MITSUBISHI ELECTRIC
Changes for the Better

Automating the World

FR-F800 SERIES INVERTERS

Pocket Reference Guide



Cross-Over Chart 208-230V (Assumes SLD Rating)

HP	FR-F720	FR-F820
1	FR-F720-00046-NA	FR-F820-00046-E3N6
2	FR-F720-00077-NA	FR-F820-00077-E3N6
3	FR-F720-00105-NA	FR-F820-00105-E3N6
5	FR-F720-00167-NA	FR-F820-00167-E3N6
7.5	FR-F720-00250-NA	FR-F820-00250-E3N6
10	FR-F720-00340-NA	FR-F820-00340-E3N6
15	FR-F720-00490-NA	FR-F820-00490-E3N6
20	FR-F720-00630-NA	FR-F820-00630-E3N6
25	FR-F720-00770-NA	FR-F820-00770-E3N6
30	FR-F720-00930-NA	FR-F820-00930-E3N6
40	FR-F720-01250-NA	FR-F820-01250-E3N6
50	FR-F720-01540-NA	FR-F820-01540-E3N6
60	FR-F720-01870-NA	FR-F820-01870-E3N6
75	FR-F720-02330-NA	FR-F820-02330-E3N6
100	FR-F720-03160-NA	FR-F820-03160-E360 +FR-HEL-90K
125	FR-F720-03800-NA	FR-F820-03800-E3U6 +FR-HEL-110K
150	FR-F720-04750-NA	FR-F820-04750-E3U6 +FR-HEL-110K

This chart shows the closest equivalent in performance between FR-F700 and FR-F800 drives.

FR-F820 Selection Chart

Model Number	AMPS For Duty		Horsepower For Duty (NEC)		Frame Size	Weight (lbs)
	SLD	LD	SLD	LD		
FR-F820-00046-E3N6	4.6	4.2	1	1	A	6
FR-F820-00077-E3N6	7.7	7	2	2	B	6
FR-F820-00105-E3N6	10.5	9.6	3	3	C	9
FR-F820-00167-E3N6	16.7	15.2	5	5	C	9
FR-F820-00250-E3N6	25	23	7.5	7.5	C	9
FR-F820-00340-E3N6	34	31	10	10	D	17
FR-F820-00490-E3N6	49	45	20	15	D	17
FR-F820-00630-E3N6	63	58	20	20	E	20
FR-F820-00770-E3N6	77	70.5	25	25	F	37
FR-F820-00930-E3N6	93	85	30	30	F	37
FR-F820-01250-E3N6	125	114	40	40	F	37
FR-F820-01540-E360	154	140	60	50	G	48
FR-F820-01870-E360	187	170	60	60	H	92
FR-F820-02330-E360	233	212	75	75	H	92
FR-F820-03160-E360	316	288	125	100	K	119
FR-F820-03800-E3U6	380	346	150	125	L	163
FR-F820-04750-E3U6	475	432	150	150	L	163

Important Note: Drives in shaded area MUST be used together with FR-HEL DC Link Choke (sold separately). Weights do not include separate DC Link chokes.

FR-HEL DC Link Chokes (sold separately)

Drives in shaded area above MUST be used together with a DC Link Choke.

Model Number	LD	SLD
FR-F820-03160-E360	FR-HEL-75K	FR-HEL-90K
FR-F820-03800-E3U6	FR-HEL-90K	FR-HEL-110K
FR-F820-04750-E3U6	FR-HEL-110K	FR-HEL-110K

Key to Duty Codes

	Overload Rating		
	60s	3s	Ambient Temp.
SLD	110%	120%	40°C
LD	120%	150%	50°C

Cross-Over Chart 460-480V (Assumes SLD Rating)

HP	FR-F740	FR-F840
1	FR-F740-00023-NA	FR-F840-00023-E3N6
2	FR-F740-00038-NA	FR-F840-00038-E3N6
3	FR-F740-00052-NA	FR-F840-00052-E3N6
5	FR-F740-00083-NA	FR-F840-00083-E3N6
7.5	FR-F740-00126-NA	FR-F840-00126-E3N6
10	FR-F740-00170-NA	FR-F840-00170-E3N6
15	FR-F740-00250-NA	FR-F840-00250-E3N6
20	FR-F740-00310-NA	FR-F840-00310-E3N6
25	FR-F740-00380-NA	FR-F840-00380-E3N6
30	FR-F740-00470-NA	FR-F840-00470-E3N6
40	FR-F740-00620-NA	FR-F840-00620-E3N6
50	FR-F740-00770-NA	FR-F840-00770-E3N6
60	FR-F740-00930-NA	FR-F840-00930-E360
75	FR-F740-01160-NA	FR-F840-01160-E360
100	FR-F740-01800-NA	FR-F840-01800-E360 +FR-HEL-H90K
150	FR-F740-02160-NA	FR-F840-02160-E3U6 +FR-HEL-H110K
200	FR-F740-02600-NA	FR-F840-02600-E3U6 +FR-HEL-H132K
250	FR-F740-03250-NA	FR-F840-03250-E3U6 +FR-HEL-H160K
300	FR-F740-03610-NA	FR-F840-03610-E3U6 +FR-HEL-H185K
350	FR-F740-04320-NA	FR-F840-04320-E3U6 +FR-HEL-H220K
400	FR-F740-04810-NA	FR-F840-04810-E3U6 +FR-HEL-H250K
450	FR-F740-05470-NA	FR-F840-05470-E3U6 +FR-HEL-H280K
500	FR-F740-06100-NA	FR-F840-06100-E3U6 +FR-HEL-H315K
550	FR-F740-06830-NA	FR-F840-06830-E3U6 +FR-HEL-H355K
650	FR-F740-07700-NA	FR-F842-07700-E3U6 +FR-CC2-H400K-60
700	FR-F740-08660-NA	FR-F842-08660-E3U6 + FR-CC2-H450K-60
800	FR-F740-09620-NA	FR-F842-09620-E3U6 +FR-CC2-H500K-60
900	FR-F740-10940-NA	FR-F842-10940-E3U6 +FR-CC2-H560K-60
1000	FR-F740-12120-NA	FR-F842-12120-E3U6 +FR-CC2-H630K-60

This chart shows the closest equivalent in performance between FR-F700 and FR-F800 drives.

FR-F840 Selection Chart

Model Number	AMPS For Duty		Horsepower For Duty (NEC)		Frame Size	Weight (lbs)*
	SLD	LD	SLD	LD		
FR-F840-00023-E3N6	2.3	2.1	1	1	C	8
FR-F840-00038-E3N6	3.8	3	2	2	C	8
FR-F840-00052-E3N6	5.2	4.8	3	3	C	8
FR-F840-00083-E3N6	8.3	7.6	5	5	C	9
FR-F840-00126-E3N6	12.6	11.5	7.5	7.5	C	9
FR-F840-00170-E3N6	17	16	10	10	D	17
FR-F840-00250-E3N6	25	23	15	15	D	17
FR-F840-00310-E3N6	31	29	20	20	E	20
FR-F840-00380-E3N6	38	35	25	25	E	20
FR-F840-00470-E3N6	47	43	30	30	F	37
FR-F840-00620-E3N6	62	57	40	40	F	37
FR-F840-00770-E360	77	70	60	50	G	51
FR-F840-00930-E360	93	85	60	60	H	90
FR-F840-01160-E360	116	106	75	75	H	90
FR-F840-01800-E360	180	144	150	100	H	95
FR-F840-02160-E3U6	216	180	150	150	J	114
FR-F840-02600-E3U6	260	216	200	150	J	121
FR-F840-03250-E3U6	325	260	250	200	L	156
FR-F840-03610-E3U6	361	325	300	250	L	172
FR-F840-04320-E3U6	432	361	350	300	M	257
FR-F840-04810-E3U6	481	432	400	350	M	257
FR-F840-05470-E3U6	547	481	450	400	N	365
FR-F840-06100-E3U6	610	547	500	450	N	365
FR-F840-06830-E3U6	683	610	550	500	N	365
FR-F842-07700-E3U6 + FR-CC2-H355K-60	-	683	-	550	P+R	827
FR-F842-07700-E3U6 + FR-CC2-H400K-60	770	-	650	-	P+S	979
FR-F842-08660-E3U6 + FR-CC2-H400K-60	-	770	-	650	P+S	979
FR-F842-08660-E3U6 + FR-CC2-H450K-60	866	-	700	-	P+S	986
FR-F842-09620-E3U6 + FR-CC2-H450K-60	-	866	-	700	Q+S	1162
FR-F842-09620-E3U6 + FR-CC2-H500K-60	962	-	800	-	Q+S	1168
FR-F842-10940-E3U6 + FR-CC2-H500K-60	-	962	-	800	Q+S	1168
FR-F842-10940-E3U6 + FR-CC2-H560K-60	1094	-	900	-	Q+S	1168
FR-F842-12120-E3U6 + FR-CC2-H560K-60	-	1094	-	900	Q+S	1168
FR-F842-12120-E3U6 + FR-CC2-H630K-60	1212	-	1000	-	Q+S	1168

*Weights of the drive and the CC2 modules are COMBINED
Important Note: Drives in shaded area MUST be used together with FR-HEL-H DC Link Choke (sold separately). Weights do not include separate DC Link chokes.

FR-HEL-H DC Link Chokes (sold separately)

Drives shown in shaded area of the FR-F840 Selection Chart MUST be used together with a DC Link Choke.

Model Number	LD	SLD
FR-F840-01800-E360	FR-HEL-H75K	FR-HEL-H90K
FR-F840-02160-E3U6	FR-HEL-H90K	FR-HEL-H110K
FR-F840-02600-E3U6	FR-HEL-H110K	FR-HEL-H132K
FR-F840-03250-E3U6	FR-HEL-H132K	FR-HEL-H160K
FR-F840-03610-E3U6	FR-HEL-H160K	FR-HEL-H185K
FR-F840-04320-E3U6	FR-HEL-H185K	FR-HEL-H220K
FR-F840-04810-E3U6	FR-HEL-H220K	FR-HEL-H250K
FR-F840-05470-E3U6	FR-HEL-H250K	FR-HEL-H280K
FR-F840-06100-E3U6	FR-HEL-H280K	FR-HEL-H315K
FR-F840-06830-E3U6	FR-HEL-H315K	FR-HEL-H355K

FR-F860 Ratings

Model Number (*3)	AMPS for Duty		Horsepower for Duty (NEC)		Frame Size	Weight (lbs)
	SLD	LD	SLD	LD		
FR-F860-00027-E3N6	2.7	2.5	2	1.5	C	11.7
FR-F860-00061-E3N6	6.1	5.6	5	3	C	12.8
FR-F860-00090-E3N6	9	8.2	7.5	5	C	12.8
FR-F860-00170-E3N6	17	16	15	10	D	15.4
FR-F860-00320-E3N6	32	27	30	25	E	19.8
FR-F860-00450-E3N6	45	41	40	40	F	37.4
FR-F860-00680-E360	68	62	60	60	H	79.2
FR-F860-01080-E360 (*1)	108	99	100	100	H	90.2
FR-F860-01440-E360 (*1)	144	131	150	125	J	114
FR-F860-01670-E360 (*1)	167	152	150	150	J	114
FR-F860-02430-E360 (*1)	243	221	250	200	J	121
FR-F860-02890-E360 (*1)	289	255	300	250	M	246
FR-F860-03360-E360 (*1)	336	304	350	300	M	253
FR-F860-04420-E360 (*1)	442	402	450	400	N	337
FR-F862-05450-E360+ FR-CC2-C355K-60 (*2)	545	496	550	500	P+R	810
FR-F862-06470-E360+ FR-CC2-C400K-60 (*2)	647	589	650	600	Q+S	920
FR-F862-08500-E360+ FR-CC2-C560K-60 (*2)	850	773	850	750	Q+S	1126

Notes:

1. These drives MUST be used with a DC Link Choke (sold separately).
2. FR-F862 Drives are inverter stage only; use together with FR-CC2-C rectifier stage. Maximum Input and Output Current of FR-CC2 modules is the value shown. COMBINED weight shown.
3. The FR-F860 does not include a built-in parameter unit. The FR-DU08 or FR-LU08 is sold separately.

600V FR-HEL-C DC Link Chokes (sold separately)

Model Number	SLD	LD
FR-F860-01080-E360	FR-HEL-C75K	FR-HEL-C75K
FR-F860-01440-E360	FR-HEL-C90K	FR-HEL-C90K
FR-F860-01670-E360	FR-HEL-C110K	FR-HEL-C110K
FR-F860-02430-E360	FR-HEL-C185K	FR-HEL-C132K
FR-F860-02890-E360	FR-HEL-C220K	FR-HEL-C185K
FR-F860-03360-E360	FR-HEL-C280K	FR-HEL-C220K
FR-F860-04420-E360	FR-HEL-C280K	FR-HEL-C280K

Frame Dimensions 200V, 400V, 600V Drives

FR-F800-E Model Number	Frame Size	Height	Width	Depth
		Dimensions Inches (mm)		
FR-F820-00046 (N6)	A	12.2 (310) 10.24 (260) w/o conduit box	4.33 (110)	4.41 (112)
FR-F820-00077 (N6)	B	12.2 (310) 10.24 (260) w/o conduit box	4.33 (110)	5.00 (127)
FR-F820-00105, 00167, 00250 (N6) **FR-F840-00023, 00038, 00052, 00083, 00126 (N6)** **FR-F860-00027, 00061, 00090 (N6)**	C	12.52 (318) 10.24 (260) w/o conduit box	5.91 (150)	5.51 (140)
FR-F820-00340, 00490 (N6) **FR-F840-00170, 00250 (N6)** **FR-F860-00170 (N6)**	D	12.76 (324) 10.24 (260) w/o conduit box	8.66 (220)	6.69 (170)
FR-F820-00630 (N6) **FR-F840-00310, 00380 (N6)** **FR-F860-00320 (N6)**	E	14.29 (363) 11.81 (300) w/o conduit box	8.66 (220)	7.48 (190)
FR-F820-00770, 00930, 01250 (N6) **FR-F840-00470, 00620 (N6)** **FR-F860-00450 (N6)**	F	20.37 (517) 15.75 (400) w/o conduit box	9.84 (250)	7.48 (190)
FR-F820-01540 **FR-F840-00770**	G	21.65 (550)	12.80 (325)	7.68 (195)
FR-F820-01870, 02330 **FR-F840-00930, 01160, 01800** **FR-F860-00680, 01080**	H	21.65 (550)	17.13 (435)	9.84 (250)
FR-F840-02160, 02600 **FR-F860-01440, 01670, 02430**	J	24.41 (620)	18.31 (465)	11.81 (300)
FR-F820-03160	K	27.56 (700)	18.31 (465)	9.84 (250)
FR-F820-03800, 04750 **FR-F840-03250, 03610**	L	29.13 (740)	18.31 (465)	14.17 (360)
FR-F840-04320, 04810 **FR-F860-02890, 03360**	M	39.76 (1010)	19.61 (498)	14.96 (380)
FR-F840-05470, 06100, 06830 **FR-F860-04420**	N	39.76 (1010)	26.77 (680)	14.96 (380)
FR-F842-07700, 08660 **FR-F862-05450**	P	52.36 (1330)	21.26 (540)	17.32 (440)
FR-F842-09620, 10940, 12120 **FR-F862-06470, 08500**	Q	62.20 (1580)	26.77 (680)	17.32 (440)
FR-CC2 Model Number	**Frame Size**	**Height**	**Width**	**Depth**
		Dimensions Inches (mm)		
FR-CC2-H315K, H355K, C355K	R	52.36 (1330)	23.62 (600)	17.32 (440)
FR-CC2-H400K, H450K, H500K **H560K, H630K, C400K, C560K**	S	62.20 (1580)	23.62 (600)	17.32 (440)

Note: Code (N6) is for UL type 1 conduit box.

Dimensions of REQUIRED DC Link Chokes (sold separately)

Model Number	Height	Width	Depth	Weight (lbs)
	Dimensions inches (mm)			
FR-HEL-75K	13.4 (340)	5.9 (150)	7.9 (200)	37
FR-HEL-90K	13.4 (340)	5.9 (150)	7.9 (200)	42
FR-HEL-110K	15.8 (400)	6.9 (175)	7.9 (200)	44
FR-HEL-H75K	12.6 (320)	5.9 (140)	7.3 (185)	35
FR-HEL-H90K	13.4 (340)	5.9 (150)	7.5 (190)	44
FR-HEL-H110K	13.4 (340)	5.9 (150)	7.7 (195)	48
FR-HEL-H132K	15.9 (405)	6.9 (175)	7.9 (200)	57
FR-HEL-H160K	15.9 (405)	6.9 (175)	8.1 (205)	62
FR-HEL-H185K	15.9 (405)	6.9 (175)	9.4 (240)	64
FR-HEL-H220K	15.9 (405)	6.9 (175)	9.4 (240)	66
FR-HEL-H250K	17.3 (440)	7.5 (190)	9.8 (250)	77
FR-HEL-H280K	17.3 (440)	7.5 (190)	10.0 (255)	84
FR-HEL-H315K	19.49 (495)	8.27 (210)	9.84 (250)	92
FR-HEL-H355K	19.49 (495)	8.27 (210)	9.84 (250)	101
FR-HEL-C75K	12.6 (320)	5.5 (140)	7.3 (185)	35
FR-HEL-C90K	13.3 (340)	5.9 (150)	9.4 (240)	44
FR-HEL-C110K	13.3 (340)	5.9 (150)	9.4 (240)	51
FR-HEL-C132K	15.9 (405)	6.9 (175)	7.7 (195)	53
FR-HEL-C185K	15.9 (405)	6.9 (175)	9.4 (240)	70
FR-HEL-C220K	15.9 (405)	6.9 (175)	9.4 (240)	73
FR-HEL-C280K	17.3 (440)	7.5 (190)	9.8 (250)	88

Peripheral Equipment Selection (Assumes LD Rating)

Model Number	Contactor		Circuit Breaker	
	No DCL	With DCL	No DCL	With DCL
200 Volt				
FR-F820-00046-E3N6	S-T10	S-T10	NF50-SVFU3P10A	NF50-SVFU3P10A
FR-F820-00077-E3N6	S-T10	S-T10	NF50-SVFU3P15A	NF50-SVFU3P15A
FR-F820-00105-E3N6	S-T10	S-T10	NF50-SVFU3P20A	NF50-SVFU3P15A
FR-F820-00167-E3N6	S-T10	S-T10	NF50-SVFU3P30A	NF50-SVFU3P30A
FR-F820-00250-E3N6	S-T20, S-T21	S-T10	NF50-SVFU3P50A	NF50-SVFU3P40A
FR-F820-00340-E3N6	S-T25	S-T20, S-T21	NF125-SVU3P60A	NF50-SVFU3P50A
FR-F820-00490-E3N6	S-T25	S-T25	NF125-SVU3P75A	NF125-SVU3P75A
FR-F820-00630-E3N6	S-N35	S-N35	NF125-SVU3P125A	NF125-SVU3P100A
FR-F820-00770-E3N6	S-N50	S-N50	NF250-SVU3P150A	NF125-SVU3P125A
FR-F820-00930-E3N6	S-N65	S-N50	NF250-SVU3P175A	NF250-SVU3P150A
FR-F820-01250-E3N6	S-N80	S-N65	NF250-SVU3P225A	NF250-SVU3P175A
FR-F820-01540-E360	S-N95	S-N80	NF250-SVU3P250A	NF250-SVU3P225A
FR-F820-01870-E360	S-N150	S-N125	NF4SWU3300BB	NF4SWU3300BB
FR-F820-02330-E360	S-N180	S-N150	NF4SWU3400BB	NF4SWU3350BB
FR-F820-03160-E360	S-N220	S-N180	-	NF4SWU3400BB
FR-F820-03800-E3U6	-	S-N300	-	NF4SWU3400BB
FR-F820-04750-E3U6	-	S-N300	-	NF6SWU3500BB
400 Volt				
FR-F840-00023-E3N6	S-T10	S-T10	NF100-HRU3P5A	NF100-HRU3P5A
FR-F840-00038-E3N6	S-T10	S-T10	NF100-HRU3P10A	NF100-HRU3P10A
FR-F840-00052-E3N6	S-T10	S-T10	NF100-HRU3P10A	NF100-HRU3P10A
FR-F840-00083-E3N6	S-T10	S-T10	NF125-SVU3P20A	NF125-SVU3P15A
FR-F840-00126-E3N6	S-T10	S-T10	NF125-SVU3P30A	NF125-SVU3P20A
FR-F840-00170-E3N6	S-T20, S-T21	S-T12	NF125-SVU3P30A	NF125-SVU3P30A
FR-F840-00250-E3N6	S-T20, S-T21	S-T20, S-T21	NF125-SVU3P50A	NF125-SVU3P40A
FR-F840-00310-E3N6	S-T20, S-T21	S-T20, S-T21	NF125-SVU3P60A	NF125-SVU3P50A
FR-F840-00380-E3N6	S-T25	S-T20, S-T21	NF125-SVU3P75A	NF125-SVU3P60A
FR-F840-00470-E3N6	S-T25	S-T25	NF125-SVU3P100A	NF125-SVU3P75A
FR-F840-00620-E3N6	S-N35	S-T25	NF125-SVU3P125A	NF125-SVU3P100A
FR-F840-00770-E360	S-N50	S-N50	NF250-SVU3P150A	NF125-SVU3P125A
FR-F840-00930-E360	S-N65	S-N65	NF250-SVU3P175A	NF250-SVU3P150A
FR-F840-01160-E360	S-N80	S-N80	NF250-SVU3P200A	NF250-SVU3P175A
FR-F840-01800-E360	S-N80	S-N95	-	NF250-SVU3P225A

Peripheral Equipment Selection (continued)

Model Number	Contactor		Circuit Breaker	
	No DCL	With DCL	No DCL	With DCL
FR-F840-02160-E3U6	-	S-N150	-	NF250-SVU3P225A
FR-F840-02600-E3U6	-	S-N180	-	NF250-SVU3P225A
FR-F840-03250-E3U6	-	S-N220	-	NF4SWU3400BB
FR-F840-03610-E3U6	-	S-N300	-	NF4SWU3400BB
FR-F840-04320-E3U6	-	S-N300	-	NF4SWU3400BB
FR-F840-04810-E3U6	-	S-N300	-	NF6SWU3500BB
FR-F840-05470-E3U6	-	S-N400	-	NF6SWU3600BB
FR-F840-06100-E3U6	-	S-N600	-	NF6SWU3600BB
FR-F840-06830-E3U6	-	S-N600	-	700A Product
FR-F842-07700-E3U6 + FR-CC2-H355K-60	-	S-N600	-	800A Product
FR-F842-07700-E3U6 + FR-CC2-H400K-60	-	S-N800	-	900A Product
FR-F842-08660-E3U6 + FR-CC2-H400K-60	-	S-N800	-	900A Product
FR-F842-08660-E3U6 + FR-CC2-H450K-60	-	1000A Product	-	1000A Product
FR-F842-09620-E3U6 + FR-CC2-H450K-60	-	1000A Product	-	1000A Product
FR-F842-09620-E3U6 + FR-CC2-H500K-60	-	1000A Product	-	1200A Product
FR-F842-10940-E3U6 + FR-CC2-H560K-60	-	1200A Product	-	1500A Product
FR-F842-12120-E3U6 + FR-CC2-H630K-60	-	1400A Product	-	2000A Product

Key to DU08 Keypad Display Codes

Function Name		Description	Indication
Error Message *2	**Operation Panel Lock**	Operation tried during operation panel lock	HOLd
	Parameter Write Error	An error occurred at parameter writing	Er1 to Er4
	Copy Operation Error	An error occurred at parameter copying	rE1 to rE4
	Error	The RES signal is on or the PU and inverter cannot make normal communication	Err.
Warnings *3	**Stall Prevention (Overcurrent)**	Overcurrent stall prevention	OL
	Stall Prevention (Overvoltage)	Overvoltage stall prevention. Appears while the regeneration avoidance function is activated.	oL
	Electronic Thermal Relay Function Prealarm	The electronic thermal O/L relay has reached 85% of the specified value	rH
	PU Stop	Stop/reset on the operation panel is pressed during external operation	PS
	Maintenance Signal Output	The cumulative energization time has exceeded the maintenance output timer set value	MT
Minor Fault	**Fan Fault *4**	Cooling fan is malfunctioning	Fn
Major Failures *5	**Overcurrent Shutoff During Acceleration**	An overcurrent occurred during acceleration	E.OC1
	Overcurrent Shutoff During Constant Speed	An overcurrent occurred during constant speed operation	E.OC2
	Overcurrent Shutoff During Deceleration or Stop	An overcurrent occurred during deceleration and at a stop	E.OC3
	Regenerative Overvoltage Shutoff During Acceleration	An overvoltage occurred during acceleration	E.Ov1
	Regenerative Overvoltage Shutoff During Constant Speed	An overvoltage occurred during constant speed operation	E.Ov2
	Regenerative Overvoltage Shutoff During Deceleration or Stop	An overvoltage occurred during deceleration and at a stop	E.Ov3
	Inverter Overload Shut-off (Electronic Thermal O/L Relay)*1	The electronic thermal relay function for inverter element protection is activated	E.THI
	Motor Overload Shut-off (Electronic Thermal O/L Relay)*1	The electronic thermal relay function for motor protection is activated	E.THM
	Fin Overheat	The heatsink overheated	E.FIn
	Instantaneous Power Failure Protection	An instantaneous power failure occurred at an input power supply	E.IPF
	Undervoltage Protection	The main circuit DC voltage became low	E.UVT
	Input Phase Failure	One of the three phases on the inverter input side opened	E.ILF
	Stall Prevention	The output frequency dropped to 0.5Hz as a result of deceleration due to excess motor load	E.OLT
	Output Side Earth (Ground) Fault Overcurrent Protection	An earth (ground) fault occurred on the inverter's output side	E. GF
	Output Phase Failure Protect.	One of the three phases on the inverter output side opened	E. LF
	External Thermal Relay Operation *6	The external thermal relay connected to the terminal OH was operated	E.OHT
	PTC Thermistor Operation	The motor overheat status is detected for 10s or more by the external PTC thermistor input connected to the terminal AU	E.PTC
	HC Unit Alarm	An alarm occurred in the option card or an AC power supply is connected to the R/L1, S/L2, T/L3 when the high power factor converter connection is set	E.OPT
	Functional Option Error	A communication error occurred in the communication option	E.OP1
	Option Card Disconnection	Card is disconnected or misconnected	E. 1
	Parameter Storage Device Alarm	Operation of the element where parameters are stored became abnormal (control circuit board)	E. PE
	PU Disconnection	A communication error between the PU and inverter occurred, the communication interval exceeded the permissible time during the RS-485 communication with the PU connector, or communication errors exceed the number of retries during the RS-485 communication	E.PUE

Notes:
1. Resetting the inverter initializes the internal thermal integrated data of the electronic thermal relay function.
2. The error message shows an operational error. The inverter output is not shut off.
3. Warnings are messages given before major failures occur. The inverter output is not shut off.
4. Minor faults warn the operator of failures with output signals. The inverter output is not shut off.
5. When major failures occur, the protective functions are activated to shut off the inverter output and output the alarms.
6. The external thermal operates only when the OH signal is set in Pr. 178 to Pr. 189 (input terminal function selection).

FR-F800 Options and Accessories

Model Number	Type	Description
FR-A8AX	I/O	16 Bit Digital Input Card
FR-A8AY	I/O	Digital Output / Extended Analog Output Card
FR-A8AR	I/O	Relay Output Card
FR-A8AC	I/O	A/F800 120V Control Option
FR-A8AN	I/O	F/A800 4-20mA I/O Card
FR-A8NC	Communication	CC-Link® Communications Card
FR-A8ND	Communication	DeviceNet™ Communications Card
FR-A8NP	Communication	Profibus® DPV0 Communications Card
A8NDPV1	Communication	Profibus DPV1 Communications Card
FR-A8NF	Communication	FL-Net Communications Card
A8N-XLT	Communication	Multi-protocol RS-485 Communications Card
A8NEIP-2P	Communication	EtherNET IP™ Communications Card
A8NPRT-2P	Communication	Profinet® Communications Card
A8NECT-2P	Communication	EtherCAT® Communications Card
A8NETH-2P	Communication	Multi-protocol EtherNET Communications Card
FR-A8NCE	Communication	CC-Link IE Communications Card
A8NC-CON	Communication	CC-Link Communications Card and Connectors
FR-LU08	Accessory	Liquid Crystal Operation Panel
FR-PU07	Accessory	Parameter Unit
FR-PU07-01	Accessory	Parameter Unit (HVAC type)
FR-PU07BB-L	Accessory	Parameter Unit with Battery Back-up
FR-CB201	Accessory	Parameter Unit Connection Cable 1M
FR-CB203	Accessory	Parameter Unit Connection Cable 3M
FR-CB205	Accessory	Parameter Unit Connection Cable 5M
FR-ADP	Accessory	Keypad Adaptor Unit for connecting FR-DU08
FR-A8TAT	Accessory	Control Terminal Block Adaptor
FR-A8TR	Accessory	Screw Terminal Block Option
FR-HEL	Accessory	DC Link Choke 240V
FR-HEL-H	Accessory	DC Link Choke 480V
FR-HEL-C	Accessory	DC Link Choke 600V
FR-Configurator2	Software	Software Setup Utility for 800 Series

Third party marks and brands are the property of their respective owners.

Mitsubishi Electric US, Inc.,
Industrial Automation

500 Corporate Woods Parkway, Vernon Hills, IL 60061
Ph 847.478.2100 • Fx 847.478.2253

us.MitsubishiElectric.com/fa/en

October, 2026 • ©2026, Mitsubishi Electric US, Inc., Industrial Automation
Specifications subject to change without notice. • All rights reserved

L-VH-04069