

MODEL: FR-F800

TITLE: SELECTION OF MOLDED CASE CIRCUIT BREAKER (MCCB) AND MAGNETIC CONTACTORS (MC) WHEN USING MULTIPLE RATINGS OF THE FR-F800

The rated current of Molded case circuit breaker (MCCB)^{*)} or earth leakage current breaker (ELB) (NF, NV type) for the FR-F800 series is shown below.

Voltage	Model Name- ₃	Power factor improving (AC or DC) reactor			
		Without		With	
		SLD	LD	SLD	LD
200V Class	FR-F820-0.75K(00046)	10A	10A	10A	10A
	FR-F820-1.5K(00077)	15A	15A	15A	15A
	FR-F820-2.2K(00105)	20A	20A	15A	15A
	FR-F820-3.7K(00167)	30A	30A	30A	30A
	FR-F820-5.5K(00250)	50A	50A	40A	40A
	FR-F820-7.5K(00340)	75A	60A	50A	50A
	FR-F820-11K(00490)	100A	75A	75A	75A
	FR-F820-15K(00630)	125A	125A	100A	100A
	FR-F820-18.5K(00770)	150A	150A	125A	125A
	FR-F820-22K(00930)	175A	175A	150A	125A
	FR-F820-30K(01250)	225A	225A	175A	150A
	FR-F820-37K(01540)	300A	250A	225A	200A
	FR-F820-45K(01870)	350A	300A	250A	225A
	FR-F820-55K(02330)	400A	400A	350A	300A
	FR-F820-75K(03160)	-	-	500A	400A
	FR-F820-90K(03800)	-	-	500A	400A
FR-F820-110K(04750)	-	-	600A	500A	
400V Class	FR-F840-0.75K(00023)	5A	5A	5A	5A
	FR-F840-1.5K(00038)	10A	10A	10A	10A
	FR-F840-2.2K(00052)	10A	10A	10A	10A
	FR-F840-3.7K(00083)	20A	20A	15A	15A
	FR-F840-5.5K(00126)	30A	30A	20A	20A
	FR-F840-7.5K(00170)	30A	30A	30A	30A
	FR-F840-11K(00250)	50A	50A	40A	40A
	FR-F840-15K(00310)	60A	60A	50A	50A
	FR-F840-18.5K(00380)	75A	75A	60A	60A
	FR-F840-22K(00470)	100A	100A	75A	75A
	FR-F840-30K(00620)	125A	125A	100A	100A
	FR-F840-37K(00770)	150A	150A	125A	100A
	FR-F840-45K(00930)	175A	175A	150A	125A
	FR-F840-55K(01160)	200A	200A	175A	150A
	FR-F840-75K(01800)	-	-	225A	200A
	FR-F840-90K(02160)	-	-	225A	225A
	FR-F840-110K(02600)	-	-	350A	225A
	FR-F840-132K(03250)	-	-	400A	350A
	FR-F840-160K(03610)	-	-	400A	400A
	FR-F840-185K(04320)	-	-	500A	400A
FR-F840-220K(04810)	-	-	600A	500A	
FR-F840-250K(05470)	-	-	600A	600A	
FR-F840-280K(06100)	-	-	700A	600A	
FR-F840-315K(06830)	-	-	800A	700A	

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The input-side magnetic contactor for the FR-F800 series is shown below.*2

Voltage	Model Name-3	Power factor improving (AC or DC) reactor			
		Without		With	
		SLD	LD	SLD	LD
200V Class	FR-F820-0.75K(00046)	S-T10	S-T10	S-T10	S-T10
	FR-F820-1.5K(00077)	S-T10	S-T10	S-T10	S-T10
	FR-F820-2.2K(00105)	S-T10	S-T10	S-T10	S-T10
	FR-F820-3.7K(00167)	S-T21	S-T21	S-T10	S-T10
	FR-F820-5.5K(00250)	S-T25	S-T25	S-T21	S-T21
	FR-F820-7.5K(00340)	S-T35	S-T35	S-T35	S-T25
	FR-F820-11K(00490)	S-T50	S-T35	S-T35	S-T35
	FR-F820-15K(00630)	S-T65	S-T50	S-T50	S-T50
	FR-F820-18.5K(00770)	S-T65	S-T65	S-T50	S-T50
	FR-F820-22K(00930)	S-T100	S-T100	S-T65	S-T65
	FR-F820-30K(01250)	S-N150	S-T100	S-T100	S-T100
	FR-F820-37K(01540)	S-N150	S-N150	S-N150	S-N125
	FR-F820-45K(01870)	S-N180	S-N180	S-N150	S-N150
	FR-F820-55K(02330)	S-N220	S-N220	S-N180	S-N180
	FR-F820-75K(03160)	-	-	S-N300	S-N300
	FR-F820-90K(03800)	-	-	S-N400	S-N300
FR-F820-110K(04750)	-	-	S-N600	S-N400	
400V Class	FR-F840-0.75K(00023)	S-T10	S-T10	S-T10	S-T10
	FR-F840-1.5K(00038)	S-T10	S-T10	S-T10	S-T10
	FR-F840-2.2K(00052)	S-T10	S-T10	S-T10	S-T10
	FR-F840-3.7K(00083)	S-T10	S-T10	S-T10	S-T10
	FR-F840-5.5K(00126)	S-T21	S-T21	S-T12	S-T12
	FR-F840-7.5K(00170)	S-T21	S-T21	S-T21	S-T21
	FR-F840-11K(00250)	S-T21	S-T21	S-T21	S-T21
	FR-F840-15K(00310)	S-T35	S-T35	S-T21	S-T21
	FR-F840-18.5K(00380)	S-T35	S-T35	S-T35	S-T35
	FR-F840-22K(00470)	S-T35	S-T35	S-T35	S-T35
	FR-F840-30K(00620)	S-T50	S-T50	S-T50	S-T50
	FR-F840-37K(00770)	S-T65	S-T65	S-T50	S-T50
	FR-F840-45K(00930)	S-T100	S-T100	S-T65	S-T65
	FR-F840-55K(01160)	S-N150	S-T100	S-T100	S-T100
	FR-F840-75K(01800)	-	-	S-N150	S-T100
	FR-F840-90K(02160)	-	-	S-N180	S-N150
	FR-F840-110K(02600)	-	-	S-N220	S-N180
	FR-F840-132K(03250)	-	-	S-N300	S-N220
	FR-F840-160K(03610)	-	-	S-N300	S-N300
	FR-F840-185K(04320)	-	-	S-N400	S-N300
FR-F840-220K(04810)	-	-	S-N600	S-N400	
FR-F840-250K(05470)	-	-	S-N600	S-N600	
FR-F840-280K(06100)	-	-	S-N600	S-N600	
FR-F840-315K(06830)	-	-	S-N800	S-N600	

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- *1 Select MCCB according to the power supply capacity.
Install one MCCB per inverter.
For the use in the United States or Canada, provide the appropriate UL and cUL listed fuse or UL489 molded case circuit breaker (MCCB) that is suitable for branch circuit protection.
(Refer to the Instruction Manual (Startup).)

- *2 Magnetic contactor is selected based on the AC-1 class. The electrical durability of the magnetic contactor is 500,000 times. When the magnetic contactor is used for emergency stops during motor driving, the electrical durability is 25 times.
If using an MC for emergency stop during motor driving or when using an MC on the inverter output side for commercial-power supply operation, select an MC regarding the rated motor current as AC-3 class rated current.

- *3 Regarding the FR-A842-355K and above, select the MCCB and magnetic contactor according to the FR-CC2 converter that is being used. (Refer to the FR-F800 catalogue.)