

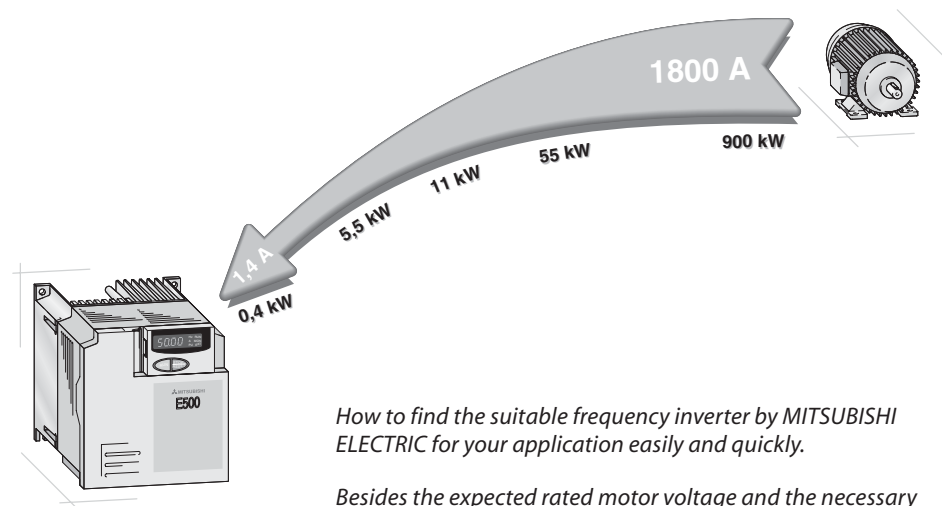
Noise Filter

No.	Frequency inverter	EMC Filter conf. S5011A	Order number	EMC Filter conf. S5022B	Order number
A	FR-S 520SE-0.2 k – 0.75 k EC	FFR-S520S-14A-RF1	152736	FFR-S520-14A-RF1	152736
B	FR-S 520SE-1.5 k EC	FFR-S520S-20A-RF1	152740	FFR-S520-20A-RF1	152740
C	FR-S 540E-0.4 k – 1.5 k EC	FFR-S540-8A-RF100	138425	FFR-S540-8A-RF100	138425
D	FR-S 540E-2.2 k – 3.7 k EC	FFR-S540-13A-RF100	138423	FFR-S540-13A-RF100	138423
E	FR-E 520S-0.4 k – 0.75 k EC	FFR-E520S-14A-SC1	152727	FFR-E520S-14A-SC1	152727
F	FR-E 520S-1.5 k – 2.2 k EC	FFR-E520S-26A-SC1	152730	FFR-E520S-26A-SC1	152730
G	FR-E 540-0.4 – 0.75 k EC	FFR-E540-4.5A-SF1	126654	FFR-E540-4.5A-SF1	126654
H	FR-E 540-1.5 – 3.7 k EC	FFR-E540-15A-SF1	126655	FFR-E540-15A-SF1	126655
I	FR-E 540-5.5 k – 7.5 k EC	FFR-E540-27A-SF1	126656	FFR-E540-27A-SF1	126656
J	FR-A 540-0.4 k – 1.5 k EC, FR-F 740-00023 – 00052 EC	FFR-A540-8A-SF100	104741	FFR-A540-8A-SF100	104741
K	FR-A 540-2.2 k – 3.7 k EC, FR-F 740-00083 EC	FFR-A540-16A-SF100	104752	FFR-A540-16A-SF100	104752
L	FR-A 540-5.5 k – 7.5 k EC, FR-F 740-00126 – 00250 EC	FFR-A540-30A-SF100	104753	FFR-A540-30A-SF100	104753
M	FR-A 540-11 k – 15 k EC	FFR-A540-50A-SF100	104754	FFR-A540-50A-SF100	104754
M1	FR-F 740-00310 – FR-F740-00380 EC	FFR-F740-55A-SF100	157395	FFR-F740-55A-SF100	157395
N	FR-A 540-18.5 k – 22 k EC, FR-F 740-00470 – FR-F740-00620 EC	FFR-A540-75A-SF100	104755	FFR-A540-75A-SF100	104755
O	FR-A 540-30 k EC, FR-F 740-00770	FFR-A540-95A-SF100	104756	FFR-A540-95A-SF100	104756
P	FR-A 540-37 k EC, FR-F 740-00930	FFR-A540-120A-SF100	151881	FFR-A540-120A-SF100	151881
Q	FR-A 540-45 k – 55 k EC, FR-F 740-01160	FFR-A540-180A-SF100	104757	FFR-A540-180A-SF100	104757
R	FR-A 540L-G75 k E1, FR-F 740-01800	FN3359-180-28	141097		
S	FR-A 540L-G90 k E1, FR-F 740-02160	FN3359-250-28	104663		
T	FR-A 540L-G110 k – 132 k E1, FR-F 740-02600 – FR-F 740-03610	FN3359-400-99	104664		
U	FR-A 540L-G160 k – 220 k E1, FR-F 740-04320 – FR-F 740-006100	FN3359-600-99	104665		
V	FR-A 540L-G280 k – 375 k E1, FR-F 740-06830 – FR-F 740-09620	FN3359-1000-99	104666		
W	FR-A 540L-G 450 k E1, FR-F 740-10940 – FR-F 740-12120	FN3359-1600-99	130229		

Note:

The frequency inverters of the FR-F740 series are equipped with a built-in EMC filter for industrial environment (environment 2). The filters shown in the table above are required for special cases only.

First the Current then the Capacity! Comparison of Frequency Inverters



How to find the suitable frequency inverter by MITSUBISHI ELECTRIC for your application easily and quickly.

Besides the expected rated motor voltage and the necessary power supply voltage you only need to know the expected rated motor current and the required overload capacity. By means of these parameters and the table overleaf you can determine the optimum frequency inverter for your application.



FR-S 500E EC

Performance range: 0.2 to 1.5 kW (1phase) and 0.4 to 3.7 kW (3phase)
Output frequency range: 0.5 – 120 Hz.



FR-E 500 EC

Performance range: 0.4 to 2.2 kW (1phase) and 0.4 to 7.5 kW (3phase)
Output frequency range: 0.2 – 400 Hz.



FR-F 740 EC

Performance range: 0.75 to 630 kW (3phase)
Output frequency range: 0.5 – 400 Hz.



FR-A 500(L-G) EC

Performance range: 0.4 to 55 kW (FR-A 500 EC) and 75 to 900 kW (FR-A 500L-G E1)
Output frequency range: 0.2 – 400 Hz.

Overview of all Specifications

Power supply 1~230 V ①	Power supply 3~400 V ②	Rated output current [A] Overload capacity 120 %*	Rated motor capacity [kW] ④	Rated output current [A] Overload capacity 150 %*	Rated motor capacity [kW] ④	Rated output current [A] ③	Rated motor capacity [kW] ④	Frequency inverter type	Order number	Applicable noise filter ⑤
●	—	—	—	—	—	1.4	0.2	FR-S 520SE-0.2 k EC	158459	A
●	—	—	—	—	—	2.5	0.4	FR-S 520SE-0.4 k EC	158460	A
●	—	—	—	—	—	4.1	0.75	FR-S 520SE-0.75 k EC	158461	A
●	—	—	—	—	—	7	1.5	FR-S 520SE-1.5 k EC	158462	B
●	●	—	—	—	—	1.2 (1.3)	0.4	FR-S 540E-0.4 k EC	158463	C
●	—	—	—	—	—	2.3 (2.5)	0.75	FR-S 540E-0.75 k EC	158464	C
●	—	—	—	—	—	3.7 (4.1)	1.5	FR-S 540E-1.5 k EC	158465	C
●	—	—	—	—	—	5.3 (5.8)	2.2	FR-S 540E-2.2 k EC	158466	D
●	—	—	—	—	—	7.7 (8.5)	3.7	FR-S 540E-3.7 k EC	158467	D
●	—	—	—	3.6	0.75	2.5	0.4	FR-E 520S-0.4 k EC	102938	E
●	—	—	—	5	1.1	4	0.75	FR-E 520S-0.75 k EC	102939	E
●	—	—	—	9.6	2.2	7	1.5	FR-E 520S-1.5 k EC	102940	F
●	—	—	—	12	3	10	2.2	FR-E 520S-2.2 k EC	102941	F
●	—	—	—	1.8	0.75	1.6	0.4	FR-E 540-0.4 k EC	69197	G
●	—	—	—	3	1.1	2.6	0.75	FR-E 540-0.75 k EC	69198	G
●	—	—	—	4.9	2.2	4	1.5	FR-E 540-1.5 k EC	69200	H
●	—	—	—	6.7	3	6	2.2	FR-E 540-2.2 k EC	69201	H
●	—	—	—	9.5	4	9.5	4	FR-E 540-3.7 k EC	69204	H
●	—	—	—	14	7.5	12	5.5	FR-E 540-5.5 k EC	102942	I
●	—	—	—	21	11	17	7.5	FR-E 540-7.5 k EC	102943	I
●	—	—	—	1.8	0.75	1.5	0.4	FR-A 540-0.4 k EC	68020	J
●	—	—	—	3	1.1	2.5	0.75	FR-A 540-0.75 k EC	68021	J
●	—	—	—	4.9	2.2	4	1.5	FR-A 540-1.5 k EC	68023	J
●	—	—	—	6.7	3	6	2.2	FR-A 540-2.2 k EC	68024	K
●	—	—	—	9.5	4	9	4	FR-A 540-3.7 k EC	68025	K
●	—	—	—	14	7.5	12	5.5	FR-A 540-5.5 k EC	68026	L
●	—	—	—	21	11	17	7.5	FR-A 540-7.5 k EC	68027	L
●	—	—	—	29	15	23	11	FR-A 540-11 k EC	68028	M
●	—	—	—	39	18.5	31	15	FR-A 540-15 k EC	68029	M
●	—	—	—	43	22	38	18.5	FR-A 540-18.5 k EC	68030	N
●	—	—	—	54	30	43	22	FR-A 540-22 k EC	68032	N
●	—	—	—	71	37	57	30	FR-A 540-30 k EC	68033	O
●	—	—	—	96	45	71	37	FR-A 540-37 k EC	68034	P
●	—	—	—	108	55	86	45	FR-A 540-45 k EC	68035	Q
●	—	—	—	138	75	110	55	FR-A 540-55 k EC	68036	Q
●	—	—	—	180	90	144	75	FR-A540L-G75 k E1	141018	R
●	—	—	—	260	132	216	110	FR-A540L-G90 k E1	141019	S
●	—	—	—	302	160	260	132	FR-A540L-G110 k E1	141020	T
●	—	—	—	432	220	361	185	FR-A540L-G132 k E1	141021	T
●	—	—	—	477	250	432	220	FR-A540L-G 160 k E1	141042	U
●	—	—	—	610	315	547	280	FR-A540L-G 220 k E1	141043	U
●	—	—	—	750	400	722	375	FR-A540L-G 280 k E1	141044	V
●	—	—	—	1010	530	866	450	FR-A540L-G 375 k E1	142589	V
●	—	—	—	1010	530	1010	530	FR-A540L-G 450 k E1	142590	W

Power supply 1~230 V ①	Power supply 3~400 V ②	Rated output current [A] ⑥ Overload capacity 120 %*	Rated motor capacity [kW] ④	Rated output current [A] ⑥ Overload capacity 150 %*	Rated motor capacity [kW] ④	Rated output current [A] Overload capacity 200 %*	Rated motor capacity [kW] ④	Frequency inverter type	Order number	Applicable noise filter ⑤
●	—	—	—	1152	600	1010	530	FR-A540L-530 k E1	on request	o.r.
●	—	—	—	1296	670	1152	600	FR-A540L-600 k E1	on request	o.r.
●	—	—	—	1440	750	1296	670	FR-A540L-670 k E1	on request	o.r.
●	—	—	—	1584	800	1440	750	FR-A540L-750 k E1	on request	o.r.
●	—	—	—	1728	900	1584	800	FR-A540L-800 k E1	on request	o.r.
●	2.3 (2.0)	0.75	2.1 (1.8)	0.75	—	—	—	FR-F 740-00023 EC	156569	J
●	3.8 (3.2)	1.5	3.5 (3.0)	1.5	—	—	—	FR-F 740-00038 EC	156570	J
●	5.2 (4.4)	2.2	4.8 (4.1)	2.2	—	—	—	FR-F 740-00052 EC	156571	J
●	8.3 (7.1)	3.7	7.6 (6.4)	3.7	—	—	—	FR-F 740-00083 EC	156572	K
●	12.6 (10.7)	5.5	11.5 (9.8)	5.5	—	—	—	FR-F 740-00126 EC	156573	L
●	17 (14.5)	7.5	16 (13)	7.5	—	—	—	FR-F 740-00170 EC	156594	L
●	25 (21.3)	11	23 (19)	11	—	—	—	FR-F 740-00250 EC	156595	L
●	31 (26.4)	15	29 (24)	15	—	—	—	FR-F 740-00310 EC	156596	M1
●	38 (32.3)	18.5	35 (30)	18.5	—	—	—	FR-F 740-00380 EC	156597	M1
●	47 (40.0)	22	43 (36)	22	—	—	—	FR-F 740-00470 EC	156598	N
●	62 (52.7)	30	57 (48)	30	—	—	—	FR-F 740-00620 EC	156599	N
●	77 (65.5)	37	70 (60)	37	—	—	—	FR-F 740-00770 EC	156600	O
●	93 (79.1)	45	85 (72)	45	—	—	—	FR-F 740-00930 EC	156601	P
●	116 (98.6)	55	106 (90)	55	—	—	—	FR-F 740-01160 EC	156602	Q
●	180 (153)	90	144 (122)	75	—	—	—	FR-F 740-01800 E1	156603	R
●	216 (184)	110	180 (153)	90	—	—	—	FR-F 740-02160 E1	156605	S
●	260 (221)	132	216 (184)	110	—	—	—	FR-F 740-02600 E1	158607	T
●	325 (276)	160	260 (221)	132	—	—	—	FR-F 740-03250 E1	158608	T
●	361 (307)	185	325 (276)	160	—	—	—	FR-F 740-03610 E1	158609	T
●	432 (367)	220	361 (307)	185	—	—	—	FR-F 740-04320 E1	158610	U
●	481 (409)	250	432 (367)	220	—	—	—	FR-F 740-04810 E1	158611	U
●	547 (465)	280	481 (409)	250	—	—	—	FR-F 740-05470 E1	158612	U
●	610 (518)	315	547 (465)	280	—	—	—	FR-F 740-06100 E1	158613	V
●	683 (581)	355	610 (518)	315	—	—	—	FR-F 740-06830 E1	158614	V
●	770 (654)	400	683 (581)	355	—	—	—	FR-F 740-07700 E1	158615	V
●	866 (736)	450	770 (654)	400	—	—	—	FR-F 740-08660 E1	158616	V
●	962 (818)	500	866 (736)	450	—	—	—	FR-F 740-09620 E1	158617	V
●	1094 (870)	560	962 (818)	500	—	—	—	FR-F 740-10940 E1	158619	W
●	1212 (1030)	630	1094 (870)	560	—	—	—	FR-F 740-12120 E1	158620	W

The values for 120 % overload capacity are valid at 110 % I_{rated} for 60 s, 120 % for 0.5 s (3 s for FR-F740) at 40 °C max.
The values for 150 % overload capacity are valid at 120 % I_{rated} for 60 s, 150 % for 0.5 s (3 s for FR-F740) at 40 °C* max.

* (FR-A540L-G and FR-F740 do not have this limitation, the validity is 50 °C max. at 150 % overload capacity)

The values for 200 % overload capacity are valid at 150 % I_{rated} for 60 s, 200 % for 0.5 s at 50 °C max.

- ① Permissible power supply voltage range for 1phase connection: 170–264 V.
- ② Permissible power supply voltage range for 3phase connection: 323–528 V (323–550 V for FR-F740-01800 – 12120)
- ③ The values in brackets are valid without a restriction to the PWM frequency (up to 40 °C).
- ④ At higher power supply voltages higher capacities can be output.
- ⑤ Combination see overleaf.
- ⑥ If the carrier of the FR-F 740 is set to 3kHz or more, the carrier frequency is automatically reduced when the inverter output current exceeds the parenthesized rated output current (= 85% load).