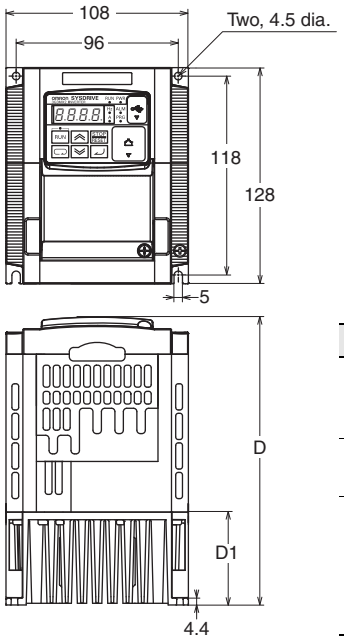
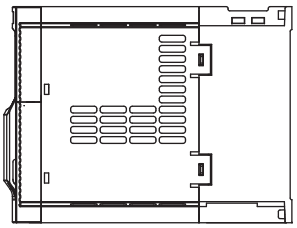
Function name			Specifications
Other option			DC reactor, AC reactor, radio noise filter, input noise filter, output noise filter, regenerative braking unit, Braking Resistor, etc.
International standard	**EC directive**	**Machinery Directives**	EN ISO 13849-1: 2008 Pld EN 61800-5-2 EN 60204-1
		EMC Directive	EN 61800-3: 2004
		Low-voltage Directive	EN 61800-5-1: 2007
	UL/cUL		UL508C

*1 Protection method complies with JEM 1030.
*2 To operate the motor at over 50/60 Hz, contact the motor manufacturer to find out the maximum allowable speed of revolution.
*3 For the stable control of the motor, the output frequency may exceed the maximum frequency set in A004 (A204) by 2 Hz max.
*4 Refer to the Drive Programming USER'S MANUAL (No. I580).

Note: 1. The applicable motor is a 3-phase standard motor. For using any other type, be sure that the rated current does not exceed that of the Inverter.
2. Output voltage decreases according to the level of the power supply voltage.
3. The braking torque at the time of capacitor feedback is an average deceleration torque at the shortest deceleration (when it stops from 50 Hz). It is not a continuous regeneration torque. Also, the average deceleration torque varies depending on the motor loss. The value is reduced in operation over 50 Hz.

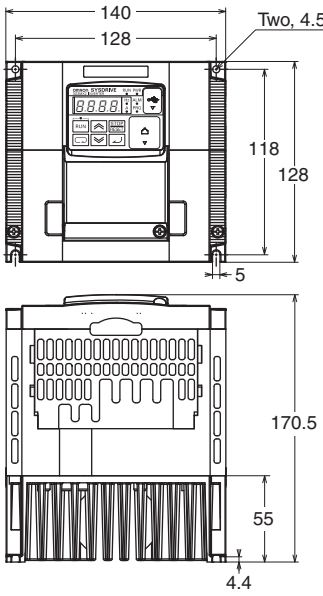
3G3MX2-AB007-V1
3G3MX2-AB015-V1
3G3MX2-AB022-V1
3G3MX2-A2015-V1
3G3MX2-A2022-V1
3G3MX2-A4004-V1
3G3MX2-A4007-V1
3G3MX2-A4015-V1
3G3MX2-A4022-V1
3G3MX2-A4030-V1

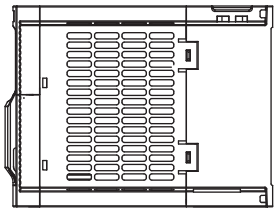




Power supply	Model	W [mm]	H [mm]	D [mm]	D1 [mm]
1-phase 200 V	3G3MX2-AB007-V1 3G3MX2-AB015-V1 3G3MX2-AB022-V1	108	128	170.5	55
3-phase 200 V	3G3MX2-A2015-V1 3G3MX2-A2022-V1				
3-phase 400 V	3G3MX2-A4004-V1			143.5	28
	3G3MX2-A4007-V1 3G3MX2-A4015-V1 3G3MX2-A4022-V1 3G3MX2-A4030-V1			170.5	55

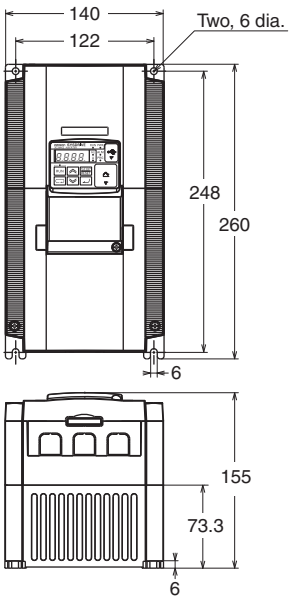
3G3MX2-A2037-V1
3G3MX2-A4040-V1

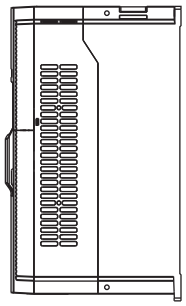




Power supply	Model	W [mm]	H [mm]	D [mm]	D1 [mm]
3-phase 200 V	3G3MX2-A2037-V1	140	128	170.5	55
3-phase 400 V	3G3MX2-A4040-V1				

3G3MX2-A2055-V1
3G3MX2-A2075-V1
3G3MX2-A4055-V1
3G3MX2-A4075-V1

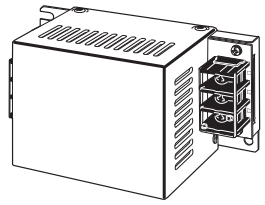




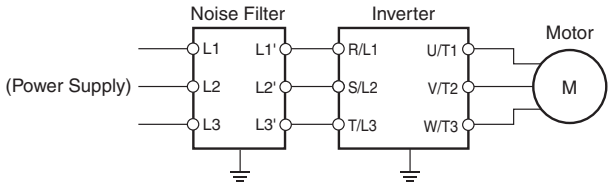
Power supply	Model	W [mm]	H [mm]	D [mm]	D1 [mm]
3-phase 200 V	3G3MX2-A2055-V1 3G3MX2-A2075-V1	140	260	155	73.3
3-phase 400 V	3G3MX2-A4055-V1 3G3MX2-A4075-V1				

Input Noise Filter 3G3AX-NFI□□

Reduces noise coming into the inverter from the power supply line and noise flowing from the inverter into the power supply line. Connect as close to the Inverter as possible.



Connection Example



Specifications

Power supply	Model	Inverter model	Rated input current In (A) at an ambient temperature of 50°C	Power loss (W)	Leakage current (mA/phase) at 60 Hz
3-phase 200 VAC	3G3AX-NFI21	3G3MX2-A2001-V1	3 × 6 A	3	< 1.5 (250 V)
	3G3AX-NFI21	3G3MX2-A2002-V1	3 × 6 A	3	< 1.5 (250 V)
	3G3AX-NFI21	3G3MX2-A2004-V1	3 × 6 A	3	< 1.5 (250 V)
	3G3AX-NFI22	3G3MX2-A2007-V1	3 × 10 A	4	< 1.5 (250 V)
	3G3AX-NFI23	3G3MX2-A2015-V1	3 × 20 A	6	< 1.5 (250 V)
	3G3AX-NFI23	3G3MX2-A2022-V1	3 × 20 A	6	< 1.5 (250 V)
	3G3AX-NFI24	3G3MX2-A2037-V1	3 × 30 A	9	< 1.5 (250 V)
	3G3AX-NFI25	3G3MX2-A2055-V1	3 × 40 A	12	< 1.5 (250 V)
	3G3AX-NFI26	3G3MX2-A2075-V1	3 × 60 A	17	< 1.5 (250 V)
	3G3AX-NFI27	3G3MX2-A2110-V1	3 × 80 A	21	< 1.5 (250 V)
	3G3AX-NFI28	3G3MX2-A2150-V1	3 × 100 A	23	< 1.5 (250 V)
1-phase 200 VAC	3G3AX-NFI21	3G3MX2-AB001-V1	3 × 6 A	3	< 1.5 (250 V)
	3G3AX-NFI21	3G3MX2-AB002-V1	3 × 6 A	3	< 1.5 (250 V)
	3G3AX-NFI22	3G3MX2-AB004-V1	3 × 10 A	4	< 1.5 (250 V)
	3G3AX-NFI23	3G3MX2-AB007-V1	3 × 20 A	6	< 1.5 (250 V)
	3G3AX-NFI24 3G3AX-NFI23*	3G3MX2-AB015-V1	3 × 30 A 3 × 20 A	9 6	< 1.5 (250 V)
	3G3AX-NFI24	3G3MX2-AB022-V1	3 × 30 A	9	< 1.5 (250 V)
3-phase 400 VAC	3G3AX-NFI41	3G3MX2-A4004-V1	3 × 7 A	2	< 7.5 (480 V)
	3G3AX-NFI41	3G3MX2-A4007-V1	3 × 7 A	2	< 7.5 (480 V)
	3G3AX-NFI41	3G3MX2-A4015-V1	3 × 7 A	2	< 7.5 (480 V)
	3G3AX-NFI42	3G3MX2-A4022-V1	3 × 10 A	4	< 7.5 (480 V)
	3G3AX-NFI42	3G3MX2-A4030-V1	3 × 10 A	4	< 7.5 (480 V)
	3G3AX-NFI43	3G3MX2-A4040-V1	3 × 20 A	6	< 7.5 (480 V)
	3G3AX-NFI43	3G3MX2-A4055-V1	3 × 20 A	6	< 7.5 (480 V)
	3G3AX-NFI44	3G3MX2-A4075-V1	3 × 30 A	9	< 7.5 (480 V)
	3G3AX-NFI45	3G3MX2-A4110-V1	3 × 40 A	12	< 7.5 (480 V)
	3G3AX-NFI46	3G3MX2-A4150-V1	3 × 50 A	15	< 7.5 (480 V)

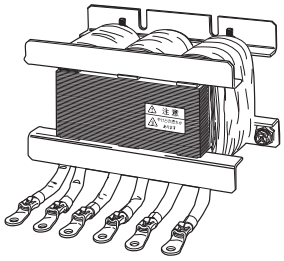
* With the 3G3AX-NFI23, only the CT rating is supported.

Model	Case enclosure rating	Terminal size	Wire dia.	Weight (kg)
3G3AX-NFI21	Plastic, IP00	M4	1.25 mm^2	0.5
3G3AX-NFI22	Plastic, IP00	M4	2 mm^2	0.6
3G3AX-NFI23	Plastic, IP00	M4	2 mm^2, 3.5 mm^2	0.7
3G3AX-NFI24	Plastic, IP00	M4	5.5 mm^2	0.8
3G3AX-NFI25	Plastic, IP00	M5	8 mm^2	1.4
3G3AX-NFI26	Plastic, IP00	M5	14 mm^2	1.8
3G3AX-NFI27	Metal, IP00	M6	22 mm^2	3.6
3G3AX-NFI28	Metal, IP00	M8	30 mm^2	4.6
3G3AX-NFI41	Plastic, IP00	M4	1.25 mm^2, 2 mm^2	0.7
3G3AX-NFI42	Plastic, IP00	M4	2 mm^2	0.7
3G3AX-NFI43	Plastic, IP00	M4	2 mm^2, 3.5 mm^2	0.7
3G3AX-NFI44	Plastic, IP00	M4	5.5 mm^2	0.8
3G3AX-NFI45	Plastic, IP00	M5	8 mm^2	1.4
3G3AX-NFI46	Plastic, IP00	M5	14 mm^2	1.6

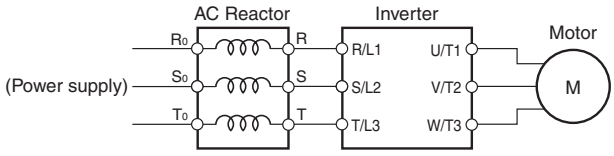
Note: Select options by the maximum applicable motor capacity of heavy and light load rating.

AC Reactor 3G3AX-AL□□□□

Connect the AC Reactor if the capacity of the power supply is much larger than that of the Inverter or the power factor is required to be improved.



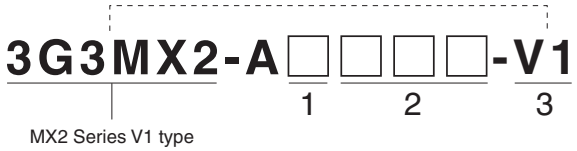
Connection Example



Specifications

Inverter						AC reactor specifications				
Voltage class	Max. applicable motor capacity (kW)	Model	Heavy load: CT, Light load: VT mode	Max. applicable motor capacity (kW)	Rated input current (A)	Model	Inductance (mH)	Heat generation (W)	Operating ambient temperature/ humidity	Location
3-phase 200-V class	0.1	3G3MX2-A2001-V1	Heavy load	0.1	1.0	3G3AX-AL2025	2.8	12	–10 to 50°C 20% to 90%	At an altitude of 1,000 m max.; indoors (without corrosive gases or dust)
			Light load	0.2	1.2					
	0.2	3G3MX2-A2002-V1	Heavy load	0.2	1.6					
			Light load	0.4	1.9					
	0.4	3G3MX2-A2004-V1	Heavy load	0.4	3.3					
			Light load	0.75	3.9					
	0.75	3G3MX2-A2007-V1	Heavy load	0.75	6.0					
			Light load	1.1	7.2					
	1.5	3G3MX2-A2015-V1	Heavy load	1.5	9.0					
			Light load	2.2	10.8	3G3AX-AL2055	0.88	25		
	2.2	3G3MX2-A2022-V1	Heavy load	2.2	12.7					
			Light load	3.0	13.9					
	3.7	3G3MX2-A2037-V1	Heavy load	3.7	20.5	3G3AX-AL2110	0.35	50		
			Light load	5.5	23.0					
	5.5	3G3MX2-A2055-V1	Heavy load	5.5	30.8					
			Light load	7.5	37.0					
	7.5	3G3MX2-A2075-V1	Heavy load	7.5	39.6	3G3AX-AL2220	0.18	50		
			Light load	11	48.0					
	11	3G3MX2-A2110-V1	Heavy load	11	57.1					
			Light load	15	68.0					
	15	3G3MX2-A2150-V1	Heavy load	15	62.6					
			Light load	18.5	72.0	3G3AX-AL2330	0.09	85		
Single-phase 200-V Class	0.1	3G3MX2-AB001-V1	Heavy load	0.1	1.3	3G3AX-AL2025	2.8	12	–10 to 50°C 20% to 90%	At an altitude of 1,000 m max.; indoors (without corrosive gases or dust)
			Light load	0.2	2.0					
	0.2	3G3MX2-AB002-V1	Heavy load	0.2	3.0					
			Light load	0.4	3.6					
	0.4	3G3MX2-AB004-V1	Heavy load	0.4	6.3					
			Light load	0.55	7.3					
	0.75	3G3MX2-AB007-V1	Heavy load	0.75	11.5	3G3AX-AL2055	0.88	25		
			Light load	1.1	13.8					
	1.5	3G3MX2-AB015-V1	Heavy load	1.5	16.8					
			Light load	2.2	20.2	3G3AX-AL2110	0.35	50		
	2.2	3G3MX2-AB022-V1	Heavy load	2.2	22.0					
			Light load	3.0	24.0					
3-phase 400-V class	0.4	3G3MX2-A4004-V1	Heavy load	0.4	1.8	3G3AX-AL4025	7.7	12	–10 to 50°C 20% to 90%	At an altitude of 1,000 m max.; indoors (without corrosive gases or dust)
			Light load	0.75	2.1					
	0.75	3G3MX2-A4007-V1	Heavy load	0.75	3.6					
			Light load	1.5	4.3					
	1.5	3G3MX2-A4015-V1	Heavy load	1.5	5.2					
			Light load	2.2	5.9					
	2.2	3G3MX2-A4022-V1	Heavy load	2.2	6.5	3G3AX-AL4055	3.5	25		
			Light load	3.0	8.1					
	3.0	3G3MX2-A4030-V1	Heavy load	3.0	7.7					
			Light load	4.0	9.4					
	4.0	3G3MX2-A4040-V1	Heavy load	4.0	11.0	3G3AX-AL4110	1.3	50		
			Light load	5.5	13.3					
	5.5	3G3MX2-A4055-V1	Heavy load	5.5	16.9					
			Light load	7.5	20.0					
	7.5	3G3MX2-A4075-V1	Heavy load	7.5	18.8					
			Light load	11	24.0	3G3AX-AL4220	0.74	60		
	11	3G3MX2-A4110-V1	Heavy load	11	29.4					
			Light load	15	38.0	3G3AX-AL4330	0.36	90		
	15	3G3MX2-A4150-V1	Heavy load	15	35.9					
			Light load	18.5	44.0					

Interpreting Model Numbers



1) Voltage class

B	1-phase 200 VAC (200-V class)
2	3-phase 200 VAC (200-V class)
4	3-phase 400 VAC (400-V class)

2) Max. applicable motor capacity (CT)

001	0.1 kW
002	0.2 kW
004	0.4 kW
007	0.75 kW
015	1.5 kW
022	2.2 kW
030	3.0 kW
037	3.7 kW
040	4.0 kW
055	5.5 kW
075	7.5 kW
110	11 kW
150	15 kW

3) Area

-V1	Japan and areas other than China and Europe
-ZV1	China
-E	Europe

Ordering Information

3G3MX2 Inverter Models

Note: Inverters with model numbers ending in "-V1" are designed to be used in areas other than China and Europe. Refer to the above "Interpreting Model Numbers" for the model numbers for China and Europe.

Rated voltage	Enclosure ratings	Max. applicable motor capacity		Model
		CT: Heavy load	VT: Light load	
3-phase 200 VAC	IP20	0.1kW	0.2 kW	**3G3MX2-A2001-V1**
		0.2 kW	0.4 kW	**3G3MX2-A2002-V1**
		0.4 kW	0.75 kW	**3G3MX2-A2004-V1**
		0.75 kW	1.1 kW	**3G3MX2-A2007-V1**
		1.5 kW	2.2 kW	**3G3MX2-A2015-V1**
		2.2 kW	3.0 kW	**3G3MX2-A2022-V1**
		3.7 kW	5.5 kW	**3G3MX2-A2037-V1**
		5.5 kW	7.5 kW	**3G3MX2-A2055-V1**
		7.5 kW	11 kW	**3G3MX2-A2075-V1**
		11 kW	15 kW	**3G3MX2-A2110-V1**
		15 kW	18.5 kW	**3G3MX2-A2150-V1**
3-phase 400 VAC	IP20	0.4 kW	0.75 kW	**3G3MX2-A4004-V1**
		0.75 kW	1.5 kW	**3G3MX2-A4007-V1**
		1.5 kW	2.2 kW	**3G3MX2-A4015-V1**
		2.2 kW	3.0 kW	**3G3MX2-A4022-V1**
		3.0 kW	4.0 kW	**3G3MX2-A4030-V1**
		4.0 kW	5.5 kW	**3G3MX2-A4040-V1**
		5.5 kW	7.5 kW	**3G3MX2-A4055-V1**
		7.5 kW	11 kW	**3G3MX2-A4075-V1**
		11 kW	15 kW	**3G3MX2-A4110-V1**
		15 kW	18.5 kW	**3G3MX2-A4150-V1**
1-phase 200 VAC	IP20	0.1 kW	0.2 kW	**3G3MX2-AB001-V1**
		0.2 kW	0.4 kW	**3G3MX2-AB002-V1**
		0.4 kW	0.55 kW	**3G3MX2-AB004-V1**
		0.75 kW	1.1 kW	**3G3MX2-AB007-V1**
		1.5 kW	2.2 kW	**3G3MX2-AB015-V1**
		2.2 kW	3.0 kW	**3G3MX2-AB022-V1**

Communication Unit

Name	Model
EtherCAT Communication Unit	**3G3AX-MX2-ECT**
CompoNet Communication Unit	**3G3AX-MX2-CRT-E**
DeviceNet Communication Unit	**3G3AX-MX2-DRT-E**

Related Options

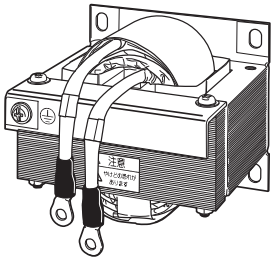
Name	Specifications		Model
Regenerative Braking Units	3-phase 200 VAC	General purpose with Braking resistor	**3G3AX-RBU21**
		High Regeneration purpose with Braking resistor	**3G3AX-RBU22**
	3-phase 400 VAC	General purpose with Braking resistor	**3G3AX-RBU41**
Braking Resistor	Compact type	Resistor 120 W, 180 Ω	**3G3AX-RBA1201**
		Resistor 120 W, 100 Ω	**3G3AX-RBA1202**
		Resistor 120 W, 5 Ω	**3G3AX-RBA1203**
		Resistor 120 W, 35 Ω	**3G3AX-RBA1204**
	Standard type	Resistor 200 W, 180 Ω	**3G3AX-RBB2001**
		Resistor 200 W, 100 Ω	**3G3AX-RBB2002**
		Resistor 300 W, 50 Ω	**3G3AX-RBB3001**
		Resistor 400 W, 35 Ω	**3G3AX-RBB4001**
	Medium capacity type	Resistor 400 W, 50 Ω	**3G3AX-RBC4001**
		Resistor 600 W, 35 Ω	**3G3AX-RBC6001**
		Resistor 1200 W, 17 Ω	**3G3AX-RBC12001**

Regenerative Braking Unit and Braking Resistor Combination

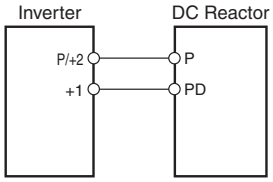
Inverter			Usage conditions		Regenerative braking unit		Braking resistor		Connection configuration	Restrictions	
Voltage	Max.applicable motor capacity (kW)	Model	%ED *1 [%]	Approximate braking torque [% *2]	Model	Number of units	Model	Number of units		Allowable continuous braking time(s)	Min. connectable resistance [Ω]
200-V Class	0.1	3G3MX2-A2001-V1 3G3MX2-AB001-V1	3.0%	220%	Built-in Inverter		3G3AX-RBA1201	1	1	20	100
			10.0%	220%			3G3AX-RBB2001	1	1	30	100
	0.2	3G3MX2-A2002-V1 3G3MX2-AB002-V1	3.0%	220%	Built-in Inverter		3G3AX-RBA1201	1	1	20	100
			10.0%	220%			3G3AX-RBB2001	1	1	30	100
	0.4	3G3MX2-A2004-V1 3G3MX2-AB004-V1	3.0%	220%	Built-in Inverter		3G3AX-RBA1201	1	1	20	100
			10.0%	220%			3G3AX-RBB2001	1	1	30	100
	0.75	3G3MX2-A2007-V1 3G3MX2-AB007-V1	3.0%	120%	Built-in Inverter		3G3AX-RBA1201	1	1	20	50
			10.0%	120%			3G3AX-RBB2001	1	1	30	50
	1.5	3G3MX2-A2015-V1 3G3MX2-AB015-V1	2.5%	110%	Built-in Inverter		3G3AX-RBA1202	1	1	12	50
			10.0%	215%			3G3AX-RBC4001	1	1	10	50
	2.2	3G3MX2-A2022-V1 3G3MX2-AB022-V1	3.0%	150%	Built-in Inverter		3G3AX-RBB3001	1	1	30	35
			10.0%	150%			3G3AX-RBC4001	1	1	10	35
	3.7	3G3MX2-A2037-V1	3.0%	125%	Built-in Inverter		3G3AX-RBB4001	1	1	20	35
			10.0%	125%			3G3AX-RBC6001	1	1	10	35
	5.5	3G3MX2-A2055-V1	3.0%	120%	Built-in Inverter		3G3AX-RBB3001	2	2	30	20
			10.0%	120%			3G3AX-RBC4001	2	2	10	20
	7.5	3G3MX2-A2075-V1	3.0%	125%	Built-in Inverter		3G3AX-RBB4001	2	2	20	17
			10.0%	125%			3G3AX-RBC6001	2	2	10	17
	11	3G3MX2-A2110-V1	3.0%	90%	Built-in Inverter		3G3AX-RBC12001	1	1	10	17
			10.0%	90%			3G3AX-RBC12001	1	1	10	17
			10.0%	125%	3G3AX-RBU23 *3	1	3G3AX-RBC6001	3	14	10	4
	15	3G3MX2-A2150-V1	3.0%	110%	Built-in Inverter		3G3AX-RBB3001	5	7	30	10
			10.0%	110%			3G3AX-RBC4001	5	7	10	10

DC Reactor 3G3AX-DL□□□□

Used to suppress harmonic current generated from the Inverter.
Suppresses harmonic current better than the AC Reactor and can be used with the AC Reactor.



Connection Example



Specifications

Inverter						DC reactor specifications				
Voltage class	Max. applicable motor capacity (kW)	Model	Heavy load: CT, Light load: VT mode	Max. applicable motor capacity (kW)	Rated input current (A)	Model	Inductance (mH)	Heat generation (W)	Operating ambient temperature/ humidity	Location
3-phase 200-V class	0.1	3G3MX2-A2001-V1	Heavy load *	0.1	1.0	3G3AX-DL2002	21.4	8	−10 to 50°C 20% to 90%	At an altitude of 1,000 m max.; indoors (without corrosive gases or dust)
			Light load	0.2	1.2					
	0.2	3G3MX2-A2002-V1	Heavy load *	0.2	1.6					
			Light load	0.4	1.9	3G3AX-DL2004	10.7			
	0.4	3G3MX2-A2004-V1	Heavy load *	0.4	3.3					
			Light load	0.75	3.9	3G3AX-DL2007	6.75	10		
	0.75	3G3MX2-A2007-V1	Heavy load *	0.75	6.0					
			Light load	1.1	7.2	3G3AX-DL2015	3.51			
	1.5	3G3MX2-A2015-V1	Heavy load *	1.5	9.0					
			Light load	2.2	10.8	3G3AX-DL2022	2.51	13		
	2.2	3G3MX2-A2022-V1	Heavy load *	2.2	12.7					
			Light load	3.0	13.9	3G3AX-DL2037	1.60	20		
	3.7	3G3MX2-A2037-V1	Heavy load *	3.7	20.5					
			Light load	5.5	23.0	3G3AX-DL2055	1.11	26		
	5.5	3G3MX2-A2055-V1	Heavy load *	5.5	30.8	3G3AX-DL2075	0.84	36		
			Light load	7.5	37.0					
	7.5	3G3MX2-A2075-V1	Heavy load *	7.5	39.6					
			Light load	11	48.0	3G3AX-DL2110	0.59	52		
	11	3G3MX2-A2110-V1	Heavy load *	11	57.1					
			Light load	15	68.0	3G3AX-DL2150	0.44	60		
	15	3G3MX2-A2150-V1	Heavy load *	15	62.6					
			Light load	18.5	72.0	3G3AX-DL2220	0.30	63		
Single-phase 200-V Class	0.1	3G3MX2-AB001-V1	Heavy load *	0.1	1.3	3G3AX-DL2002	21.4	8	−10 to 50°C 20% to 90%	At an altitude of 1,000 m max.; indoors (without corrosive gases or dust)
			Light load	0.2	2.0					
	0.2	3G3MX2-AB002-V1	Heavy load *	0.2	3.0					
			Light load	0.4	3.6	3G3AX-DL2004	10.7			
	0.4	3G3MX2-AB004-V1	Heavy load *	0.4	6.3					
			Light load	0.55	7.3	3G3AX-DL2007	6.75	10		
	0.75	3G3MX2-AB007-V1	Heavy load *	0.75	11.5					
			Light load	1.1	13.8	3G3AX-DL2015	3.51			
	1.5	3G3MX2-AB015-V1	Heavy load *	1.5	16.8					
			Light load	2.2	20.2	3G3AX-DL2022	2.51	13		
	2.2	3G3MX2-AB022-V1	Heavy load *	2.2	22.0					
			Light load	3.0	24.0	3G3AX-DL2037	1.60	20		