MITSUBISHI ELECTRIC
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INVERTER

New Product RELEASE No.19-5E

Release of the FR-XCG Stand-Alone Reactor for Multifunction Regeneration Converter

Another stand-alone reactor dedicated to the FR-XC series converter is now available.

Features

New reactor for power regeneration mode 2 of the FR-XC

For power driving, the inverter supplies power. For regenerative driving, the FR-XC series converter returns power to the power supply.
(In this mode, the FR-XC series converter cannot be used as a common converter.)
The converter with its harmonic suppression function disabled can be used in the power regeneration mode 2.

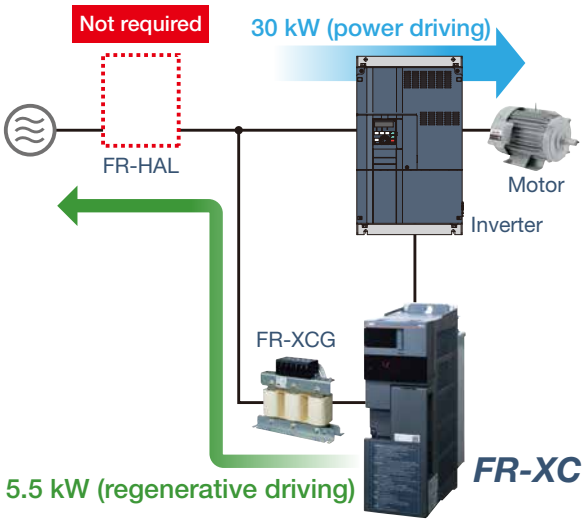
- Extended motor selection
  The upper limit for the compatible motor capacity was removed.
- Less devices required to configure the system
  Less space is required as the FR-HAL (AC reactor) is no longer necessary.

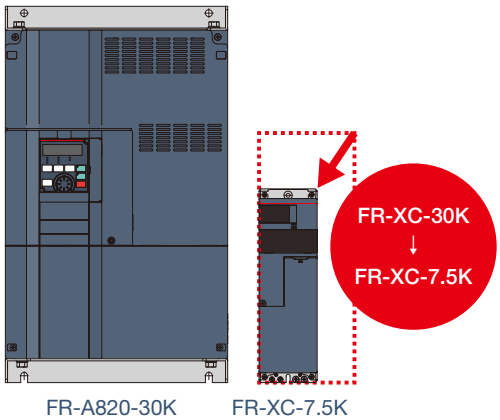

FR-XCG-7.5K

Benefits

Smaller regeneration system with much less cost

- The FR-XC converter returns regenerative power to the power supply system to allow the power to be reused.
  It is possible to downsize the system as a resistor is not required.
  Furthermore, energy saving can be expected.
- The capacity of the FR-XC series converter is selectable according to the regenerative power of the system. Thus, the compact converter is applicable for the regenerative power smaller than the inverter capacity, which contributes to space saving.





Release schedule February 2020

Inverter parameter settings

To use the converter with the inverter, Pr.30 Regenerative function selection in the inverter parameters must be set. To use the converter in the power regeneration mode 2, set "0" in Pr.30 in any inverter regardless of the model and capacity. When a jumper is installed across terminals PR and PX, remove the jumper.

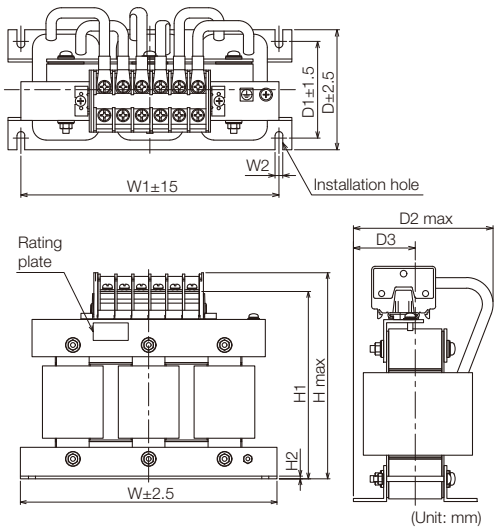
FR-XC connection mode selection

Refer to the table on the right to select the power regeneration mode 2.
Set switch 1 and switch 2 (connection mode setting switches) to the OFF position in the function selection switch assembly (SW2).

Switch*		Function
1	2	
ON	ON	Common bus regeneration mode
ON	OFF	
OFF	ON	Power regeneration mode 1
OFF	OFF	Power regeneration mode 2

* The switches in the assembly are initially set to ON.

Outline dimensions



200 V class

Model	W	W1	W2	H	H1	H2	D	D1	D2	D3	Mounting screw size	Terminal screw size	Mass
FR-XCG-7.5K	220	200	6	185	161.5	2.3	78	60	115	46.5	M5	M5	5kg
FR-XCG-11K							93	75	120				8kg
FR-XCG-15K				190	162		108	90	130	54		M6	11kg
FR-XCG-22K	255	225	8	240	212		112	85	140	60	M6		16kg
FR-XCG-30K							127	100	155	70			20kg
FR-XCG-37K	300	270	10	285	255	3.2	130		180	75	M8	M10	25kg
FR-XCG-55K							160	130	190	85			40kg

400 V class

Model	W	W1	W2	H	H1	H2	D	D1	D2	D3	Mounting screw size	Terminal screw size	Mass
FR-XCG-H7.5K	220	200	6	185	161.5	2.3	78	60	115	55	M5	M5	5kg
FR-XCG-H11K							93	75	120				8kg
FR-XCG-H15K							108	90	130	60			11kg
FR-XCG-H22K	255	225	8	240	212		112	85			M6	M6	16kg
FR-XCG-H30K							127	100	140	70			20kg
FR-XCG-H37K	300	270	10	285	255	3.2	130		180	75	M8	M8	25kg
FR-XCG-H55K							160	130	190	85			40kg

Lineup

Dedicated stand-alone reactor (option) model

A stand-alone reactor for power regeneration mode 2.

FR-XCG- [ ] **22** **K**

Symbol	Voltage
None	200 V class
H	400 V class

Reactor capacity: Capacity (kW)

Voltage	Model	7.5	11	15	22	30	37	55
200V	FR-XCG-[ ]K	●	●	●	●	●	●	●
400V	FR-XCG-H[ ]K	●	●	●	●	●	●	●

Combination matrix of FR-XCG and FR-XC(-PWM) (power regeneration mode 2)

Dedicated standalone reactor	Multifunction regeneration converter	
FR-XCG-(H)[ ]K	FR-XC-(H)[ ]K	FR-XC-(H)[ ]K-PWM*1
7.5	7.5	-
11	11	-
15	15	-
22	22	18.5
30	30	22
37	37	37
55	55	55

*1: The harmonic suppression function is pre-enabled in this model.
To use the converter with the FR-XCL, change the "9999" setting of Pr.416 Control method selection to "0" (harmonic suppression disabled).

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