

Existing Product	Recommended Replacement
 Variable Speed Drivers 3G3MX2-[-]-E CHN	Variable Speed Drivers 3G3MX2-[-]-EV2 (Will be released in July, 2023.)

[Final order entry date]
The end of January, 2023

[Date of The Last Shipping]
The end of August, 2023

[Scheduled date of maintenance close]
The end of March, 2031

[Caution on recommended replacement]

1. The depth dimension increases by 10mm when the EtherCAT communication unit is connected.
2. Safety input terminals are newly added.
3. The output frequency range is extended to 0.01 to 590Hz.
4. 3G3MX2-[-]-EV2 can be operated with jog dial.
5. 3G3MX2-[-]-EV2 has increased the number of digits of data display from 4digits of 3G3MX2-[-]-E to 5digits.
6. Several parameters are changed or added.

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
3G3MX2-[-]-EV2	**	*	*	**	**	*	--

** : Compatible

* : The change is a little/Almost compatible

-- : Not compatible

- : No corresponding specification

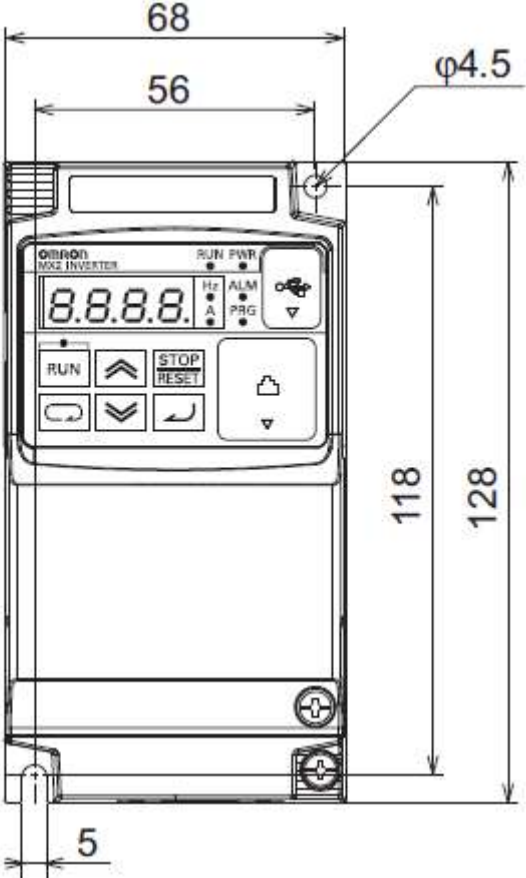
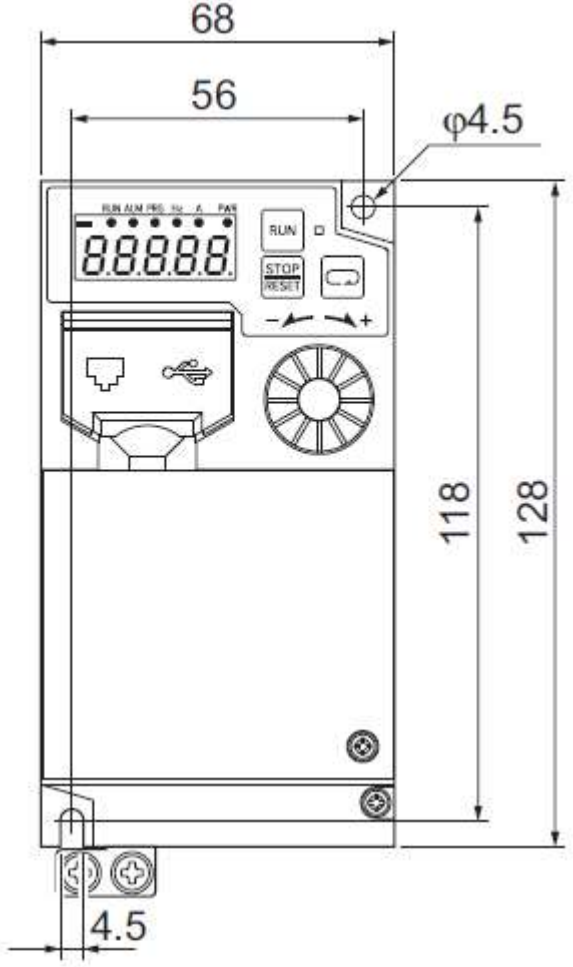
[Existing Product and recommended replacement]

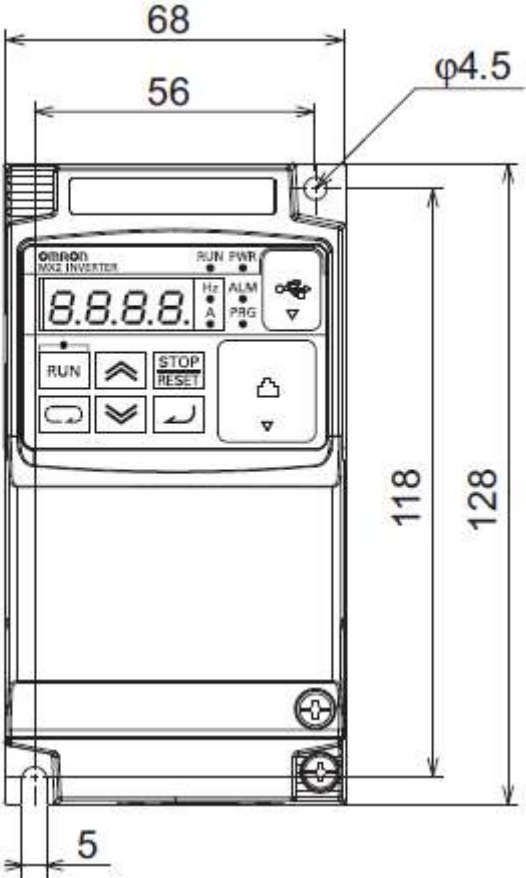
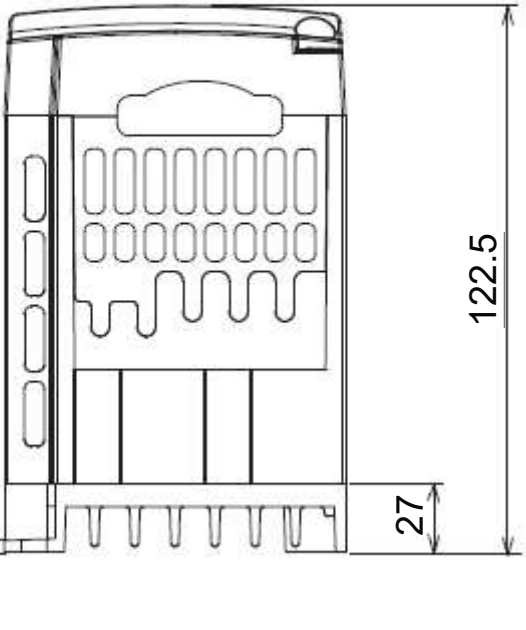
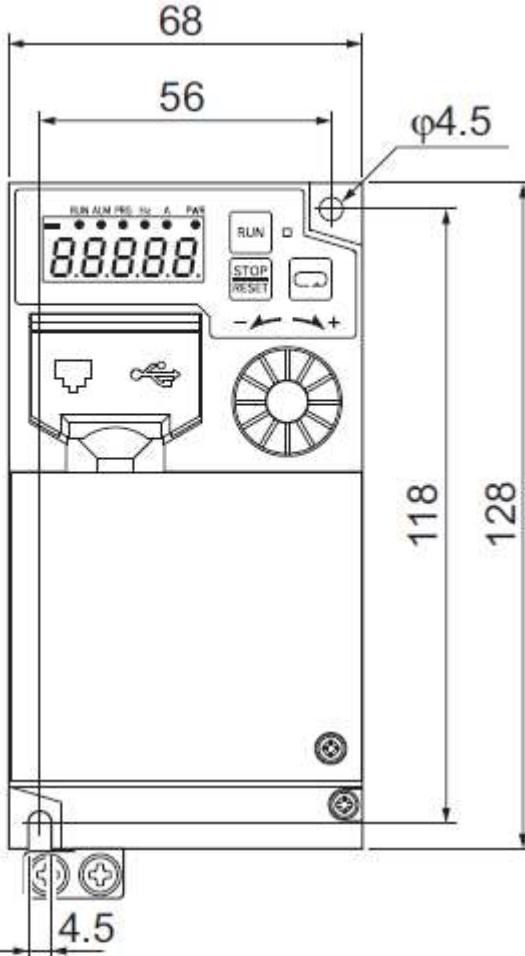
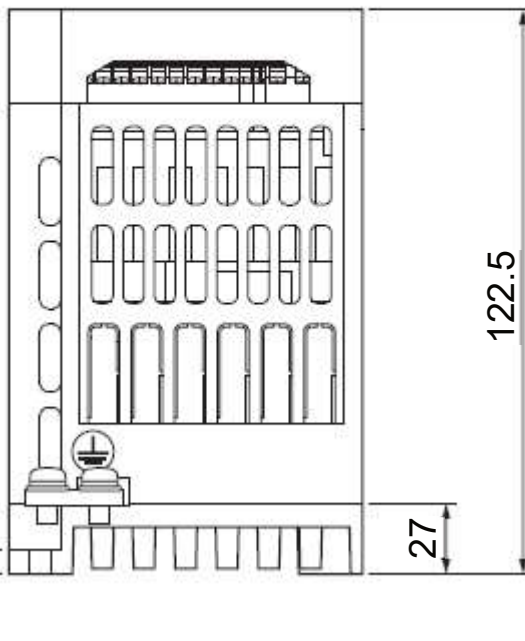
Existing Product	Recommended replacement
3G3MX2-A2001-E CHN	3G3MX2-A2001-EV2
3G3MX2-A2002-E CHN	3G3MX2-A2002-EV2
3G3MX2-A2004-E CHN	3G3MX2-A2004-EV2
3G3MX2-A2007-E CHN	3G3MX2-A2007-EV2
3G3MX2-A2015-E CHN	3G3MX2-A2015-EV2
3G3MX2-A2022-E CHN	3G3MX2-A2022-EV2
3G3MX2-A2037-E CHN	3G3MX2-A2037-EV2
3G3MX2-A2055-E CHN	3G3MX2-A2055-EV2
3G3MX2-A2075-E CHN	3G3MX2-A2075-EV2
3G3MX2-A2110-E CHN	3G3MX2-A2110-EV2
3G3MX2-A2150-E CHN	3G3MX2-A2150-EV2
3G3MX2-A4004-E CHN	3G3MX2-A4004-EV2
3G3MX2-A4007-E CHN	3G3MX2-A4007-EV2
3G3MX2-A4015-E CHN	3G3MX2-A4015-EV2
3G3MX2-A4022-E CHN	3G3MX2-A4022-EV2
3G3MX2-A4030-E CHN	3G3MX2-A4030-EV2
3G3MX2-A4040-E CHN	3G3MX2-A4040-EV2
3G3MX2-A4055-E CHN	3G3MX2-A4055-EV2
3G3MX2-A4075-E CHN	3G3MX2-A4075-EV2
3G3MX2-A4110-E CHN	3G3MX2-A4110-EV2
3G3MX2-A4150-E CHN	3G3MX2-A4150-EV2
3G3MX2-AB001-E CHN	3G3MX2-AB001-EV2
3G3MX2-AB002-E CHN	3G3MX2-AB002-EV2
3G3MX2-AB004-E CHN	3G3MX2-AB004-EV2
3G3MX2-AB007-E CHN	3G3MX2-AB007-EV2
3G3MX2-AB015-E CHN	3G3MX2-AB015-EV2
3G3MX2-AB022-E CHN	3G3MX2-AB022-EV2

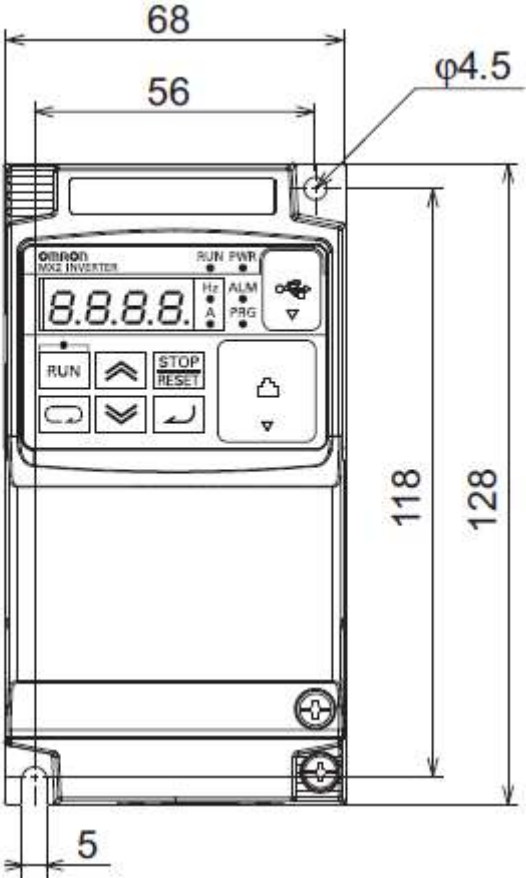
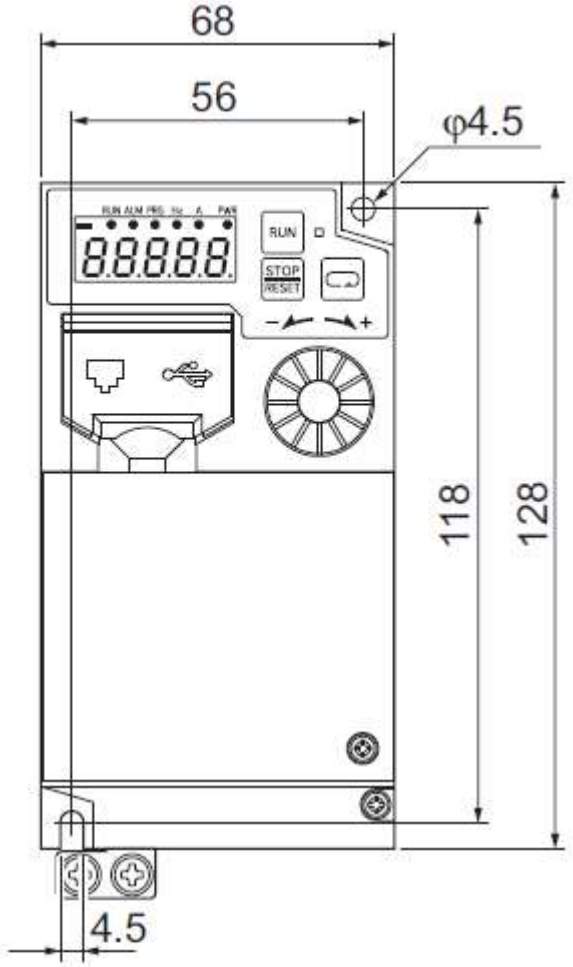
[Body color]

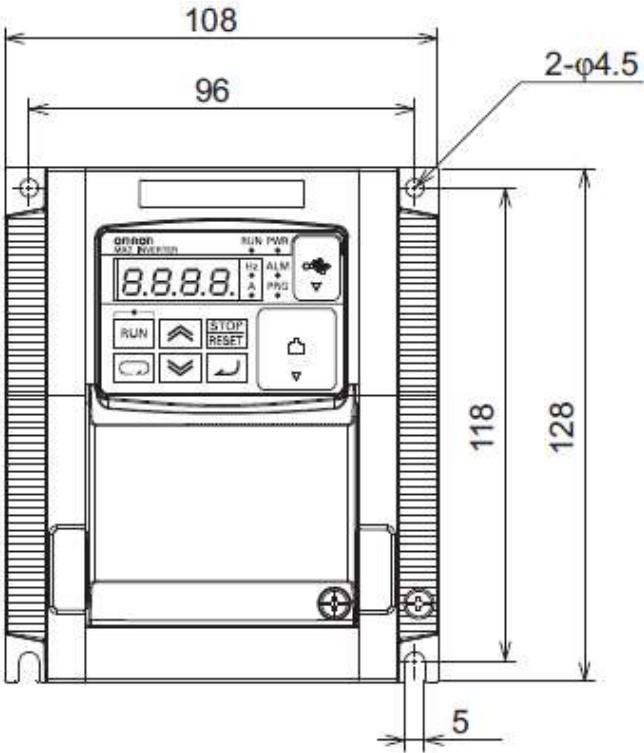
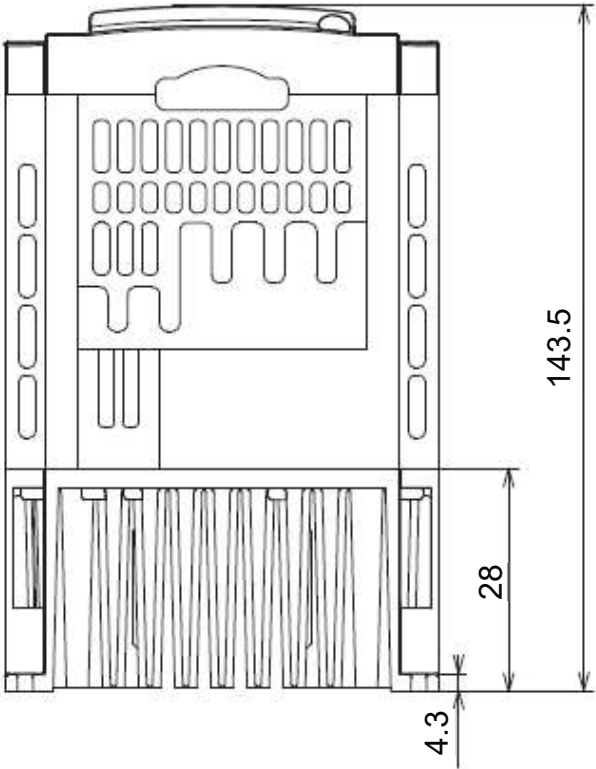
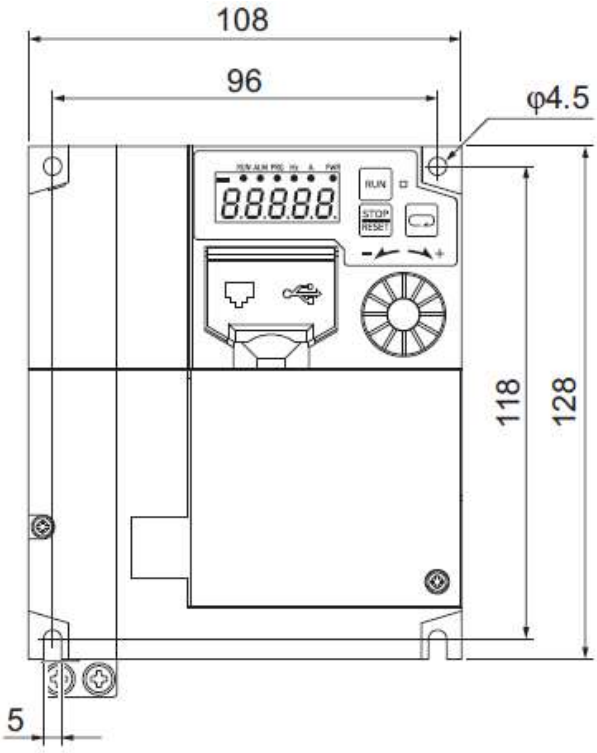
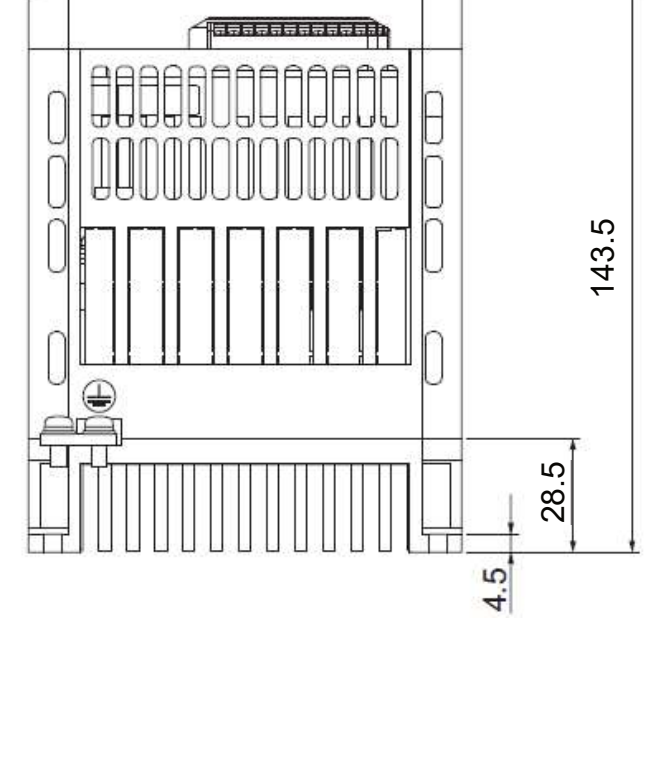
Existing Product 3G3MX2-[]-E CHN	Recommendable replacement 3G3MX2-[]-EV2
3G3MX2-[]-E CHN Black	3G3MX2-[]-EV2 Black

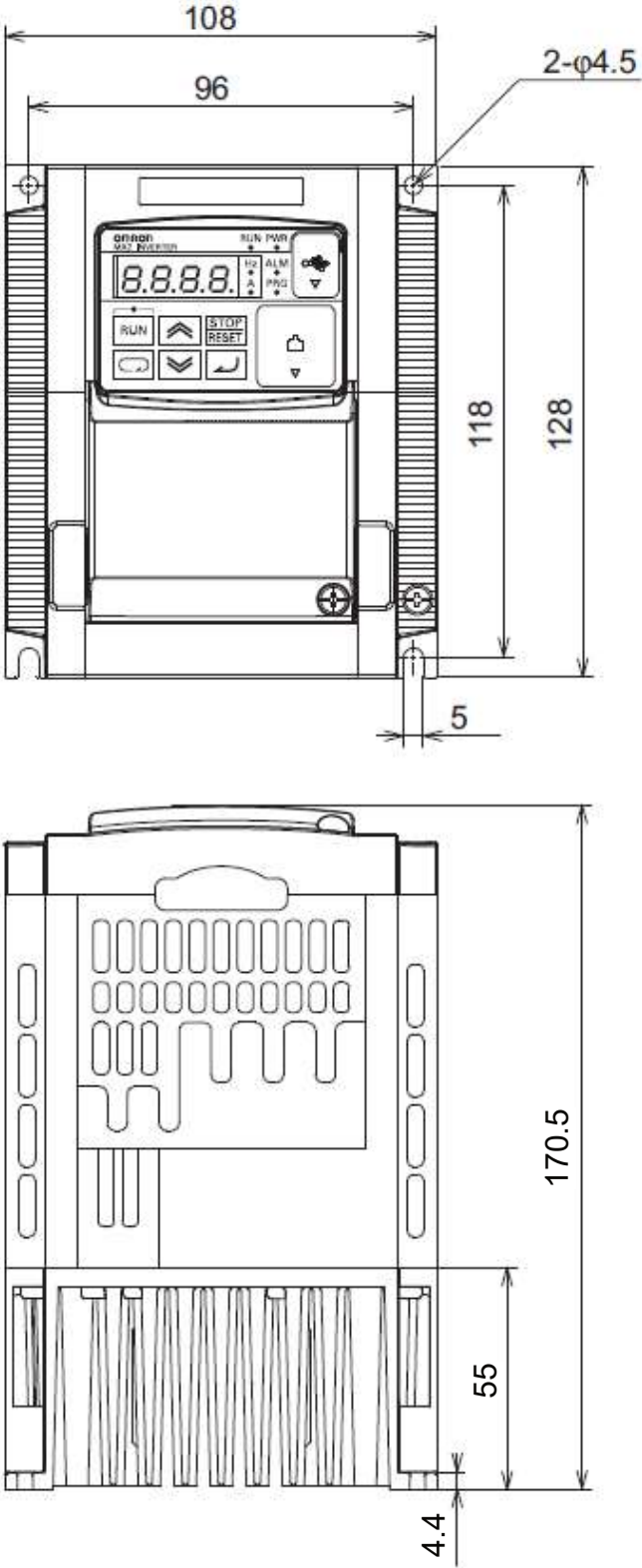
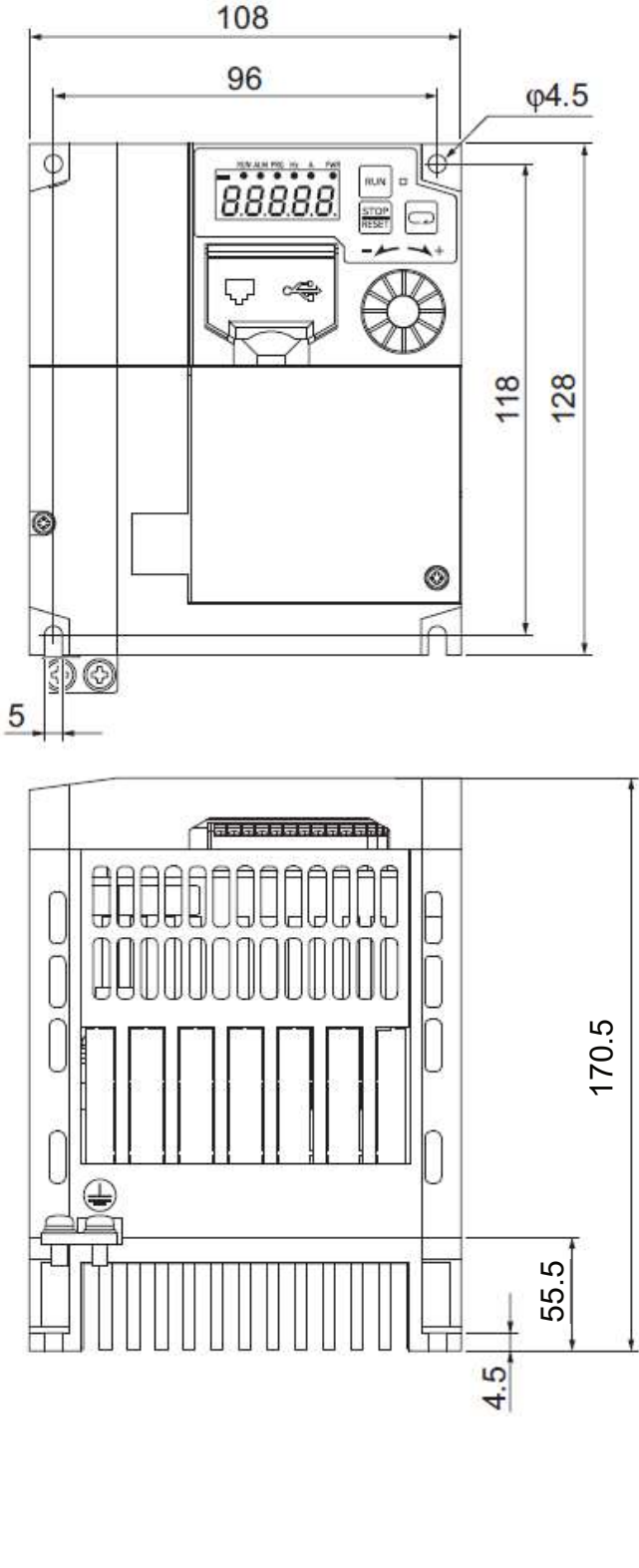
[Dimensions & Mounting dimensions]

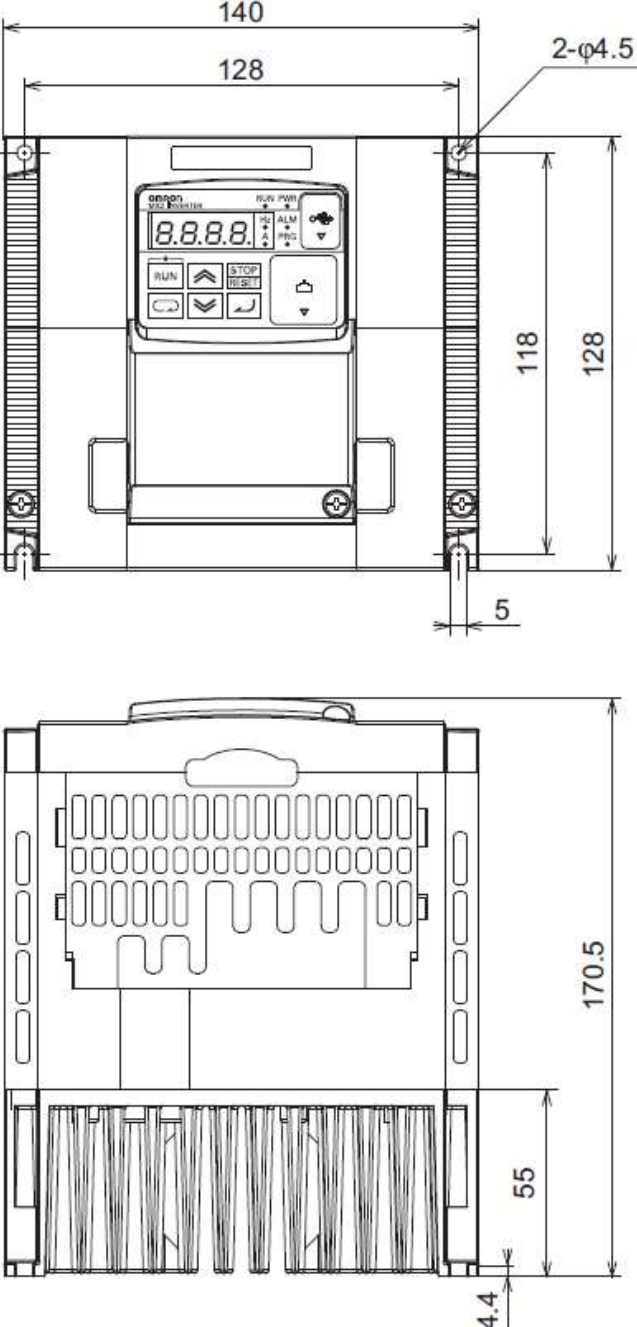
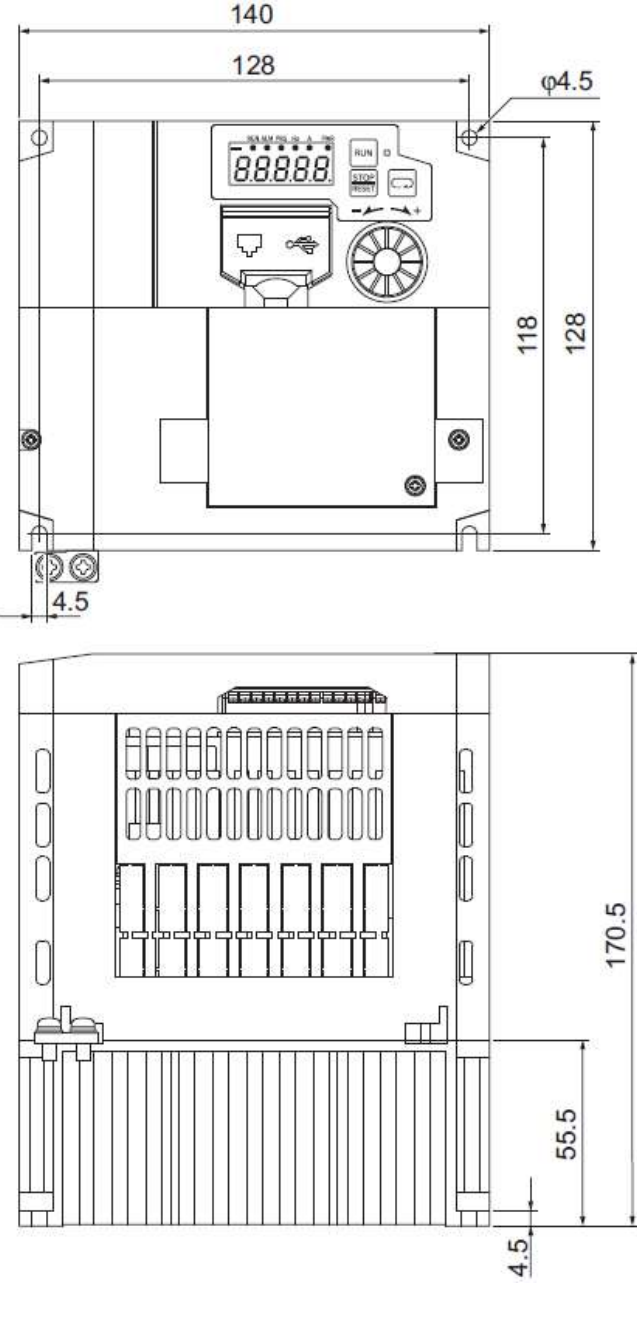
Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2001/A2002/AB001/AB002 	3G3MX2-[-EV2 A2001/A2002/AB001/AB002 

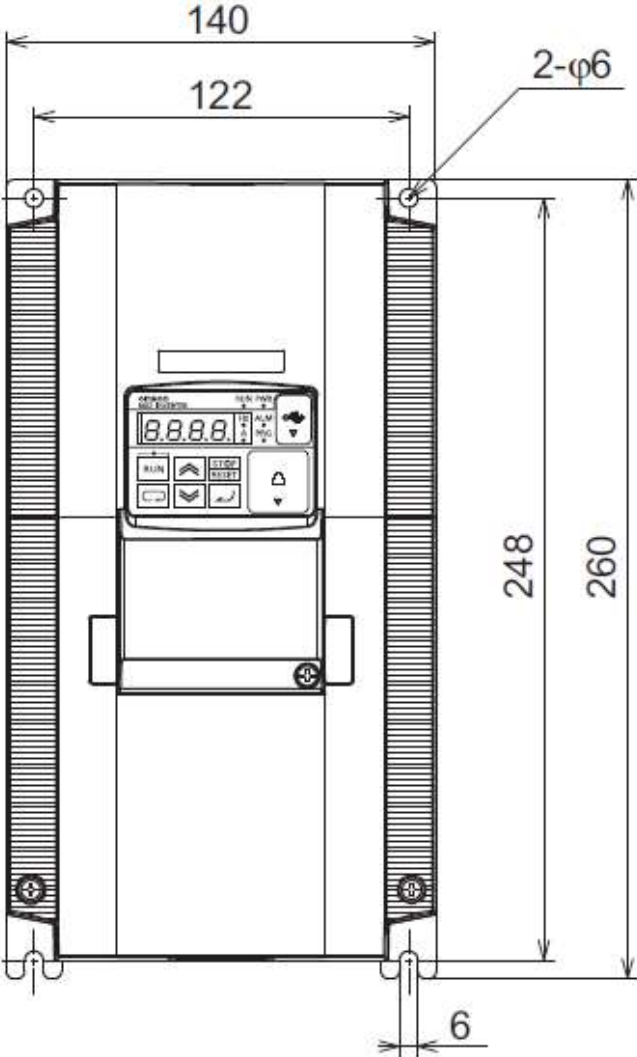
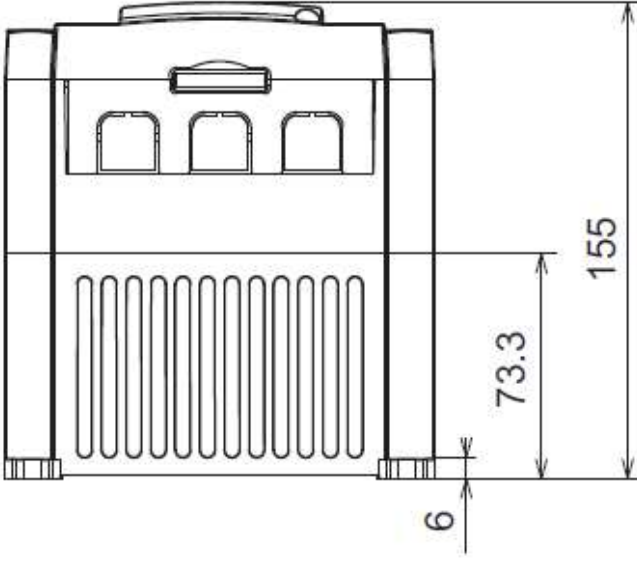
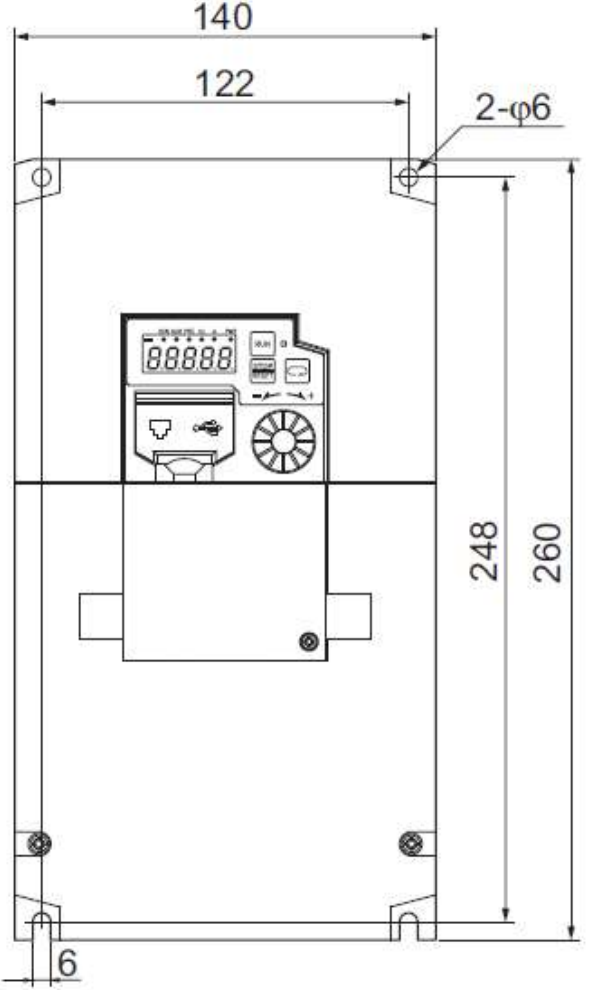
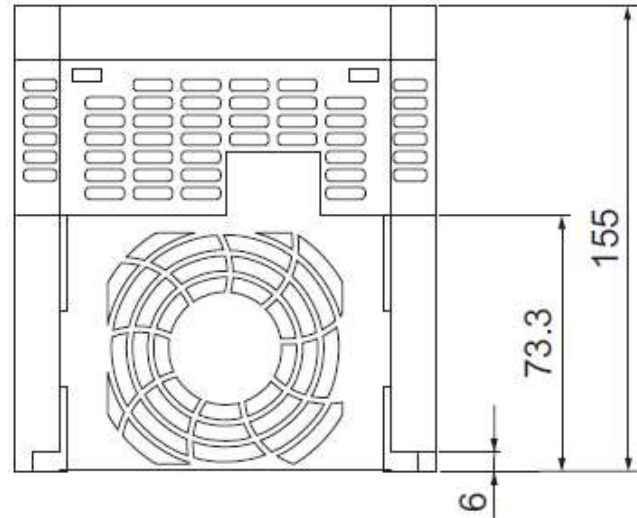
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3G3MX2-[-E CHN A2004/AB004  	3G3MX2-[-EV2 A2004/AB004  

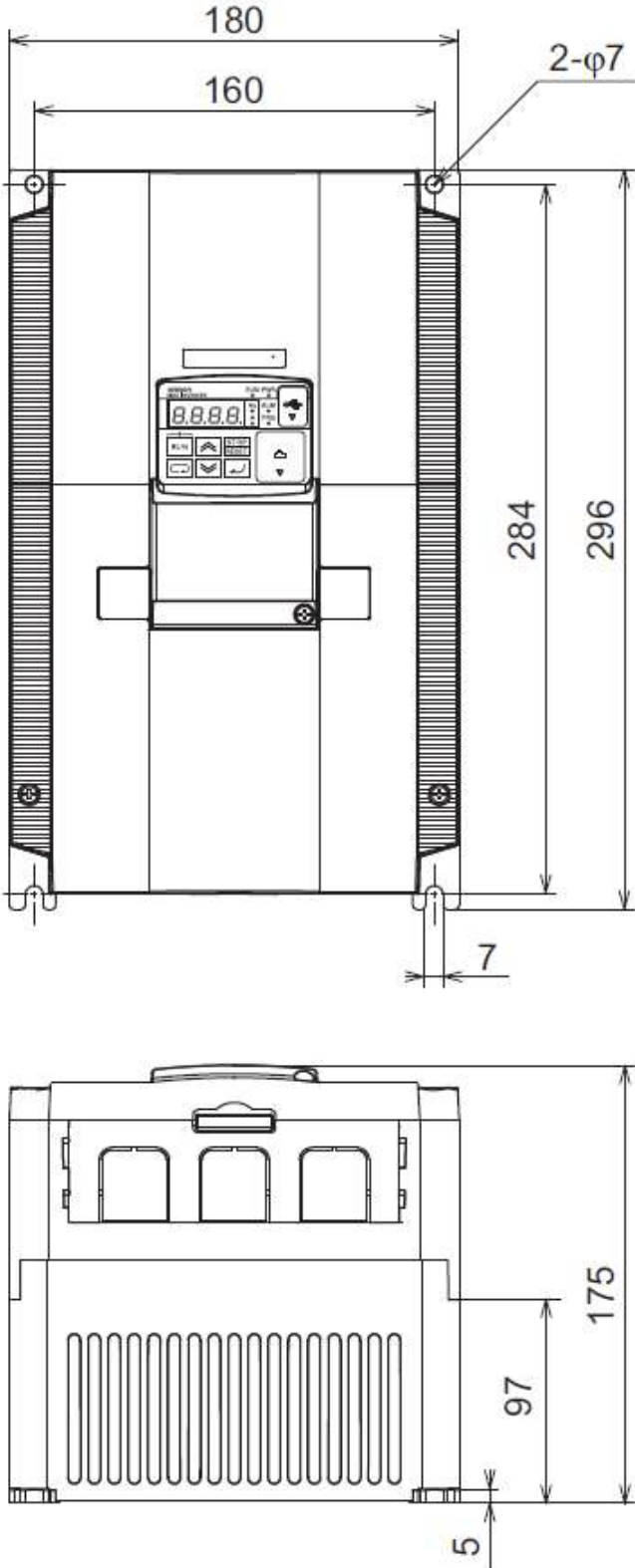
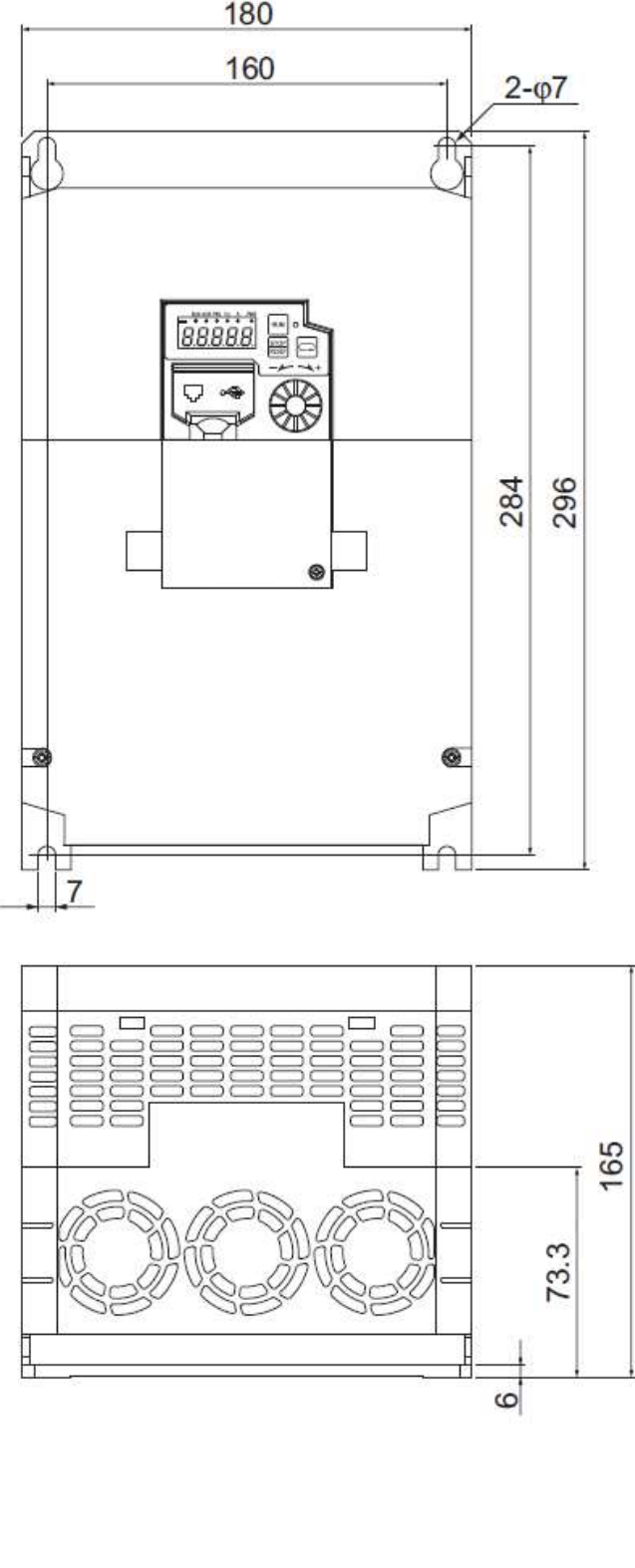
Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2007 	3G3MX2-[-EV2 A2007 

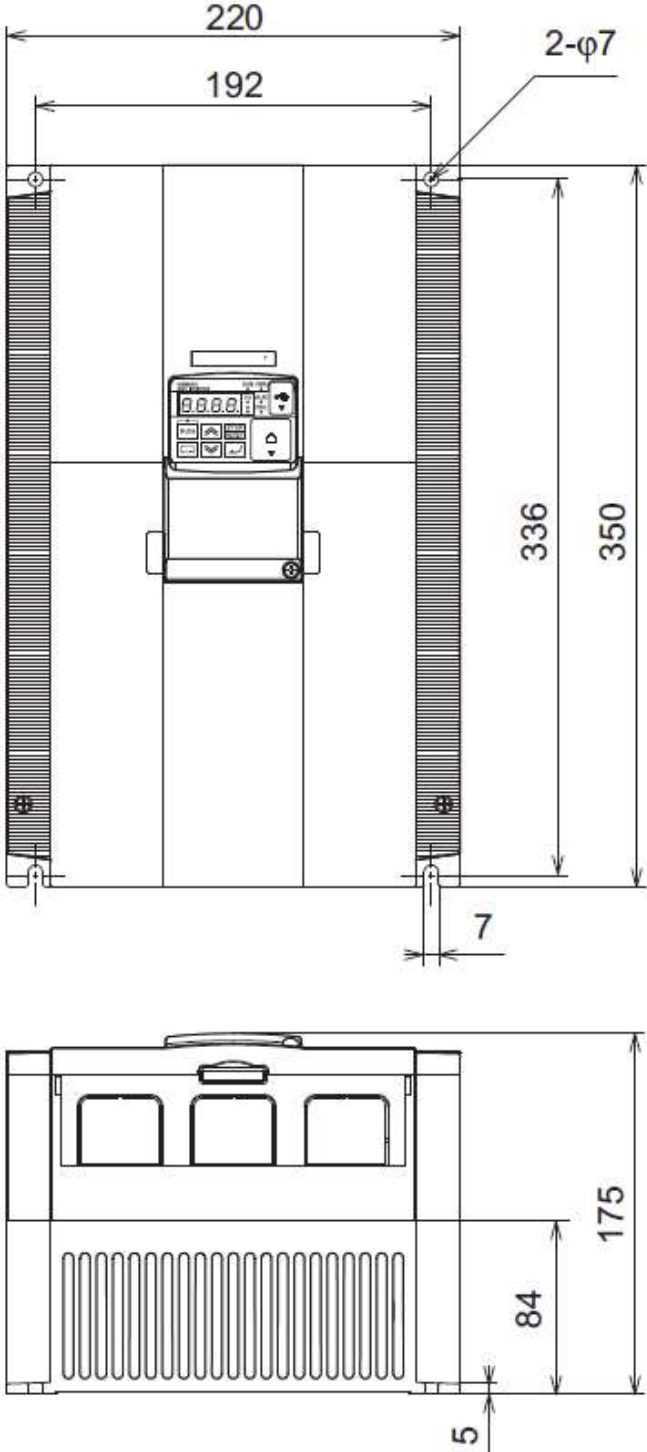
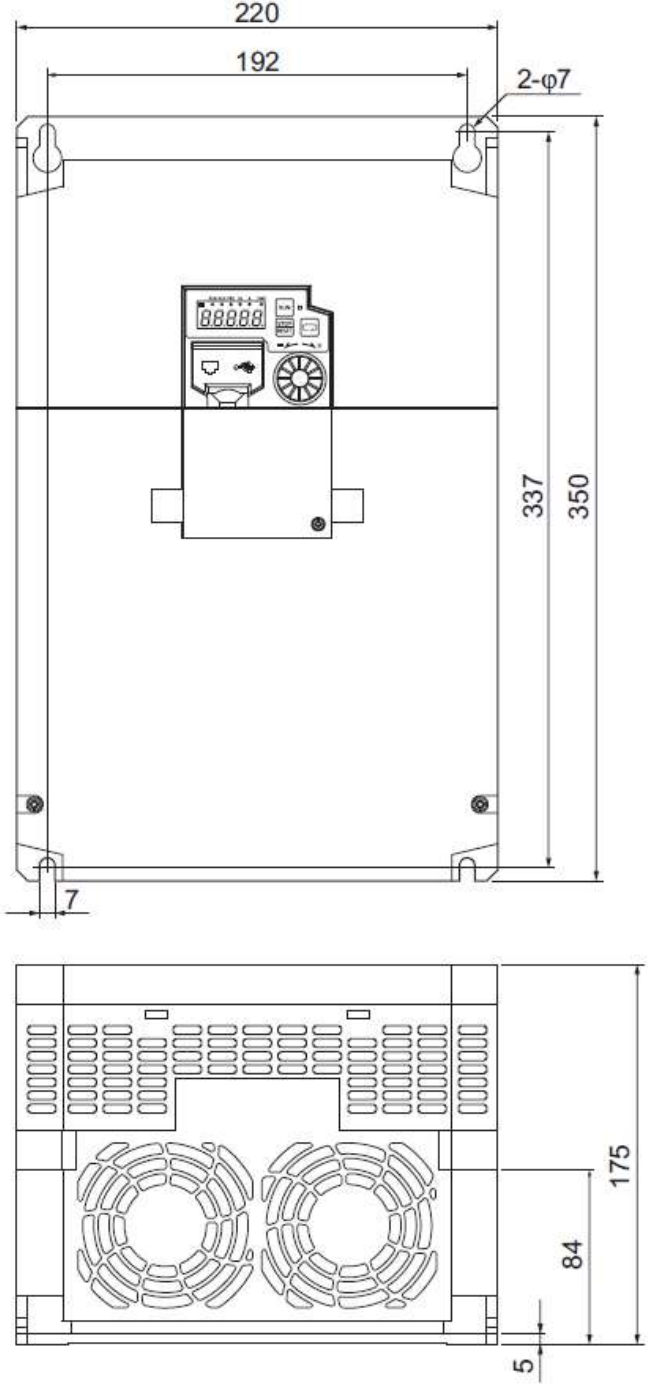
Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A4004  	3G3MX2-[-EV2 A4004  

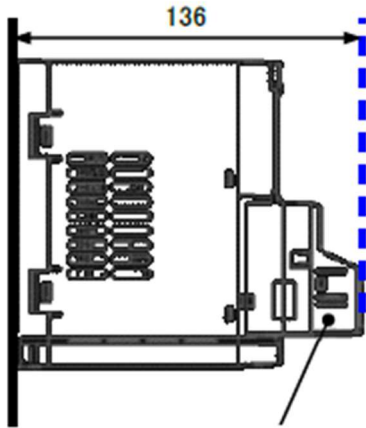
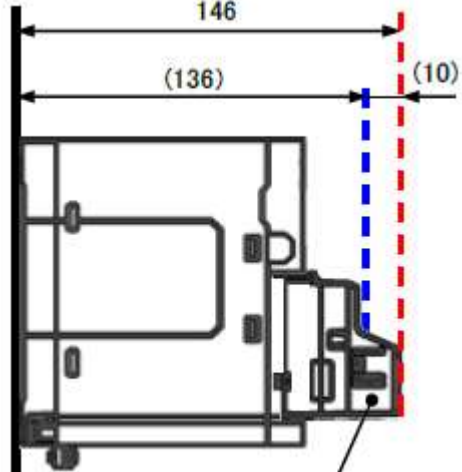
Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2015/A2022/A4007/A4015/A4022/A4030 AB007/AB015/AB022 	3G3MX2-[-EV2 A2015/A2022/A4007/A4015/A4022/A4030 AB007/AB015/AB022 

Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2037/A4040 	3G3MX2-[-EV2 A2037/A4040 

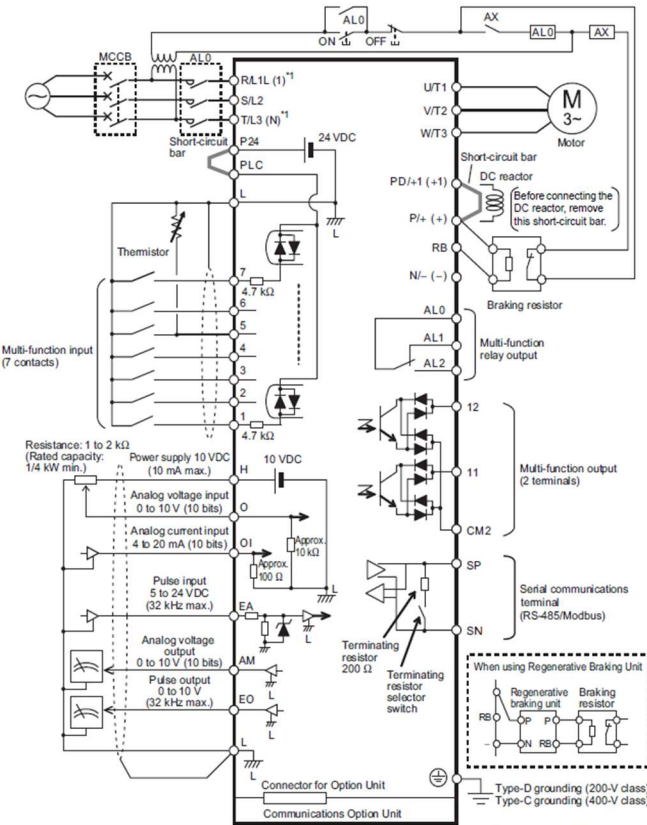
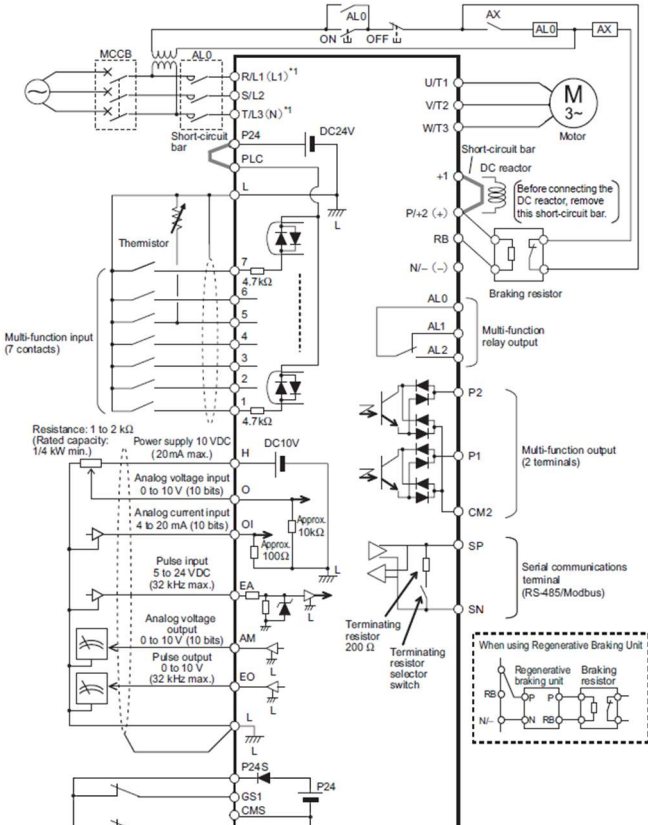
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3G3MX2-[-E CHN A2055/A2075/A4055/A4075  	3G3MX2-[-EV2 A2055/A2075/A4055/A4075  

Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2110/A4110/A4150 	3G3MX2-[-EV2 A2110/A4110/A4150 

Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2150 	3G3MX2-[-EV2 A2150 

Existing Product 3G3MX2-[-]-E CHN	Recommendable replacement 3G3MX2-[-]-EV2
3G3MX2-[-]-E CHN  e.g. 3G3AX-MX2-ECT	3G3MX2-[-]-EV2 The depth dimension increases by 10mm compared to 3G3MX2-[-]-E when the communication units are connected.  e.g. 3G3AX-MX2-ECT

[Wire connection]

Existing Product 3G3MX2-[-]-E CHN	Recommendable replacement 3G3MX2-[-]-EV2
3G3MX2-[-]-E CHN Circuit Diagram  *1. Connect to the terminals L1 and N on the single-phase 200-VAC inverter (Model: 3G3MX2-AB□□□-V1).	3G3MX2-[-]-EV2 Circuit Diagram  *1. Connect to the terminals L1 and N on the single-phase 200-VAC inverter (Model: 3G3MX2-AB□□□-V2).

Difference of Terminal Block
Main Circuit Terminal Block

Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2001/A2002/A2004/A2007	3G3MX2-[-EV2 A2001/A2002/A2004/A2007
AB001/AB002/AB004	AB001/AB002/AB004
A2015/A2022/A2037 A4004/A4007/A4015/A4022/A4030/A4040	A2015/A2022/A2037 A4004/A4007/A4015/A4022/A4030/A4040
AB007/AB015/AB022	AB007/AB015/AB022

Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
3G3MX2-[-E CHN A2055/A2075/A2110/A2150 A4055/A4075/A4110/A4150	3G3MX2-[-EV2 A2055/A2075/A2110/A2150 A4055/A4075/A4110/A4150

Control Circuit Terminal Block

Existing Product 3G3MX2-[-E CHN			Recommendable replacement 3G3MX2-[-EV2		
Terminal	Terminal name	Remarks	Terminal	Terminal name	Remarks
H	Frequency reference power supply	Allowable current: 10mA max.	H	Frequency reference power supply	Allowable current: 20mA max.
-	-	-	P24S	Safety input signal power supply	This is 24-VDC power supply for contact input signal of safety switch. This terminal is for source logic only.
7 6 5 4 3 2 1	Multifunction input	Select seven functions from among 68 functions and allocate them to terminals 1 to 7. These terminals support both the sink logic and the source logic.	7 6 5 4 3 2 1	Multifunction input	Select seven functions from among 66 functions and allocate them to terminals 1 to 7. These terminals support both the sink logic and the source logic.
3 (GS1) 4 (GS2)	Safety input	Turn ON the safety function selector switch to enable this terminal. This automatically configures 3 and 4 as follows. 3: GS1 (Safety input 1) 4: GS2 (Safety input 2)	GS1 GS2	Safety input	Safety input terminals are separated from 3 and 4.
7 (EB)	Pulse input - B	Input pulse: 1.8kHz max. Internal resistance: 4.7kΩ ON voltage: 18V min. OFF voltage: 3V max. Allowable voltage: 27VDC max. Load current: 5mA (at 24V)	7 (EB)	Pulse input - B	Input pulse: 32kHz max. Internal resistance: 4.7kΩ ON voltage: 18V min. OFF voltage: 3V max. Allowable voltage: 27VDC max. Load current: 5mA (at 24V)

[Characteristics]

Characteristics are same

Characteristics are same

Item		Existing Product 3G3MX2-[-E CHN				Recommendable replacement 3G3MX2-[-EV2					
			A2001	A2002	A2004	A2007		A2001	A2002	A2004	A2007
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	0.1	0.2	0.4	0.75	CT	0.1	0.2	0.4	0.75
		VT	0.2	0.4	0.75	1.1	VT	0.2	0.4	0.75	1.1
Rated input voltage		3-phase: 200V -15% to 240V +10%, 50/60Hz ±5%				3-phase: 200V -15% to 240V +10%, 50/60Hz ±5%					
Rated input current [A]		CT	1.0	1.6	3.3	6.0	CT	1.0	1.6	3.3	6.0
		VT	1.2	1.9	3.9	7.2	VT	1.2	1.9	3.9	7.2
Rated output voltage		3-phase (3-wire): 200 to 240V (depending on receiving voltage)				3-phase (3-wire): 200 to 240V (depending on receiving voltage)					
Rated output current [A]		CT	1.0	1.6	3.0	5.0	CT	1.0	1.6	3.0	5.0
		VT	1.2	1.9	3.5	6.0	VT	1.2	1.9	3.5	6.0
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)				Built-in braking resistor circuit (with a discharge resistor separately installed)					
	Minimum connection resistance [Ω]	-	100	100	100	50	-	100	100	100	50

Item		Existing Product 3G3MX2-[]-E CHN				Recommendable replacement 3G3MX2-[]-EV2					
			A2015	A2022	A2037	A2055		A2015	A2022	A2037	A2055
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	1.5	2.2	3.7	5.5	CT	1.5	2.2	3.7	5.5
		VT	2.2	3.0	5.5	7.5	VT	2.2	3.0	5.5	7.5
Rated input voltage		3-phase: 200V -15% to 240V +10%, 50/60Hz ±5%				3-phase: 200V -15% to 240V +10%, 50/60Hz ±5%					
Rated input current [A]		CT	9.0	12.7	20.5	30.8	CT	9.0	12.7	20.5	30.8
		VT	10.8	13.9	23.0	37.0	VT	10.8	13.9	23.0	37.0
Rated output voltage		3-phase (3-wire): 200 to 240V (depending on receiving voltage)				3-phase (3-wire): 200 to 240V (depending on receiving voltage)					
Rated output current [A]		CT	8.0	11.0	17.5	25.0	CT	8.0	11.0	17.5	25.0
		VT	9.6	12.0	19.6	30.0	VT	9.6	12.0	19.6	30.0
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)				Built-in braking resistor circuit (with a discharge resistor separately installed)					
	Minimum connection resistance [Ω]	-	50	35	35	20	-	50	35	35	20

Item		Existing Product 3G3MX2-[]-E CHN			Recommendable replacement 3G3MX2-[]-EV2				
			A2075	A2110	A2150		A2075	A2110	A2150
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	7.5	11	15	CT	7.5	11	15
		VT	11	15	18.5	VT	11	15	18.5
Rated input voltage		3-phase: 200V -15% to 240V 10%, 50/60Hz ±5%				3-phase: 200V -15% to 240V 10%, 50/60Hz ±5%			
Rated input current [A]		CT	39.6	57.1	62.6	CT	39.6	57.1	62.6
		VT	48.0	68.0	72.0	VT	48.0	68.0	72.0
Rated output voltage		3-phase (3-wire) 200 to 240V (depending on receiving voltage)				3-phase (3-wire) 200 to 240V (depending on receiving voltage)			
Rated output current [A]		CT	33.0	47.0	60.0	CT	33.0	47.0	60.0
		VT	40.0	56.0	69.0	VT	40.0	56.0	69.0
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)				Built-in braking resistor circuit (with a discharge resistor separately installed)			
	Minimum connection resistance [Ω]	-	17	17	10	-	17	17	10

Item		Existing Product 3G3MX2-[-E CHN					Recommendable replacement 3G3MX2-[-EV2						
			A4004	A4007	A4015	A4022	A4030		A4004	A4007	A4015	A4022	A4030
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	0.4	0.75	1.5	2.2	3.0	CT	0.4	0.75	1.5	2.2	3.0
		VT	0.75	1.5	2.2	3.0	4.0	VT	0.75	1.5	2.2	3.0	4.0
Rated input voltage		3-phase: 380V -15% to 480V +10%, 50/60Hz ±5%					3-phase: 380V -15% to 480V +10%, 50/60Hz ±5%						
Rated input current [A]		CT	1.8	3.6	5.2	6.5	7.7	CT	1.8	3.6	5.2	6.5	7.7
		VT	2.1	4.3	5.9	8.1	9.4	VT	2.1	4.3	5.9	8.1	9.4
Rated output voltage		3-phase (3-wire): 380 to 480V (depending on receiving voltage)					3-phase (3-wire): 380 to 480V (depending on receiving voltage)						
Rated output current [A]		CT	1.8	3.4	4.8	5.5	7.2	CT	1.8	3.4	4.8	5.5	7.2
		VT	2.1	4.1	5.4	6.9	8.8	VT	2.1	4.1	5.4	6.9	8.8
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)					Built-in braking resistor circuit (with a discharge resistor separately installed)						
	Minimum connection resistance [Ω]	-	180	180	180	100	100	-	180	180	180	100	100

Item		Existing Product 3G3MX2-[-E CHN					Recommendable replacement 3G3MX2-[-EV2						
			A4040	A4055	A4075	A4110	A4150		A4040	A4055	A4075	A4110	A4150
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	4.0	5.5	7.5	11	15	CT	4.0	5.5	7.5	11	15
		VT	5.5	7.5	11	15	18.5	VT	5.5	7.5	11	15	18.5
Rated input voltage		3-phase: 380V -15% to 480V +10%, 50/60Hz ±5%					3-phase: 380V -15% to 480V +10%, 50/60Hz ±5%						
Rated input current [A]		CT	11.0	16.9	18.8	29.4	35.9	CT	11.0	16.9	18.8	29.4	35.9
		VT	13.3	20.0	24.0	38.0	44.0	VT	13.3	20.0	24.0	38.0	44.0
Rated output voltage		3-phase (3-wire): 380 to 480V (depending on receiving voltage)					3-phase (3-wire): 380 to 480V (depending on receiving voltage)						
Rated output current [A]		CT	9.2	14.8	18.0	24.0	31.0	CT	9.2	14.8	18.0	24.0	31.0
		VT	11.1	17.5	23.0	31.0	38.0	VT	11.1	17.5	23.0	31.0	38.0
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)					Built-in braking resistor circuit (with a discharge resistor separately installed)						
	Minimum connection resistance [Ω]	-	100	70	70	70	35	-	100	70	70	70	35

Item		Existing Product 3G3MX2-[]-E CHN				Recommendable replacement 3G3MX2-[]-EV2			
			AB001	AB002	AB004		AB001	AB002	AB004
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	0.1	0.2	0.4	CT	0.1	0.2	0.4
		VT	0.2	0.4	0.55	VT	0.2	0.4	0.55
Rated input voltage		Single-phase: 200V -15% to 240V +10%, 50/60Hz ±5%				Single-phase: 200V -15% to 240V +10%, 50/60Hz ±5%			
Rated input current [A]		CT	1.3	3.0	6.3	CT	1.3	3.0	6.3
		VT	2.0	3.6	7.3	VT	2.0	3.6	7.3
Rated output voltage		3-phase (3-wire): 200 to 240V (depending on receiving voltage)				3-phase (3-wire): 200 to 240V (depending on receiving voltage)			
Rated output current [A]		CT	1.0	1.6	3.0	CT	1.0	1.6	3.0
		VT	1.2	1.9	3.5	VT	1.2	1.9	3.5
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)				Built-in braking resistor circuit (with a discharge resistor separately installed)			
	Minimum connection resistance [Ω]	-	100	100	100	-	100	100	100

Item		Existing Product 3G3MX2-[]-E CHN			Recommendable replacement 3G3MX2-[]-EV2				
			AB007	AB015	AB022		AB007	AB015	AB022
Applicable motor capacity [kW] (Standard 3-phase motors)		CT	0.75	1.5	2.2	CT	0.75	1.5	2.2
		VT	1.1	2.2	3.0	VT	1.1	2.2	3.0
Rated input voltage		Single-phase: 200V -15% to 240V +10%, 50/60Hz ±5%				Single-phase: 200V -15% to 240V +10%, 50/60Hz ±5%			
Rated input current [A]		CT	11.5	16.8	22.0	CT	11.5	16.8	22.0
		VT	13.8	20.2	24.0	VT	13.8	20.2	24.0
Rated output voltage		3-phase (3-wire): 200 to 240V (depending on receiving voltage)				3-phase (3-wire): 200 to 240V (depending on receiving voltage)			
Rated output current [A]		CT	5.0	8.0	11.0	CT	5.0	8.0	11.0
		VT	6.0	9.6	12.0	VT	6.0	9.6	12.0
Braking resistor circuit	Regenerative braking	Built-in braking resistor circuit (with a discharge resistor separately installed)				Built-in braking resistor circuit (with a discharge resistor separately installed)			
	Minimum connection resistance [Ω]	-	50	50	35	-	50	50	35

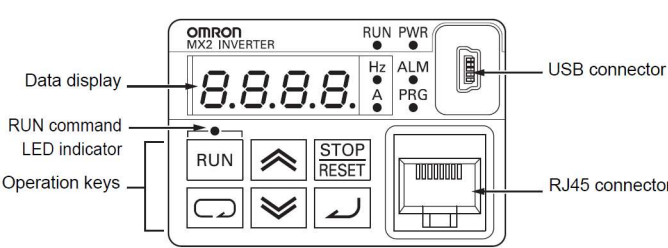
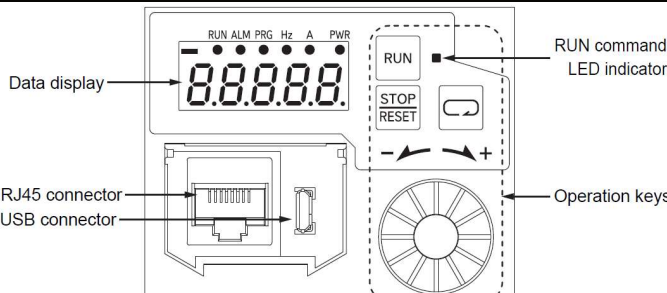
Standards

Item		Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
EC Directives	Machinery directives	EN ISO 13849-1: 2008 Pld EN 61800-5-2 EN 60204-1	EN ISO 13849-1 PLe/Cat3 EN 61800-5-2 SIL3 EN 61508 SIL3 EN 62061 SIL CL3
	EMC Directive	EN 61800-3: 2004	
	Low-voltage Directive	EN 61800-5-1: 2007	
UL/cUL Standards		UL 508C	UL 61800-5-1

[Operation ratings]

Item	Existing Product 3G3MX2-[-E CHN	Recommendable replacement 3G3MX2-[-EV2
Control method	Phase-to-phase sinusoidal modulation PWM	
Output frequency range	0.01 to 400Hz (or 580Hz in the high-frequency mode)	0.01 to 590Hz
Frequency precision	Digital command: $\pm 0.01\%$ of the maximum frequency Analog command: $\pm 0.2\%$ of the maximum frequency ($25 \pm 10^\circ\text{C}$)	
Frequency resolution	Digital setting: 0.01Hz Analog setting: maximum frequency $\times 1/1000$	
Voltage/Frequency characteristics	V/f characteristics (constant torque, reduced torque) Sensorless vector control, V/f control with speed feedback	
Overload current rating of inverter	Heavy load rating (CT): 150%/60s Light load rating (VT): 120%/60s	
Instantaneous overcurrent protection	200% of heavy load rating (CT) value	
Acceleration /Deceleration time	0.0 to 3600 s (line/curve arbitrary setting) 2nd acceleration/deceleration setting provided	
Carrier frequency change range	2 to 15 kHz (Derating required)	
Starting torque	200%/0.5Hz (Sensorless vector control)	
DC injection braking	Operates at operating frequency or less during deceleration via STOP command, at set frequency or less during operation, or via external input (level and time can be set).	

[Operation methods]

Existing Product 3G3MX2-[-E CHN			Recommendable replacement 3G3MX2-[-EV2				
Digital Operator							
							
Name		Description		Name		Description	
Data display		4 digits		Data display		5 digits	
Operation keys		6 buttons		Operation keys		A jog dial and 4 buttons	
Parameters							
No.	Name	Description	No.	Name	Description		
b031	Soft Lock Selection	10: Data can be changed during RUN.	b031	Soft Lock Selection	10: Deleted		
b037	Display Selection	04: Basic display	b037	Display Selection	04: Deleted		
-	-	-	b098	Ground Fault Selection	Select whether to enable or disable the function that detects ground faults between the inverter output and the motor when the power is turned on. Ground fault protection trips when a ground fault is detected. 00: Disabled 01: Enabled		
-	-	-	C117	Jog Sensitive	Set the sensitivity of the jog dial required to increment or decrement the value of the parameters by 1. 1 to 24		
-	-	-	C118	Jog Carry Sensitive	Set the sensitivity of the jog dial required to carry-up or carry-down the value of the parameters. 1 to 100		

Specifications and prices in this product news are as of the issue date and are subject to change without notice. Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.