	180M	50	220 380 415	76.6 44.2 43.9	90.2 90.2 90.0	0.84 0.84 0.77	1475 1475 1480	14.52 14.52 14.47	372 372 446	296 296 354	567 340 371
	40	30	180L	50	220 380 415	102.0 58.9 57.0	90.7 90.7 90.7	0.85 0.85 0.81	1465 1470 1475	19.93 19.87 19.80	344 344 412	276 276 329	702 418 457
	50	37	200L	50	220 380 415	126.4 73.0 70.0	91.2 91.2 91.2	0.84 0.84 0.81	1470 1470 1475	24.50 24.50 24.42	307 307 368	210 210 251	754 441 481
	60	45	200L	50	220 380 415	152.9 88.3 85.5	91.7 91.7 91.7	0.84 0.84 0.80	1470 1470 1475	29.80 29.80 29.70	316 316 345	217 217 260	930 546 596
	75	55	225S	50	220 380 415	187.1 108.0 106.3	92.2 92.2 92.1	0.84 0.84 0.78	1480 1480 1480	36.17 36.17 36.17	371 371 443	249 249 298	1230 722 788

SF-Q 15HP~75HP HORIZONTAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



Dimensions (mm)

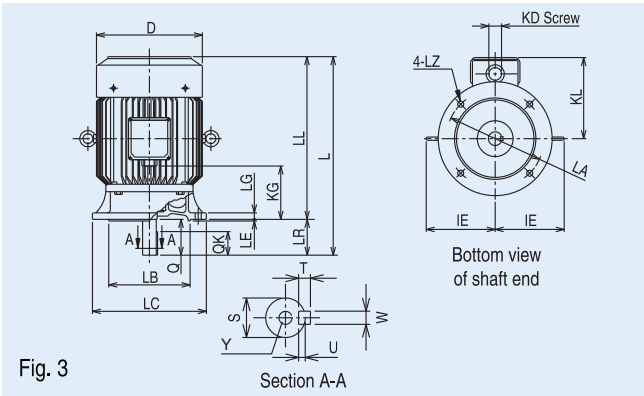
Model	Frame No.	Output HP (kW)	Fig.	Motor																Terminal box					
		4-Pole		A	B	C*	D	E	F	G	H	I	J	JK	K	L	M	N	XB	Z	KA	KG	KD	KL	KP
SF- Q	160M	15(11)	1	252	207	160	324	127	105	20	322	373	55	R6	-	575	310	260	108	15	-	127	PF1 1/4	271	-
	160L	20(15)		274	229	160	324	127	127	20	322	373	55	R6	-	619	310	304	108	15	-	127	PF1 1/4	271	-
	180M	25(18.5), 30(22)		294.5	239	180	376	139.5	120.5	22	367	427	70	R6	-	646	350	300	121	15	-	151	PF1 1/2	295	-
	180L	40(30)		313.5	258	180	376	139.5	139.5	22	367	427	70	R6	-	684	350	338	121	15	-	151	PF1 1/2	295	-
	200L	50(37), 60(45)	2	370.5	281	200	410	159	152.5	25	405	-	80	R6	78	796	390	369	133	18.5	120	476	PF2	-	550
	225S	75(55)		380	287.5	225	459	178	143	28	457	-	80	R8	82	812	430	350	149	18.5	120	528	PF2	-	602

* The perpendicular variation of tolerance for the shaft center is $\begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$

Model	Frame No.	Shaft end							Shaft Tapping (MxPitchxD)	Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
		Q	QK	R	S	T	U	W	Y	Drive end	Opposite	4-Pole		4-Pole
SF- Q	160M	110	90	323	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	110	731 x 547 x 494	131
	160L	110	90	345	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	136	731 x 547 x 494	157
	180M	110	90	351.5	48 k6	9	5.5	14	M16 x 2.0 x 36	6311ZZ	6310ZZ	193 , 213	796 x 595 x 548	217 , 237
	180L	110	90	370.5	55 m6	10	6	16	M20 x 2.5 x 42	6312ZZ	6310ZZ	231	796 x 595 x 548	255
	200L	140	110	425.5	60 m6	11	7	18	M20 x 2.5 x 42	6313ZZ	6311ZZ	287 , 311	910 x 522 x 691	314 , 338
	225S	140	110	432	65 m6	11	7	18	M20 x 2.5 x 42	6315ZZ	6312ZZ	356	924 x 579 x 774	386

SF-QV 15HP~40HP VERTICAL TYPE

TOTALLY ENCLOSED FAN-COOLED TYPE, IP55 DEGREES OF PROTECTION



Dimensions (mm)

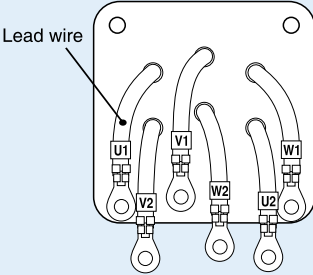
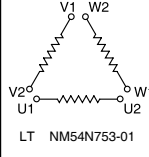
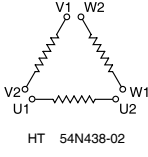
Model	Flange No.	Frame No.	Output HP (kW)	Fig.	Motor										Terminal box		
			4-Pole		D	IE	LA	LB	LC	LE	LG	LL	LZ	L	KD	KG	KL
SF- QV	FF300	160M	15(11)	3	324	213	300	250 j6	350	5	20	500	18.5	610	PF1 1/4	147	259
	FF300	160L	20(15)		324	213	300	250 j6	350	5	20	544	18.5	654	PF1 1/4	169	259
	FF350	180M	25(18.5), 30(22)		376	247	350	300 j6	400	5	20	576	18.5	686	PF1 1/2	176	284
	FF350	180L	40(30)		376	247	350	300 j6	400	5	20	614	18.5	724	PF1 1/2	195	284

Model	Flange No.	Frame No.	Shaft end							Shaft Tapping (MxPitchxD)	Bearing No.		Approximate weight (kg)	Approximate packing dimensions (LxWxH)	Packing weight (kg)
			LR	Q	QK	S	T	U	W	Y	Drive end	Opposite	4-Pole		4-Pole
SF- QV	FF300	160M	110	110	90	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	113	766 x 546 x 557	137
	FF300	160L	110	110	90	42 k6	8	5	12	M16 x 2.0 x 36	6309ZZ	6308ZZ	141	766 x 546 x 557	165
	FF350	180M	110	110	90	48 k6	9	5.5	14	M16 x 2.0 x 36	6311ZZ	6310ZZ	198 , 218	836 x 596 x 610	225 , 245
	FF350	180L	110	110	90	55 m6	10	6	16	M20 x 2.5 x 42	6312ZZ	6310ZZ	236	836 x 596 x 610	263

Standard Specifications

Item		Specifications									
Voltage and frequency		LT (Low Voltage) : 220/380/415V 50Hz HT (High Voltage) : 380/415V 50Hz									
Enclosure construction and degrees of protection	Degrees of protection	Enclosure construction	Model name	Output HP(kW) 4P							
				15(11)	20(15)	25(18.5)	30(22)	40(30)	50(37)	60(45)	75(55)
	IP55	Totally enclosed fan-cooled	Horizontal type SF-Q	●	●	●	●	●	●	●	●
			Vertical type SF-QV	●	●	●	●	●	-	-	-
Method of cooling		IC411									
Rating		S1 (continuous)									
Frame material		Cast Iron									
Power transmission system		Direct-coupled, Belt driven									
Direction of rotation		Counterclockwise (CCW) viewed from shaft end side.									
Thermal class		155(F)									
Circumstance conditions	Ambient temperature	-20 ~ +40 °C									
	Ambient humidity	95% RH or less									
	Altitude	1,000m above sea level or less									
	Environment	No bursting / erosive gas or vapor									
Connection type		6 Lead wire									
Coating color		Munsell N1.5 (Black)									
Conformed standard		IEC 60034-1, IEC 60034-30-1									
Advantage		-Shaft end with tapping -Reinforced insulation for inverter operation									

Connection

Construction of lead wires	Connection diagram	
	LT : 220/380/415V 50Hz	HT : 380/415V 50Hz
	CONNECTION DIAGRAM (端子接続図) DUAL VOLTAGE (二種電圧)  LT NM54N753-01	CONNECTION DIAGRAM (端子接続図) △-△ STARTING (スターデルタ始動)  HT 54N438-02

MITSUBISHI ELECTRIC AUTOMATION (THAILAND) CO., LTD.

