

# FR-A800-CRN (Crane and Hoist)

## FR-A800 Plus Program

FR-A800 Plus takes the outstanding performance and functionality of the regular FR-A800 VFD and combines it with special firmware to make a drive dedicated to specific industry sectors. For main specifications please refer to the standard FR-A800

**FR-A800CRN Crane Control** version of FR-A800 includes:

- **Anti-Sway Control** – Eliminates swinging loads caused by speed changes during load handling, ensuring smoother operation and reduced ‘tact’ time
- **Shortest Time Start-up Feature** – Adapts to changing load masses
- **Dedicated Sequencing System** – Interface with mechanical brakes during raising and lowering
- **Falling Load Detection** – Detects unexpected load dropping
- **Hoist and Travel Control** – Coordinates lifting and traveling operations

### Part Number System

The basic part numbering system is the same as for the standard drives but includes a suffix at the end.

A ① - ② -1- ③

#### ① Max Load Capacity

Symbol	Voltage Class
820	240V Class
840	480V Class
842	480V Class

\*Inverter stage only. Use in conjunction with FR-CC2.

#### ② Capacity

Symbol
See FR-A800 section for available capacities.

#### ③ Control

Symbol	Control
N6CRN	Class Crane Control
60CRN	Class Crane Control
U6CRN	Class Crane Control*
N6R2R	Class Roll-toRoll Control
60R2R	Class Roll-toRoll Control
U6R2R	Class Roll-toRoll Control*

## FR-A800-CRN

The FR-A800-CRN inverter is dedicated for crane and hoist applications. Due to its embedded functions such as “swinging suppression control”, “shortest time torque startup function”, as well as “load based speed control”, the dedicated CRN features

### 200V

Model Number	AMPS For Duty				Horsepower Duty (NEC)				Frame Size	Weight (lbs)	Cooling Method	Protective Rating
	SLD	LD	ND	HD	SLD	LD	ND	HD				
A820-00046-1-N6CRN	4.6	4.2	3	1.5	1	1	0.75	0.25	A	5.5	Self-Cooling	NEMA 1, UL Type-1, Plenum Rated (IP20)
A820-00077-1-N6CRN	7.7	7	5	3	2	2	1	0.5	B	5.9		
A820-00105-1-N6CRN	10.5	9.6	8	5	3	3	2	1	B	8.8		
A820-00167-1-N6CRN	16.7	15.2	11	8	5	5	3	2		8.8		
A820-00250-1-N6CRN	25	23	17.5	11	7.5	7.5	5	3	C	8.8		
A820-00340-1-N6CRN	34	31	24	17.5	10	10	7.5	5	C	16.7		
A820-00490-1-N6CRN	49	45	33	24	20	15	10	7.5		D	16.7	
A820-00630-1-N6CRN	63	58	46	33	20	20	15	10	E	20.5		
A820-00770-1-N6CRN	77	70.5	61	46	25	25	20	15		37.4		
A820-00930-1-N6CRN	93	85	76	61	30	30	25	20	F	37.4	Forced-Air Cooling	
A820-01250-1-N6CRN	125	114	90	76	40	40	30	25	37.4			
A820-01540-1-60CRN	154	140	115	90	60	50	40	30	G	48.4		
A820-01870-1-60CRN	187	170	145	115	60	60	50	40		92.4		
A820-02330-1-60CRN	233	212	175	145	75	75	60	50	H	92.4	(IP00)	
A820-03160-1-60CRN	316	288	215	175	125	100	75	60	K	118.8		
A820-03800-1-U6CRN	380	346	288	215	150	125	100	75		162.8		
A820-04750-1-U6CRN	475	432	346	288	150	150	125	100	L	162.8		

### 400V

Model Number	AMPS For Duty				Horsepower Duty (NEC)				Frame Size	Weight (lbs)	Cooling Method	Protective Rating
	SLD	LD	ND	HD	SLD	LD	ND	HD				
A840-00023-1-N6CRN	2.3	2.1	1.5	0.8	1	1	0.5	0.25	C	7.7	Self-Cooling	NEMA 1, UL Type-1, Plenum Rated (IP20)
A840-00038-1-N6CRN	3.8	3.5	2.5	1.5	2	2	1	0.5		7.7		
A840-00052-1-N6CRN	5.2	4.8	4	2.5	3	3	2	1		7.7		
A840-00083-1-N6CRN	8.3	7.6	6	4	5	5	3	2	C	8.8		
A840-00126-1-N6CRN	12.6	11.5	9	6	7.5	7.5	5	3		8.8		
A840-00170-1-N6CRN	17	16	12	9	10	10	7.5	5	D	16.7		
A840-00250-1-N6CRN	25	23	17	12	15	15	10	7.5		16.7		
A840-00310-1-N6CRN	31	29	23	17	20	20	15	10	D	20.5		
A840-00380-1-N6CRN	38	35	31	23	25	25	20	15		20.5		
A840-00470-1-N6CRN	47	43	38	31	30	30	25	20	E	37.4	Forced-Air Cooling	
A840-00620-1-N6CRN	62	57	44	38	40	40	30	25	F	37.4		
A840-00770-1-60CRN	77	70	57	44	60	50	40	30	G	50.6		
A840-00930-1-60CRN	93	85	71	57	60	60	50	40		90.2		
A840-01160-1-60CRN	116	106	86	71	75	75	60	50	H	90.2		
A840-01800-1-60CRN	180	144	110	86	150	100	75	60		94.6		
A840-02160-1-U6CRN	216	180	144	110	150	150	100	75	H	114.4		
A840-02600-1-U6CRN	260	216	180	144	200	150	150	100		121		
A840-03250-1-U6CRN	325	260	216	180	250	200	150	150	J	156.2		
A840-03610-1-U6CRN	361	325	260	216	300	250	200	150	L	171.6		
A840-04320-1-U6CRN	432	361	325	260	350	300	250	200		257.4		
A840-04810-1-U6CRN	481	432	361	325	400	350	300	250	M	257.4		
A840-05470-1-U6CRN	547	481	432	361	450	400	350	300		365.2		
A840-06100-1-U6CRN	610	547	481	432	500	450	400	350	N	365.2		
A840-06830-1-U6CRN	683	610	547	481	550	500	450	400		365.2		

Select a reactor according to the applied motor capacity.

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
	SND	150% 60 s, 200% 3 s (inverse-time characteristics) at surrounding air temperature of 50°C
	ND	200% 60 s, 250% 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

\* 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.