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Find the *Mitsubishi FR-S5NFSA-0.75K* at our website: *Click HERE*

EMC filter

FR-S5NFSA-0.75K, 1.5K
FR-S5NFSB-0.75K, 1.5K

This instruction manual gives handling information and precautions for use of this equipment. Incorrect handling might cause an unexpected fault. Before using the equipment, please read this manual carefully to use the equipment to its optimum.
Please forward this manual to the end user.
For further details please refer to Mitsubishi manuals for Frequency Inverters and EMC installation guidelines, which contain detailed information about installation conforming to EMC.

Safety instruction

⚠ Do not touch the filter while the power is on or when the inverter is running. Otherwise, you may access the exposed high-voltage terminals and charging part and get an electric shock.

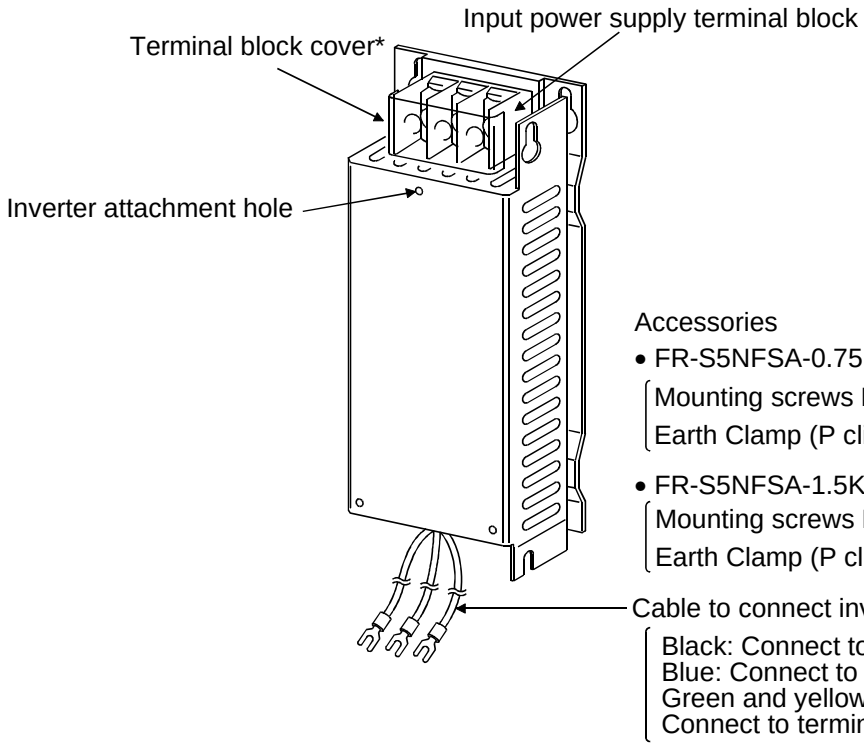
⚠ The inverter and EMC filter will be hot while the power is ON and for a short time after the power is turned OFF. Touching the inverter or filter could cause burns.

⚠ Do not switch power on before connecting the inverter power connection cables to the inverter. Doing so can cause an electric shock or failure.

1. Applicable inverters

Filter type	Applicable inverter
FR-S5NFSA-0.75K	FR-S520S-0.2K to 0.75K-EC (R), -CH (R)
FR-S5NFSA-1.5K	FR-S520S-1.5K-EC (R), -CH (R)
FR-S5NFSB-0.75K	FR-S520S-0.2K to 0.75K-EC (R), -CH (R)
FR-S5NFSB-1.5K	FR-S520S-1.5K-EC (R), -CH (R)

2. Product diagram

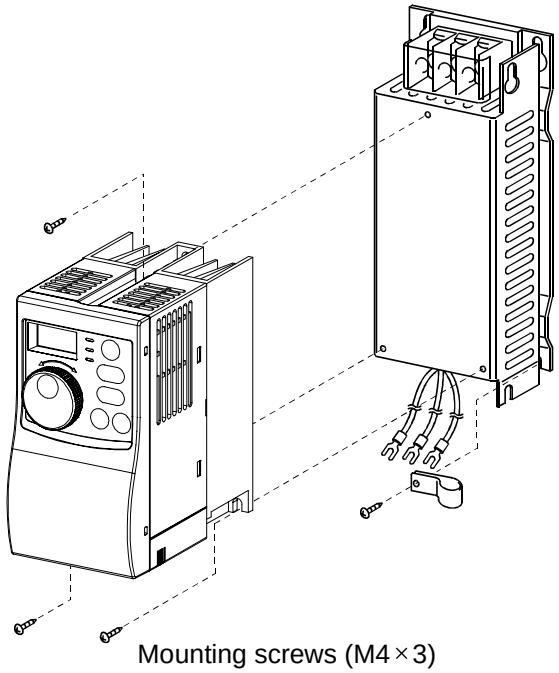


*Terminal block cover must be attached when using the filter.

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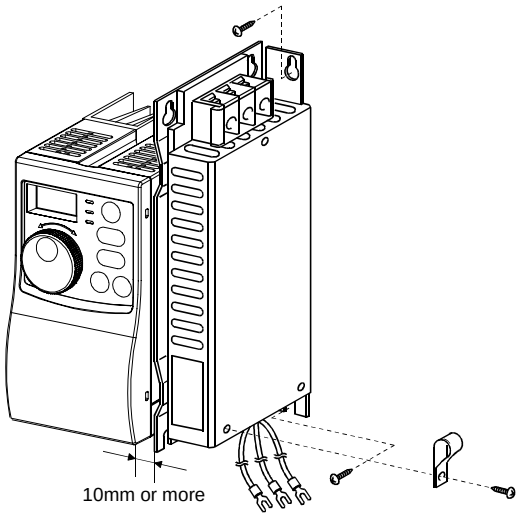
3. Installation

- Method for installation on the rear panel of the inverter (Vibration: 5.9 m/s^2)



Mounting screws (M4×3)

- Method for installation in parallel with the inverter (Vibration: 2.4 m/s^2)



4. Wiring

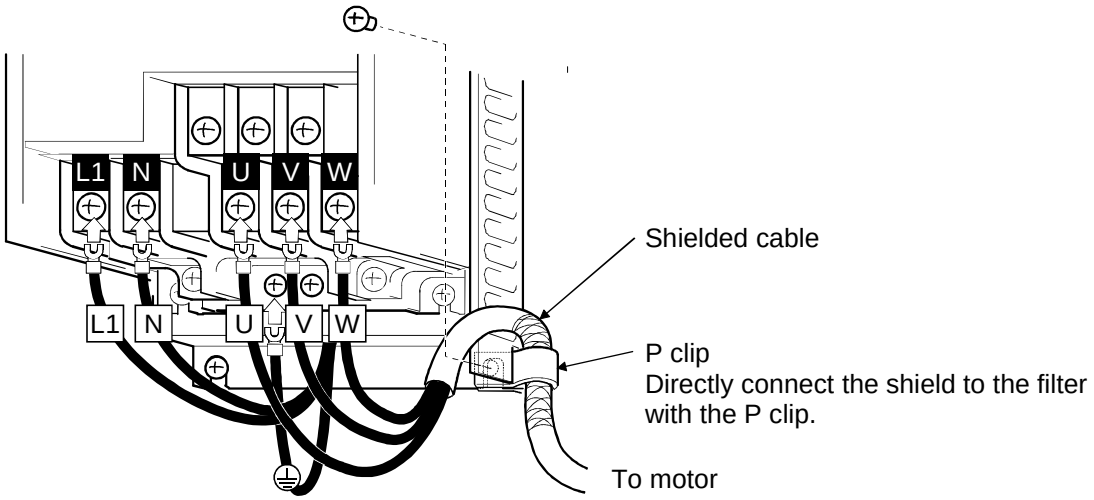
Earth the filter before connecting the power to prevent an electrical shock.

4.1 Wiring for installation on the rear panel of the inverter

The inverter-motor wiring can be a powerful noise source. Using the P clip, connect the shield of the shielded cable directly to the filter for grounding.

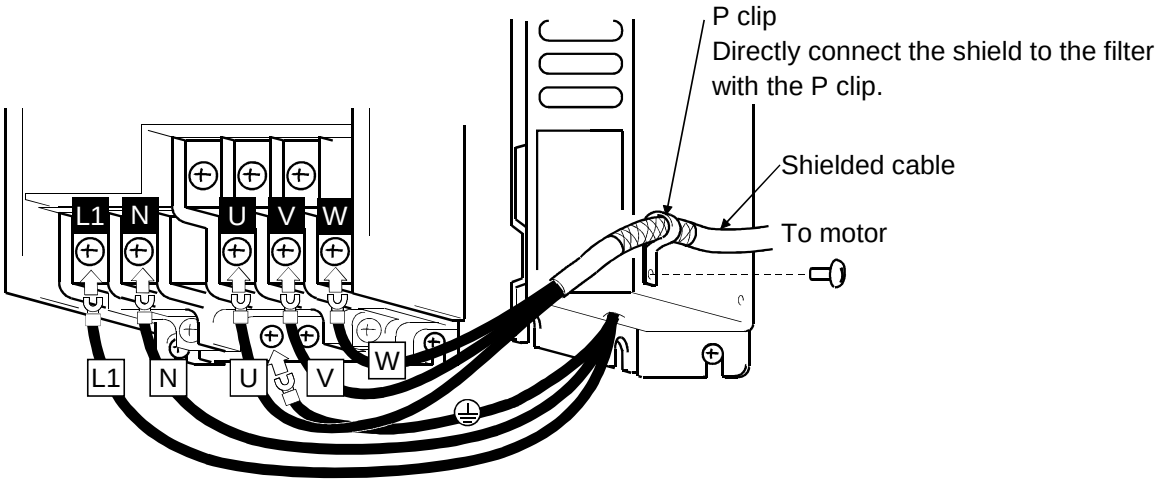
- Green and yellow stripe cable ——— ⏚
- Black cable ——— L1
- Blue cable ——— N

(Black cable: For L1 terminal, blue cable: For N terminal, Green and yellow stripe cable: For Earth terminal.)



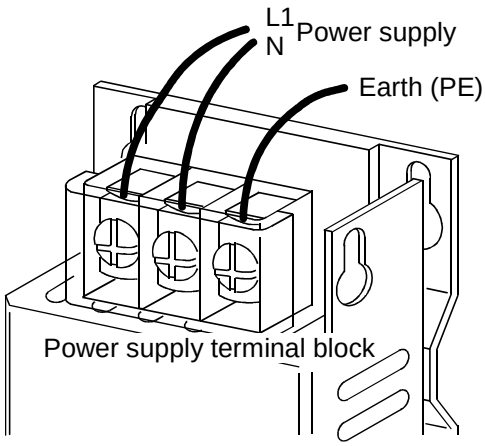
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4.2 Wiring for installation in parallel with the inverter



4.3 Wiring the power supply.

1) Earth (PE) connection
2) Inverter connection (L1, N)



Terminal block diagram
for noise filter connection

L1	N	PE

Screw size (M4)

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5. Specifications

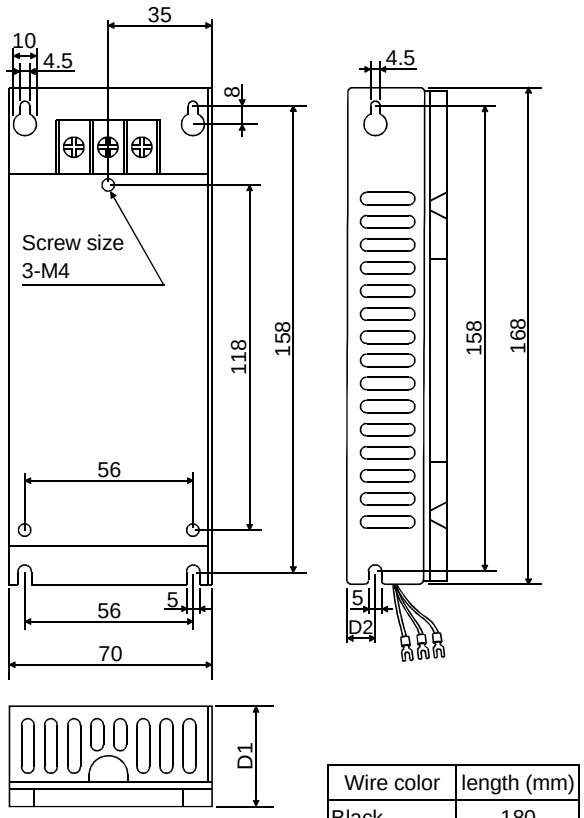
Filter type		FR-S5NFSA-0.75K	FR-S5NFSA-1.5K	FR-S5NFSB-0.75K	FR-S5NFSB-1.5K
Rated input AC voltage [V]		200 to 240V +10%, -15%			
Rated input/output current [A]		14 (100% load)	25 (100% load)	14 (100% load)	20 (100% load)
Overload capacity		150% load 1min, 200% load 1s			
Leakage current [mA] (50Hz)		4.5	9.5	9.5	14
Electric strength		AC2000V 1minute, AC2400V 5seconds			
Surge		5000V 1.2μs peak, 50μs (5times)			
Environment condition	Ambient temperature	-10 to 50°C			
	Storge temperature	-20 to 65°C			
	Ambient humidity	90% RH or less (Without dew condensing)			

<Instructions for European Directives>
It has been confirmed that this product complies with the following standard by installing an inverter compatible with this product in reference to the technical information in the "EMC Installation Guidelines" (literature number BCN-A21041-202).

Filter type	EMC Standards
FR-S5NFSA-0.75K, 1.5K	EN 61800-3, EN 50081-2 AC Mains (Industrial Environment) Limits equivalent to EN 55011 Class A, Group 1
FR-S5NFSB-0.75K, 1.5K	EN 61800-3, EN 50081-1 AC Mains (Residential and Commercial Environment) Limits equivalent to EN 55011 Class B, Group 1

6. Outline drawings

FR-S5NFSA-0.75K
FR-S5NFSB-0.75K

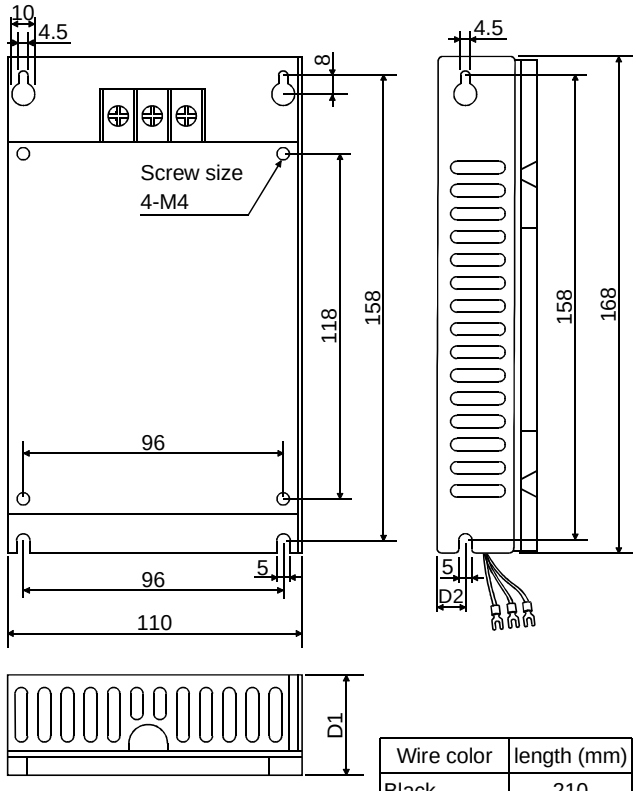


Filter type	D1	D2
FR-S5NFSA-0.75K	35	9.5
FR-S5NFSB-0.75K	47	11

Wire color	length (mm)
Black	180
Blue	180
Green and yellow stripe	160

(Unit:mm)

FR-S5NFSA-1.5K
FR-S5NFSB-1.5K



Filter type	D1	D2
FR-S5NFSA-1.5K	35	9.5
FR-S5NFSB-1.5K	47	11

Wire color	length (mm)
Black	210
Blue	210
Green and yellow stripe	180

(Unit:mm)

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