





■ Additional sheet

1. Compliance with Low Voltage Directive 2014/35/EU

Since 21 June 2023, EN61800-5-1:2007 / A1 (2017) / A11 (2021) has been harmonized standard listed on the Low Voltage Directive (2014/35/EU). This additional sheet is very important to use VF-AS3J inverter safely, prevent injury to yourself and other people around you as well as to prevent damage to property in the area. Thoroughly familiarize yourself with the symbols and indications shown in the VF-AS3J instruction manual (E6582248(Included in CD-ROM)) accompanied with product and then continue to read this manual.

See web page <https://www.inverter.co.jp/> for EU Declaration of Conformity.

 WARNING	
 Mandatory action	<ul style="list-style-type: none"> • Install proper short-circuit protective device between the power supply and the inverter (primary side). If proper short-circuit protective device is not installed, short circuit current cannot be shut down by inverter alone and it will result in electric shock or fire. Integral solid state short circuit protection in the inverter does not provide branch circuit protection. Branch circuit protection must be provided in accordance with any local codes • Install the inverter into enclosure based on this manual, and install short-circuit protective device or power distribution devices based on the manufacturer manual. When they are installed with improper coordination, this will result in electric shock or fire. • The grounding wire must be connected securely. If the grounding wire is not securely connected, when the inverter has failure or earth leakage, this will result in electric shock or fire.

 CAUTION	
 Mandatory action	<ul style="list-style-type: none"> • This product can cause a DC current in the PE conductor. Where a residual current operated protective device (RCD) is used for protection against electric shock, only an RCD of Type B is allowed on the supply side of this product. All upstream RCD, up to the supply transformer, shall be of Type B. If proper device above is not used, it can result in electric shock.

This additional manual includes the correction and additional information for [9.1.2] of E6582248 to comply with Low Voltage Directive 2014/35/EU under the condition below.

- Applicable standard: EN61800-5-1:2007 / A1:2017 / A11:2021 (IEC61800-5-1 Ed.2.1)
- Pollution degree: 2
- Overvoltage category: 3*
* In case of using VFAS3J-2750P and 4110KPC with corner earthed power supply system under the surrounding according to OVC3, supply cooling fan should be powered by separated power supply under the surrounding according to OVC2.
- The electronic power output short-circuit protection circuitry meets the requirements of IEC60364-4-41:2005/AMD1 - Clause 411.

When incorporating the inverter into a power drive system, take the following measures to comply with IEC61800-5-1 Ed.2.1.

- (1) Installation and upstream protection devices
 - Install the inverter into the enclosure with proper short circuit protective device (SCPD) in accordance with the prospective short-circuit current (Isc) rating defined for each power output of the inverter in the table shown in following page.
Class CC/J fuses are mandatory in case of using DC bus and/or braking ports.
- (2) Grounding
 - Connect a dedicated wire to the grounding terminal on the inverter.
 - Do not connect two or more grounding wires to a single grounding terminal (screw) on the inverter.
 - Refer to the table in [10. 1] of E6582248 to select wire size.
- (3) Overload protection
 - For overload protection of inverter, refer to [5.1.5], [5.2.2] of E6582248.
- (4) Motor overload protection and overtemperature protection
 - For electronic motor thermal protection, refer to [5. 1. 5] of E6582248.
 - For motor integrated PTC thermal protection, refer to [6. 30. 19] of E6582248.

Prospective short-circuit current rating (Isc) table

The rating of the short circuit protection devices (SCPD) in the table below are maximum values with Enclosure.

Use the wire with the size described in [10.1] of E6582248.

Class CC/J fuses are mandatory in case of using DC output and/or braking ports to comply with IEC61800-5-1 Ed.2.1.

Reference * ¹	Maximum voltage (V)	Applicable motor (kW) HD	Applicable motor (kW) ND	Maximum Isc (kA)	SCPD rating			Minimum enclosure volume (L) * ⁴	
					Fuse * ²		Circuit breaker * ³		
					Class	(A)			
VFAS3J-2004PL	240	0.4	0.4	5	Class CC	7	HLL36015	47	
VFAS3J-2007PL		0.75	0.75	5	Class J	15	HLL36015	47	
VFAS3J-2015PL		1.5	1.5	5	Class J	25	HLL36015	47	
VFAS3J-2022PL		2.2	2.2	5	Class J	25	HLL36020	47	
VFAS3J-2037PL		4.0	4.0	5	Class J	46	HLL36030	47	
VFAS3J-2055PL		5.5	5.5	5	Class J	60	HLL36050	47	
VFAS3J-2075PL		7.5	7.5	5	Class J	70	HLL36070	47	
VFAS3J-2110PM		11	11	5	Class J	90	HLL36080	142	
VFAS3J-2150PM		15	15	5	Class J	110	HLL36100	142	
VFAS3J-2185PM		18.5		18.5	5	Class J	150	HLL36125	142
			22	5	Class J	150	HLL36125	142	
VFAS3J-2220PM		22	30	5	Class J	175	JLL36175	142	
VFAS3J-2300PM		30	37	10	Class J	225	JLL36200	283	
VFAS3J-2370PM		37	45	10	Class J	250	JLL36250	283	
VFAS3J-2450PM		45	55	10	Class J	300	LLL36400	283	
VFAS3J-2550P		55	75	10 * ⁵	Class J	350	LLL36400	854	
VFAS3J-2750P		75	90	10 * ⁵	Class J	450	LLL36600	1280	
VFAS3J-4007PL	480	0.75	0.75	5	Class CC	6	HLL36015	47	
VFAS3J-4015PL		1.5	1.5	5	Class CC	12	HLL36015	47	
VFAS3J-4022PL		2.2	2.2	5	Class J	15	HLL36015	47	
VFAS3J-4037PL		4.0	4.0	5	Class J	25	HLL36020	47	
VFAS3J-4055PL		5.5	5.5	5	Class J	40	HLL36030	47	
VFAS3J-4075PL		7.5	7.5	5	Class J	40	HLL36040	47	
VFAS3J-4110PL		11	11	5	Class J	60	HLL36050	47	
VFAS3J-4150PL		15	15	5	Class J	70	HLL36070	142	
		18.5		18.5	5	Class J	90	HLL36080	142
			22	5	Class J	90	HLL36080	142	
VFAS3J-4220PL		22	30	5	Class J	100	HLL36090	142	
VFAS3J-4300PL		30	37	10	Class J	110	HLL36125	283	
VFAS3J-4370PL		37	45	10	Class J	150	HLL36150	283	
VFAS3J-4450PL		45	55	10	Class J	200	JLL36175	854	
VFAS3J-4550PL		55	75	10	Class J	225	JLL36200	854	
VFAS3J-4750PL		75	90	10	Class J	300	JLL36250	854	
VFAS3J-4900PC		90	110	10 * ⁵	Class J	300	LLL36400	1280	
VFAS3J-4110KPC	110	132	10 * ⁵	Class J	350	LLL36400	1280		

*1: Reference may be followed by any characters.

*2: Mersen is recommended supplier

*3: The molded-case circuit breakers in the table are made by Schneider Electric.

*4: Install the inverter in UL type 1 or equivalent cabinet.

*5: DC reactor required.

DCL1-2550 for VFAS3J-2550P

DCL1-2750 for VFAS3J-2750P

DCL1-4900 for VFAS3J-4900PC

DCL1-4110K for VFAS3J-4110KPC

2. Compliance with EMC Directive 2014/30/EU

This additional manual includes the additional information for [9.1.1] of E6582248 to comply with EMC Directive 2014/35/EU under the condition below.

These products cannot satisfy EMI requirement alone, but they can comply with the requirement by installing with the EMC plate and filter shown in the table below. For reference not listed below, refer to [9.1.1] of E6582248.

Reference *1	EMC plate model	Applicable motor (kW) HD	Applicable motor (kW) ND	EMC Filter model *2	Conducted noise IEC61800-3 category C3	
					Carrier frequency [F300] (kHz)	Motor wiring wire length (m)
VFAS3J-2110PM	EMP104Z	11	11	FN3270H-80-35	4 / 16	5
VFAS3J-2150PM		15	15	FN3270H-80-35	4 / 16	5
VFAS3J-2185PM	EMP105Z	18.5	18.5 22	FN3270H-100-35	4 / 12	5
VFAS3J-2220PM		22	-	FN3270H-100-35	4 / 12	5
		-	30	FN3270H-200-99		
VFAS3J-2300PM	EMP107Z	30	37	FN3270H-200-99	4 / 12	5
VFAS3J-2370PM		37	45	FN3270H-200-99	4 / 12	5
VFAS3J-2450PM		45	-	FN3270H-200-99		
		-	55	FN3270H-320-99	4 / 12	5
VFAS3J-2550P *3	-	55	75	FN3270H-320-99	2.5 / 8	5
VFAS3J-2750P *3		75	-	FN3270H-320-99		
		-	90	FN3270H-400-99	2.5 / 8	5

*1: Reference may be followed by any characters.

*2: Schaffner FN3270H series are recommended.

*3: DC reactor required.

DCL1-2550 for VFAS3J-2550P

DCL1-2750 for VFAS3J-2750P