

# Unparalleled Performance

FR-A840

PRODUCT FLYER



High performance and high quality inverter of the highest level. With enhanced drive performance and usability, the inverter is compliant with applicable safety standards.



### Excellent Drive Performance

Equipped with a new state-of-the-art high-speed processor developed by Mitsubishi Electric. With better control performance and response level, safe and accurate operation is assured in a diverse range of applications.



### Security & Safety

Controls with safety functions can be easily performed. The Safe Torque Off (STO) safety function is supported by the inverter. 24 V DC control power input is equipped as standard.



### Energy Saving

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.

## Features

- » FR configurator software
- » Real sensor-less vector control
- » Auto tuning
- » SIL3 compatible
- » 24 V DC control circuit
- » IP55 model available up to 132kW
- » Communication options
- » Easy fault diagnosis
- » Built-in PLC function
- » Long lifetime

# SPECIFICATIONS

FR-A840-2 <sup>1</sup> -60 <sup>2</sup>		00023	00038	00052	00083	00126	00170	00250	00310	00380	00470	00620	00770	00930	01160	01800	02160	02600	03250	03610	04320	04810	05470	06100	06830			
		0.4K	0.75K	1.5K	2.2K	3.7K	5.5K	7.5K	11K	15K	18.5K	22K	30K	37K	45K	55K	75K	90K	110K	132K	160K	185K	220K	250K	280K			
Applicable motor capacity (kW)	SLD	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75/90	110	132	160	185	220	250	280	315	355			
	LD	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220	250	280	315			
	ND (initial setting)	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220	250	280			
	HD	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	185	220	250			
Rated capacity (kVA)	SLD	1.8	2.9	4	6.3	10	13	19	24	29	36	47	59	71	88	137	165	198	248	275	329	367	417	465	521			
	LD	1.6	2.7	3.7	5.8	8.8	12	18	22	27	33	43	53	65	81	110	137	165	198	248	275	329	367	417	465			
	ND (initial setting)	1.1	1.9	3	4.6	6.9	9.1	13	18	24	29	34	43	54	66	84	110	137	165	198	248	275	329	367	417			
	HD	0.6	1.1	1.9	3	4.6	6.9	9.1	13	18	24	29	34	43	54	66	84	110	137	165	198	248	275	329	367			
Rated current (A)	SLD	2.3	3.8	5.2	8.3	12.6	17	25	31	38	47	62	77	93	116	180	216	260	325	361	432	481	547	610	683			
	LD	2.1	3.5	4.8	7.6	11.5	16	23	29	35	43	57	70	85	106	144	180	216	260	325	361	432	481	547	610			
	ND (initial setting)	1.5	2.5	4	6	9	12	17	23	31	38	44	57	71	86	110	144	180	216	260	325	361	432	481	547			
	HD	0.8	1.5	2.5	4	6	9	12	17	23	31	38	44	57	71	86	110	144	180	216	260	325	361	432	481			
Overload current rating	SLD	110% 60 s, 120% 3 s (inverse-time characteristics) at surrounding air temperature of 40°C																										
	LD	120% 60 s, 150% 3 s (inverse-time characteristics) at surrounding air temperature of 50°C																										
	ND (initial setting)	150% 60 s, 200% 3 s (inverse-time characteristics) at surrounding air temperature of 50°C																										
	HD	200% 60 s, 250% 3 s (inverse-time characteristics) at surrounding air temperature of 50°C																										
Rated voltage		Three-phase 380 to 500 V																										
Regenerative braking	Brake transistor	Built-in										FR-BU2 (option)																
	Max. brake torque	100% torque/2% ED							20% torque/continuous							10% torque/continuous												
	FR-ABR (when the option is used)	100% torque/10% ED							100% torque/6% ED							-	-	-	-	-	-	-	-	-	-	-	-	-
Rating input AC voltage/frequency		Three-phase 380 to 500 V 50 Hz/60 Hz																										
Permissible AC voltage fluctuation		323 to 550 V 50 Hz/60 Hz																										
Permissible frequency fluctuation		±5%																										
Power supply	Rated input current (A)	Without DC reactor	SLD	3.2	5.4	7.8	10.9	16.4	22.5	31.7	40.3	48.2	58.4	76.8	97.6	115	141	-	-	-	-	-	-	-	-	-		
			LD	3	4.9	7.3	10.1	15.1	22.3	31	38.2	44.9	53.9	75.1	89.7	106	130	-	-	-	-	-	-	-	-	-	-	
			ND (initial setting)	2.3	3.7	6.2	8.3	12.3	17.4	22.5	31	40.3	48.2	56.5	75.1	91	108	134	-	-	-	-	-	-	-	-	-	-
			HD	1.4	2.3	3.7	6.2	8.3	12.3	17.4	22.5	31	40.3	48.2	56.5	75.1	91	108	-	-	-	-	-	-	-	-	-	-
	With DC reactor	SLD	2.3	3.8	5.2	8.3	12.6	17	25	31	38	47	62	77	93	116	180	216	260	325	361	432	481	547	610	683		
		LD	2.1	3.5	4.8	7.6	11.5	16	23	29	35	43	57	70	85	106	144	180	216	260	325	361	432	481	547	610		
		ND (initial setting)	1.5	2.5	4	6	9	12	17	23	31	38	44	57	71	86	110	144	180	216	260	325	361	432	481	547		
		HD	0.8	1.5	2.5	4	6	9	12	17	23	31	38	44	57	71	86	110	144	180	216	260	325	361	432	481		
	Power supply capacity (kVA)	Without DC reactor	SLD	2.5	4.1	5.9	8.3	12	17	24	31	37	44	59	74	88	107	-	-	-	-	-	-	-	-	-	-	
			LD	2.3	3.7	5.5	7.7	12	17	24	29	34	41	57	68	81	99	-	-	-	-	-	-	-	-	-	-	
			ND (initial setting)	1.7	2.8	4.7	6.3	9.4	13	17	24	31	37	43	57	69	83	102	-	-	-	-	-	-	-	-	-	
			HD	1.1	1.7	2.8	4.7	6.3	9.4	13	17	24	31	37	43	57	69	83	-	-	-	-	-	-	-	-	-	
With DC reactor		SLD	1.8	2.9	4	6.3	10	13	19	24	29	36	47	59	71	88	137	165	198	248	275	329	367	417	465	521		
		LD	1.6	2.7	3.7	5.8	8.8	12	18	22	27	33	43	53	65	81	110	137	165	198	248	275	329	367	417	465		
		ND (initial setting)	1.1	1.9	3	4.6	6.9	9.1	13	18	24	29	34	43	54	66	84	110	137	165	198	248	275	329	367	417		
		HD	0.6	1.1	1.9	3	4.6	6.9	9.1	13	18	24	29	34	43	54	66	84	110	137	165	198	248	275	329	367		
Protective structure (IEC 60529)		Enclose type (IP20)										Open type (IP00)																
Cooling system		Self-cooling										Forced air cooling																
Approximate mass (kg)		3.0	3.0	3.0	3.4	3.4	6.7	6.7	8.3	8.3	15	15	23	41	41	43	52	55	71	78	117	117	166	166	166			

## Notes:

- \*1: CA type: The monitor output terminal F/C operates as terminal CA (analog current output: 0 to 20 mADC), not as terminal FM (pulse train output).
  - \*2: 60 type: With circuit board coating (IEC 60721-3-3 3C2/3S2 compatible).
- SLD (Super Light Duty), LD (Light Duty), ND (Normal Duty), HD (Heavy Duty).  
Up to 500kW inverters are available using separate convertor types.  
IP55 model available up to 132kW.

## Catalogue

<https://bit.ly/FR-A840>

## e-Learning

<https://www.mitsubishielectric.com/fa/assist/e-learning/eng.html>

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