

MITSUBISHI ELECTRIC EUROPE B.V.
Gothaer Str. 8, 40880 Ratingen
Germany
<https://eu3a.mitsubishielectric.com/>

Date: October 21th 2014
Contact: Oliver Endres
+49/(0)2102/486-9710
Oliver.Endres@meg.mee.com

Product Introduction of FR-A846

Herewith we would like to inform you about the arrival of our new high end Inverter FR-A846 Series.

The FR-A846 fulfills the IP55 protection class to make it possible to offer the outstanding performance of the FR-A800 Series in decentralised or harsh environments.

This new drive series is the successor of the highly successful FR-A700 series. It is equipped with the new state-of-the-art high-speed processor by Mitsubishi Electric.



- **3 years warranty**

Mitsubishi Electric now offers a 3 year warranty for the FR-A800 Series, after an registration of the Inverter on our homepage.

- **Easy operation**

The operation panel with the one touch Digital Dial allows direct access to all important parameters. Select the operation panel ideal for your needs. Choose either a LU operation panel with an LCD screen offering enhanced display functionality and a clock function, or a more economical DU operation panel with a 5-digit, 12-segment display.



- **High flexibility by built-in PLC**

The FR-A846 is easy to program with Mitsubishi Electric standard PLC software, which is available in FR Configurator2. It is also possible to combine the PLC program with the Real time clock of the LU-08 operation panel.

- **Energy saving by 24 V control power supply**

By connecting an external 24 V DC control power supply, the system can be operated even when the main power supply is turned off. Furthermore parameters can be set and network communication can be maintained with this power supply which facilitates safe maintenance. More energy saving can be achieved by using the automatic "stand by" function which switches off the drive main power supply. Capacitors and other devices are offline, so heat loss is reduced.

- **Easy & safe maintenance**

For maintenance of the drive system, it is possible to order the FR-A846 with built-in main switch to power off including lock capability.

- **Perfect autotuning of PM and IM motors**

Based on the new autotuning method, even Permanent Magnet motors can be used with ease.



- **More energy savings with PM motors**

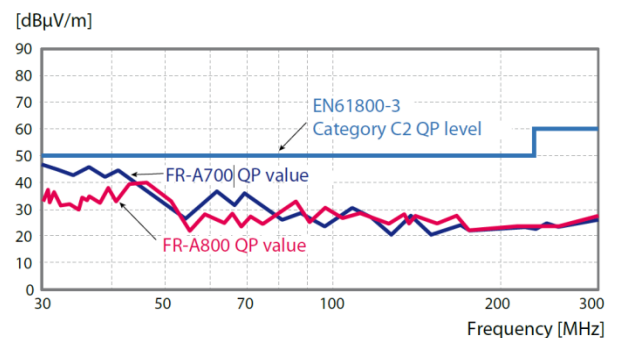
The FR-A846 series enables factory energy savings, which can be achieved by replacing current induction motors with permanent magnet motors (PM motors). A PM motor is very efficient because the current does not flow to the rotor, so there is no secondary copper loss. There is also magnetic flux generated by permanent magnets, so less current is required to drive a motor.

- **Various network compatibility**

The drive can be controlled and monitored by a controller via network. For the major network protocols such as CC-Link IE Field, CC-Link, Profibus DP/DPV1, Profinet/EtherNet IP/EtherCat (to be released soon) and SSCNETIII/H as well as DeviceNet™ and LONWORKS communication options are available. RS485 communication (Mitsubishi Electric drive protocol, Modbus-RTU protocol) is supported as standard.

- **Comprehensive noise countermeasures**

The drive's built-in EMC filter and DC link choke ensures full compliance with European EMC Directive standards (EN61800-3 1st Environment category C2) as well as harmonic regulations (IEC61000-3-12), so separate certification is not required for the drive. The newly developed drive technology and power supply technology significantly reduce electromagnetic noise.



Model FR-A846-[]		00023 (0.4K)	00038 (0,75K)	00052 (1.5K)	00083 (2.2K)	00126 (3.7K)	00170 (5.5K)	00250 (7.5K)	00310 (11K)	00380 (15K)	00470 (18.5K)	
SAP Nr.		279639	279640	279641	279642	279643	279644	279645	279646	279647	279648	
Applicable motor capacity (kW) *1	LD	0,75	1,5	2,2	3,7	5,5	7,5	11	15	18,5	22	
	ND (initial setting)	0,4	0,75	1,5	2,2	3,7	5,5	7,5	11	15	18,5	
Output	Rated Capacity (KVA)*1	LD	1,6	2,7	3,7	5,8	8,8	12	18	22	27	33
		ND (initial setting)	1,1	1,9	3	4,6	6,9	9,1	13	18	24	29
	Rated Current (A) *3	LD	2,1	3,5	4,8	7,6	11,5	16	23 (19.6)	29 (24.7)	35 (29.8)	43 (36.6)
		ND (initial setting)	1,5	2,5	4	6	9	12	17 (25.5)	23 (34.5)	31 (46.5)	38 (57)
Overload Current Rating *4	LD	120% 60s, 150% 3s (inverse-time characteristics) at surrounding air temperature 40°C										
	ND (initial setting)	150% 60s, 200% 3s (inverse-time characteristics) at surrounding air temperature 40°C										
Rated voltage *5		Three-phase 380 to 500V										
Regenerative braking torque	Maximum value/ permissible duty	10% torque/continuous										
Power supply	Rated input AC voltage/frequency		Three-phase 380 to 500V 50Hz/60Hz *7									
	Permissible AC voltage fluctuation		323 to 550V 50Hz/60Hz									
	Permissible frequency fluctuation		±5%									
Protective structure		IP55 (IEC 60529), UL Type12										
Cooling system		Self cooling + internal fan						Forced-air-cooling + internal fan				
Approx. mass (kg)		15	15	15	15	16	17	26	26	27	27	

*1 The applicable motor capacity indicated is the maximum capacity applicable for use of the Mitsubishi 4-pole standard motor.

*2 The rated output capacity indicated assumes that the output voltage is 220 V for 200 V class and 440 V for 400 V class.

*3 When an operation is performed with the carrier frequency set to 3 kHz or more, and the inverter output current reaches the value indicated in the parenthesis of the rated current, the carrier frequency is automatically lowered. The motor noise becomes louder accordingly.

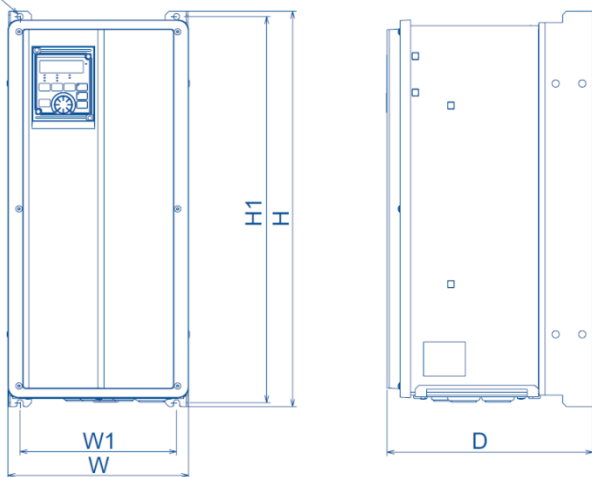
*4 The % value of the overload current rating indicated is the ratio of the overload current to the inverter's rated output current. For repeated duty, allow time for the inverter and motor to return to or below the temperatures under 100% load.

*5 The maximum output voltage does not exceed the power supply voltage. The maximum output voltage can be changed within the setting range. However, the maximum point of the voltage waveform at the inverter output side is the power supply voltage multiplied by about $\sqrt{2}$.

*6 FR-DU08: IP40 (except for the PU connector section)

*7 For the power voltage exceeding 480 V, set Pr.977 Input voltage mode selection.)

2-ØC



Inverter Model	W	W1	H	H1	D	C
FR-A846-00023(0.4K) to 00170 (5.5K)	238	201	520	508	271	8
FR-A846-00250(7.5K) to 00470(18.5K)			650	632,5	285	10
FR-A846-00620(22K) to 01160(45K)	345	300	790	770	357	12
FR-A846-01800(55K) to 02600(90K)	420	350	1360	1334	456,6	15
FR-A846-03250(110K) to 03610(132K)			290	1510		