



FR-A800-CRN INVERTER FOR CRANE OPERATION

Product Overview



The FR-A800-CRN variable frequency drives are designed specifically for crane and hoist applications to achieve fast, robust, and smooth operation. With built-in features such as vibration suppression control, torque build-up in the shortest possible time, and load-based speed control, the FR-A800-CRN series VFD enables cycle time optimization, resulting in increased productivity, smooth operations and overall user safety.

KEY FEATURES:

- Anti-sway control Eliminates swinging loads caused by speed changes during load handling, ensuring smoother operation and reduced 'tact' or settling time.
- Shortest time start-up feature Adapts to changing load masses.
 When light loads are moved up or down by a crane, the speed will automatically be increased for quicker movements.
- Tension control (inertia compensation/mechanical loss compensation – The torque required for acceleration/deceleration and the mechanical loss compensation torque are controlled, keeping the material tension constant and reducing wrinkling or deformations within the material roll.
- Dedicated sequencing system Interface with mechanical brakes during raising and lowering. Adjusting the speed control P gain in low-speed ranges improves response at low speed and shortens the time from startup to brake opening.
- Falling load detection Detects unexpected load dropping. When the commanded direction differs from the actual motor rotation direction, the falling detection signal is output.



REDUCTION IN TACT TIME

Mitsubishi Electric's original anti-sway control technology eliminates the swaying of the load moved by a crane at the time it stops in place without additional operator adjustments. This control reduces the tact time and for quicker and more efficient operation.







Mar actic flu torque startup: enabled Pre-excitation: disabled

SHORTEST-TIME TORQUE STARTUP

brake opens contributes to a reduction in tact time.

torque startup: disabled Pre-excitation: disabled

Shortening the time from the start command to when the

400 ms

300 ms

100% 100%

FUNCTION



Example of FR-A820-90K-1-60CRN and SF-THY (90 kW)

MAGNETIC FLUX COMMAND DURING **PRE-EXCITATION**

Decreasing the pre-excitation current during a motor stop reduces power consumption during standby, and enables rapid startup of the torque.

A820- THREE PHASE 200V CLASS Normal Duty	.75HP	1HP	2HP	3HP	5HP	7.5HP	10HP	15HP	20HP
	00046-N6CRN	00077-N6CRN	00105-N6CRN	00167-N6CRN	00250-N6CRN	00340-N6CRN	00490-N6CRN	00630-N6CRN	00770-N6CRN
	25HP	30HP	40HP	50HP	60HP	75HP	100HP	125HP	
	00930-N6CRN	01250-N6CRN	01540-60CRN	01870-60CRN	02330-60CRN	03160-60CRN	03800-U6CRN	04750-U6CRN	
A840- THREE PHASE 400V CLASS Normal Duty	.5HP	1HP	2HP	3HP	5HP	7.5HP	10HP	15HP	20HP
	00023-N6CRN	00038-N6CRN	00052-N6CRN	00083-N6CRN	00126-N6CRN	00170-N6CRN	00250-N6CRN	00310-N6CRN	00380-N6CRN
	25HP	30HP	40HP	50HP	60HP	75HP	100HP	150HP	200HP
	00470-N6CRN	00620-N6CRN	00770-60CRN	00930-60CRN	01160-60CRN	01800-60CRN	02160-U6CRN	02600-U6CRN	03250-U6CRN
	200HP	250HP	300HP	350HP	400HP	450HP			
	03610-U6CRN	04320-U6CRN	04810-U6CRN	05470-U6CRN	06100-U6CRN	06830-U6CRN			
FR-A842- THREE PHASE 400V CLASS	500HP	550HP	650HP	700HP	800HP				
	07700-U6CRN	08660-U6CRN	09620-U6CRN	10940-U6CRN	12120-U6CRN				

STANDARD FR-A800-CRN SERIES LINEUP

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