

MODELS: FR-F800

TITLE: Applicable cables of FR-F800 series in multiple ratings.

Applicable cables are shown below when you use FR-F800 series in multiple ratings.

1. Standard Model

(1) HIV wire etc

Voltage	Inverter model (LD rating)	Recommended cable gauge (mm ²) *1					
		Input (R,S,T)				Output (U,V,W)	
		Power factor improving (AC or DC) reactor					
		Without		With			
SLD	LD	SLD	LD	SLD	LD		
200V	FR-F820-0.75K(00046)	2	2	2	2	2	2
	FR-F820-1.5K(00077)	2	2	2	2	2	2
	FR-F820-2.2K(00105)	2	2	2	2	2	2
	FR-F820-3.7K(00167)	3.5	3.5	3.5	3.5	3.5	3.5
	FR-F820-5.5K(00250)	5.5	5.5	5.5	5.5	5.5	5.5
	FR-F820-7.5K(00340)	14	8	8	5.5	8	5.5
	FR-F820-11K(00490)	14	14	14	14	14	14
	FR-F820-15K(00630)	22	22	22	22	22	22
	FR-F820-18.5K(00770)	38	38	22	22	22	22
	FR-F820-22K(00930)	38	38	38	38	38	38
	FR-F820-30K(01250)	60	60	60	60	60	60
	FR-F820-37K(01540)	80	80	80	60	80	60
	FR-F820-45K(01870)	100	100	100	100	100	100
	FR-F820-55K(02330)	100	100	100	100	100	100
	FR-F820-75K(03160)	-	-	125	125	125	125
	FR-F820-90K(03800)	-	-	150	150	150	150
FR-F820-110K(04750)	-	-	2×100	150	2×100	150	
400V	FR-F840-0.75K(00023)	2	2	2	2	2	2
	FR-F840-1.5K(00038)	2	2	2	2	2	2
	FR-F840-2.2K(00052)	2	2	2	2	2	2
	FR-F840-3.7K(00083)	2	2	2	2	2	2
	FR-F840-5.5K(00126)	2	2	2	2	2	2
	FR-F840-7.5K(00170)	3.5	3.5	3.5	3.5	3.5	3.5
	FR-F840-11K(00250)	5.5	5.5	5.5	5.5	5.5	5.5
	FR-F840-15K(00310)	8	8	5.5	5.5	5.5	5.5
	FR-F840-18.5K(00380)	14	14	8	8	8	8
	FR-F840-22K(00470)	14	14	14	14	14	14
	FR-F840-30K(00620)	22	22	22	22	22	22
	FR-F840-37K(00770)	22	22	22	22	22	22
	FR-F840-45K(00930)	38	38	38	38	38	38
	FR-F840-55K(01160)	60	60	60	60	60	60
	FR-F840-75K(01800)	-	-	60	60	60	60
	FR-F840-90K(02160)	-	-	80	60	80	60
	FR-F840-110K(02600)	-	-	100	80	100	80
	FR-F840-132K(03250)	-	-	125	100	125	100
	FR-F840-160K(03610)	-	-	150	125	150	125
	FR-F840-185K(04320)	-	-	2×100	150	2×100	150
FR-F840-220K(04810)	-	-	2×100	2×100	2×100	2×100	
FR-F840-250K(05470)	-	-	2×125	2×100	2×125	2×100	
FR-F840-280K(06100)	-	-	2×150	2×125	2×150	2×125	
FR-F840-315K(06830)	-	-	2×200	2×150	2×200	2×150	

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(2)AWG/MCM

Voltage	Inverter model (LD rating)	Recommended cable gauge (AWG) *2					
		Input (R,S,T)				Output (U,V,W)	
		Power factor improving (AC or DC) reactor					
		Without		With			
SLD	LD	SLD	LD	SLD	LD		
200V	FR-F820-0.75K(00046)	14	14	14	14	14	14
	FR-F820-1.5K(00077)	14	14	14	14	14	14
	FR-F820-2.2K(00105)	14	14	14	14	14	14
	FR-F820-3.7K(00167)	12	12	12	12	12	12
	FR-F820-5.5K(00250)	10	10	10	10	10	10
	FR-F820-7.5K(00340)	6	6	8	10	8	10
	FR-F820-11K(00490)	6	6	6	6	6	6
	FR-F820-15K(00630)	4	4	4	4	4	4
	FR-F820-18.5K(00770)	2	2	4	4	4	4
	FR-F820-22K(00930)	2	2	2	2	2	2
	FR-F820-30K(01250)	1/0	1/0	1/0	1/0	1/0	1/0
	FR-F820-37K(01540)	3/0	3/0	3/0	1/0	3/0	1/0
	FR-F820-45K(01870)	4/0	4/0	4/0	4/0	4/0	4/0
	FR-F820-55K(02330)	4/0	4/0	4/0	4/0	4/0	4/0
	FR-F820-75K(03160)	-	-	250	250	250	250
	FR-F820-90K(03800)	-	-	2x4/0	2x4/0	2x4/0	2x4/0
FR-F820-110K(04750)	-	-	2x4/0	2x4/0	2x4/0	2x4/0	
400V	FR-F840-0.75K(00023)	14	14	14	14	14	14
	FR-F840-1.5K(00038)	14	14	14	14	14	14
	FR-F840-2.2K(00052)	14	14	14	14	14	14
	FR-F840-3.7K(00083)	14	14	14	14	14	14
	FR-F840-5.5K(00126)	12	12	14	14	14	14
	FR-F840-7.5K(00170)	12	12	12	12	12	12
	FR-F840-11K(00250)	10	10	10	10	10	10
	FR-F840-15K(00310)	8	8	10	10	10	10
	FR-F840-18.5K(00380)	6	6	8	8	8	8
	FR-F840-22K(00470)	6	6	6	6	6	6
	FR-F840-30K(00620)	4	4	4	4	4	4
	FR-F840-37K(00770)	4	4	4	4	4	4
	FR-F840-45K(00930)	1	1	2	2	2	2
	FR-F840-55K(01160)	1/0	1/0	1/0	1/0	1/0	1/0
	FR-F840-75K(01800)	-	-	1/0	1/0	1/0	1/0
	FR-F840-90K(02160)	-	-	3/0	1/0	3/0	1/0
	FR-F840-110K(02600)	-	-	4/0	3/0	4/0	3/0
	FR-F840-132K(03250)	-	-	250	4/0	250	4/0
	FR-F840-160K(03610)	-	-	300	250	300	250
	FR-F840-185K(04320)	-	-	2x4/0	300	2x4/0	300
FR-F840-220K(04810)	-	-	2x4/0	2x4/0	2x4/0	2x4/0	
FR-F840-250K(05470)	-	-	2x250	2x4/0	2x250	2x4/0	
FR-F840-280K(06100)	-	-	2x300	2x250	2x300	2x250	
FR-F840-315K(06830)	-	-	2x350	2x300	2x350	2x300	

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(3) PVC wire etc

Voltage	Inverter model (LD rating)	Recommended cable gauge (mm ²) *3					
		Input (R,S,T)				Output (U,V,W)	
		Power factor improving (AC or DC) reactor					
		Without		With			
SLD	LD	SLD	LD	SLD	LD		
200V	FR-F820-0.75K(00046)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F820-1.5K(00077)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F820-2.2K(00105)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F820-3.7K(00167)	4	4	4	4	4	4
	FR-F820-5.5K(00250)	6	6	6	6	6	6
	FR-F820-7.5K(00340)	16	16	10	6	10	6
	FR-F820-11K(00490)	16	16	16	16	16	16
	FR-F820-15K(00630)	25	25	25	25	25	25
	FR-F820-18.5K(00770)	50	35	25	25	25	25
	FR-F820-22K(00930)	50	35	50	35	50	35
	FR-F820-30K(01250)	50	50	50	50	50	50
	FR-F820-37K(01540)	70	70	70	70	70	70
	FR-F820-45K(01870)	95	95	95	95	95	95
	FR-F820-55K(02330)	95	95	95	95	95	95
	FR-F820-75K(03160)	-	-	-	-	-	-
	FR-F820-90K(03800)	-	-	-	-	-	-
FR-F820-110K(04750)	-	-	-	-	-	-	
400V	FR-F840-0.75K(00023)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F840-1.5K(00038)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F840-2.2K(00052)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F840-3.7K(00083)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F840-5.5K(00126)	2.5	2.5	2.5	2.5	2.5	2.5
	FR-F840-7.5K(00170)	4	4	4	4	4	4
	FR-F840-11K(00250)	6	6	6	6	6	6
	FR-F840-15K(00310)	10	10	6	6	6	6
	FR-F840-18.5K(00380)	16	16	10	10	10	10
	FR-F840-22K(00470)	16	16	16	16	16	16
	FR-F840-30K(00620)	25	25	25	25	25	25
	FR-F840-37K(00770)	25	25	25	25	25	25
	FR-F840-45K(00930)	50	50	50	50	50	50
	FR-F840-55K(01160)	50	50	50	50	50	50
	FR-F840-75K(01800)	-	-	50	50	50	50
	FR-F840-90K(02160)	-	-	70	50	70	50
	FR-F840-110K(02600)	-	-	95	70	95	70
	FR-F840-132K(03250)	-	-	120	95	120	95
	FR-F840-160K(03610)	-	-	150	120	150	120
	FR-F840-185K(04320)	-	-	2×95	150	2×95	150
FR-F840-220K(04810)	-	-	2×95	2×95	2×95	2×95	
FR-F840-250K(05470)	-	-	2×120	2×95	2×120	2×95	
FR-F840-280K(06100)	-	-	2×150	2×120	2×150	2×120	
FR-F840-315K(06830)	-	-	2×185	2×150	2×185	2×150	

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- *1 For FR-F820-55K(02330) or lower and FR-F840-55K(01160) or lower, it is the gauge of a cable with the continuous maximum permissible temperature of 75°C. (HIV cable (600 V grade heat-resistant PVC insulated wire), etc.) It assumes a surrounding air temperature of 50°C or lower and the wiring distance of 20 m or shorter.
For FR-F820-75K(03160) or higher and FR-F840-75K(01800) or higher, it is the gauge of the cable with the continuous maximum permissible temperature of 90°C or higher. (LMFC (heat resistant flexible cross-linked polyethylene insulated cable), etc.) It assumes a surrounding air temperature of 50°C or lower and in-enclosure wiring.
- *2 For all the 200 V class capacities and FR-F840-45K(00930) or lower, it is the gauge of a cable with the continuous maximum permissible temperature of 75°C (THHW cable). It assumes a surrounding air temperature of 40°C or lower and the wiring distance of 20 m or shorter. For the FR-F840-55K(01160) or higher, it is the gauge of a cable with the continuous maximum permissible temperature of 90°C (THHN cable). It assumes a surrounding air temperature of 40°C or lower and in-enclosure wiring. (Selection example for use mainly in the United States.)
- *3 For the FR-F820-18.5K(00770) or lower and the FR-F840-45K(00930) or lower, it is the gauge of a cable with the continuous maximum permissible temperature of 70°C (PVC cable). It assumes a surrounding air temperature of 40°C or lower and the wiring distance of 20 m or shorter.
For the FR-F820-22K(00930) or higher and the FR-F840-55K(01160) or higher, it is the gauge of a cable with the continuous maximum permissible temperature of 90°C (XLPE cable). It assumes a surrounding air temperature of 40°C or lower and in-enclosure wiring. (Selection example for use mainly in Europe.)

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2. Converter Separated Type

(1) HIV cable, etc

Voltage	Inverter Model*7	Recommended cable gauge (mm2) *4	
		Output (U,V,W)	
		SLD	LD
400V class	FR-F840-355K(07700)	2x200	2x200
	FR-F840-400K(08660)	2x250	2x200
	FR-F840-450K(09620)	2x250	2x250
	FR-F840-500K(10940)	3x200	2x250
	FR-F840-630K(12120)	3x200	3x200

(2) AWG/MCM

Voltage	Inverter Model*7	Recommended cable gauge (AWG) *5	
		Output (U,V,W)	
		SLD	LD
400V class	FR-F840-355K(07700)	2x400	2x350
	FR-F840-400K(08660)	2x500	2x400
	FR-F840-450K(09620)	2x500	2x500
	FR-F840-500K(10940)	3x350	2x500
	FR-F840-630K(12120)	3x400	3x350

(3) PVC cable, etc.

Voltage	Inverter Model*7	Recommended cable gauge (mm2) *6	
		Output (U,V,W)	
		SLD	LD
400V class	FR-F840-355K(07700)	2x185	2x185
	FR-F840-400K(08660)	2x240	2x185
	FR-F840-450K(09620)	2x240	2x240
	FR-F840-500K(10940)	3x185	2x240
	FR-F840-630K(12120)	3x185	3x185

*4 It is the gauge of the cable with the continuous maximum permissible temperature of 90°C or higher. (LMFC (heat resistant flexible cross-linked polyethylene insulated cable), etc.). It assumes a surrounding air temperature of 50°C or lower and in-enclosure wiring.

*5 It is the gauge of a cable with the continuous maximum permissible temperature of 90°C (THHN cable). It assumes a surrounding air temperature of 40°C or lower and in-enclosure wiring. (Selection example for use mainly in the United States.)

*6 It is the gauge of a cable with the continuous maximum permissible temperature of 90°C (XLPE cable). It assumes a surrounding air temperature of 40°C or lower and in-enclosure wiring. (Selection example for use mainly in Europe.)

*7 Regarding the input (R,S,T) of the FR-F842-355K and above, select by matching to the FR-CC2 converter unit. (refer to the FR-F800 catalogue)