

Geared and Gearless   
Elevator Drive  
L1000A



**DMC**

**I&R<sup>ISE</sup>**

**Drives Motors Controls**

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### Experience & Innovation

**For more than 90 years YASKAWA has been manufacturing and supplying mechatronic products for machine building and industrial automation. Its standard products as well as tailor-made solutions are famous and have a high reputation for outstanding quality and durability.**

YASKAWA has proven success of manufacturing and wiring drive systems for many installations of over 1,000 elevators in its standard applications. The YASKAWA L1000A is a dedicated drive for elevator applications suitable for both modernization projects and new installations.

The L1000A provides high-performance characteristics offering a set of attractive features:

- ▶ Single drive for either IM or PM motor control
- ▶ Peak current ratings of 200% or more based on NEC amps
- ▶ Auto-tuning routines optimally match L1000A to IM/PM motor (coupled or uncoupled)
- ▶ YASKAWA reliability - designed for more than 7,000 hours of maintenance-free operation
- ▶ Decision for extreme quiet operation
- ▶ Enhanced features for highest passenger comfort (i.e., torque ripple suppression)
- ▶ Additional functions to reduce floor-to-floor times
- ▶ Easy field wiring and I/O interface to simplify elevator controller integration
- ▶ Easy serviceability and maintainability with lifetime monitors and removable terminals with parameter backup
- ▶ Elevator terminology for ease of operation
- ▶ Rescue operation control flexibility
- ▶ Reduce system cost with TÜV-compliant functional safety

# DMC

## Drives Motors Controls



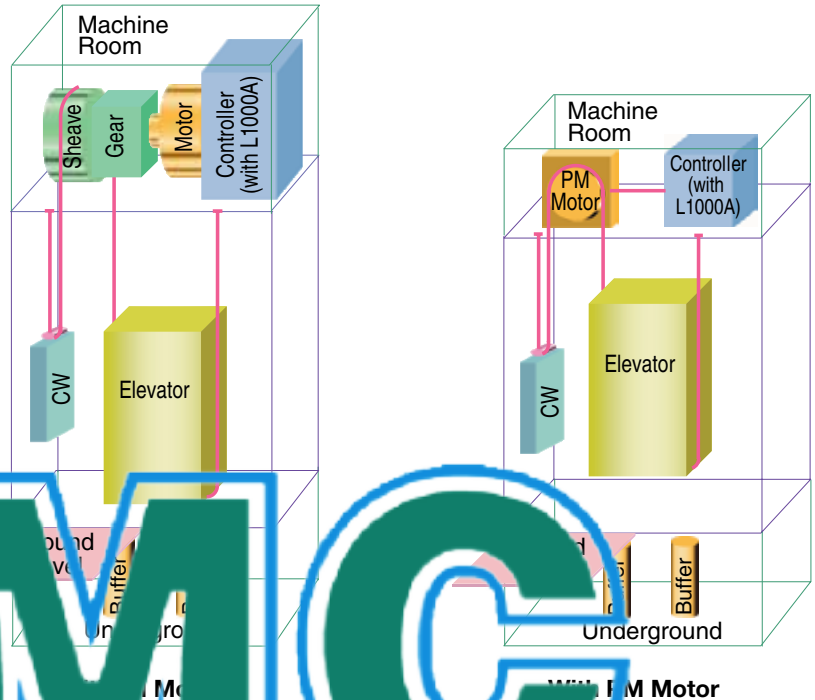
## Advanced Motor / Drive Technology

High-performance current vector control technology for induction and PM motor operation

- ▶ Single software parameter to switch between the various motor types
- ▶ Perfect for a wide range of elevator applications

### Control Modes

- ▶ PM motors (SPM/IPM motors): Closed Loop Vector for PM
- ▶ Induction motors (IM): V/f control, Open-Loop Vector, Closed-Loop Vector Control



# DMC

Powerful torque characteristics

Control Mode	Starting Torque	Speed Range	Motor Encoders and Option Cards
Closed-loop vector control for IM motors: For geared and gearless induction motors	200% at 0 rpm	1:1500	Incremental encoders: - Line driver - Complementary
Closed-loop vector control for PM motors: For geared and gearless permanent magnet motors	200% at 0 rpm	1:1500	Incremental encoders: - Line driver - Complementary Absolute encoders: - EnDat 2.1/01, 2.2/01, 2.2/22 - HEIDENHAIN ERN1387/487
Open-loop vector control for IM motors: For modernization and new installations	200% at 1 Hz	1:120	Not required
V/f control for IM motors: For modernization applications, when auto-tuning is not possible (e.g., motor current is not known)	150% at 3 Hz	1:40	Not required

## Auto-Tuning Methods

Auto-Tuning methods optimize motor handling performance. Rotational Auto-Tuning and Stationary Auto-Tuning are available for both induction motors and PM motors.

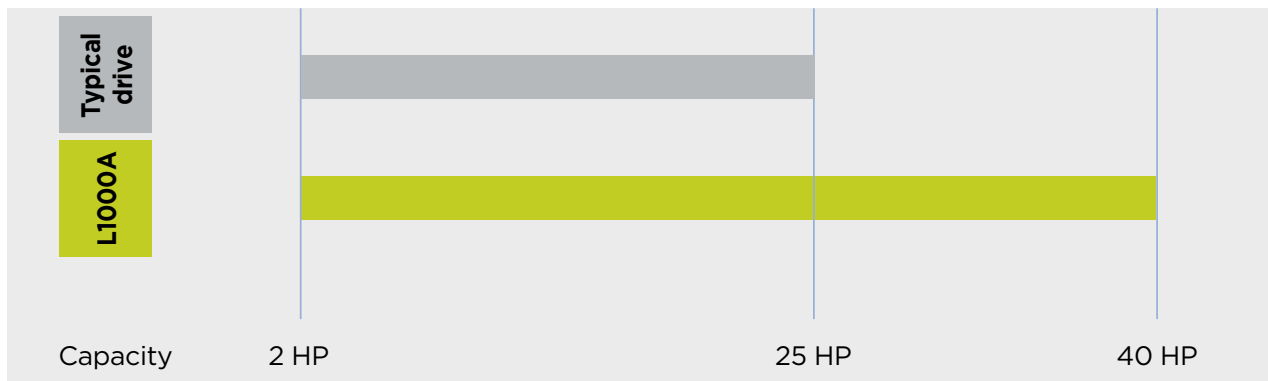
Auto-Tuning for Induction Motors	
Rotational Auto-Tuning	Rotational Auto-Tuning gives the most accurate results and is highly recommended (ropes have to be removed).
Stationary Auto-Tuning 1	Automatically calculates motor parameters needed for vector control (choose this tuning if ropes cannot be removed).
Stationary Auto-Tuning for Line-to-Line Resistance	Used for V/f control or vector control modes when the drive was previously set up properly and the motor cable has changed.
Stationary Auto-Tuning for Motor Test Report	Used when the motor test report is available. The nominal current and the rated torque must be entered on the motor report. All other motor-related parameters are calculated automatically (use this tuning if ropes cannot be removed).
Auto-Tuning for PM Motors	
Motor Parameter Settings	Use when the motor test report is available.
Stationary Auto-Tuning	Use when the motor nameplate data is only available. The drive automatically calculates the other motor-related parameters.
Stationary Auto-Tuning for Stator Resistance	Automatically calculates stator resistance only. Should be performed if the motor cable has changed.
Pole Position Auto-Tuning	Pre-tuning for selecting an encoder offset tuning function. Checks the PM motor to determine if the stationary encoder offset auto-tuning is possible. After the initial motor auto-tuning, the Pole Position Auto-Tuning attempts to detect the rotor position without motor rotation and auto-tunes the other motor-related parameters.
Rotating Encoder Offset Auto-Tuning	Auto-tunes the encoder offset of an absolute encoder while rotating the motor. Should be performed with no load (ropes have to be removed or car must be balanced).
Stationary Encoder Offset Auto-Tuning	Auto-tunes the encoder offset of an absolute encoder without rotating the motor. Can only be used with an IPM motor. If offset cannot be tuned properly by this method, perform the Rotating Encoder Offset Auto-Tuning.



## Drives Motors Controls

## Extended Drive Range with Built-In Braking Transistor

- ▶ L1000A provides built-in braking transistor for all drive models up to 40 HP



## LCD Operator for Simple Parameter Programming



can be used for a wide range of applications with a wide range of operating conditions. The LCD operator language includes: speed feedback level, alarm rates, stop function, stop code, and command parameter settings instantly. The LCD operator prepares the initial parameter settings to start the drive immediately.

- ▶ Verify function: checks parameters that have been changed from default values

- ▶ Multiple languages: 8 different languages (English, Japanese, German, French, Italian, Spanish, Portuguese, Chinese)

## Support Tool: iQrise DriveWizard 2010

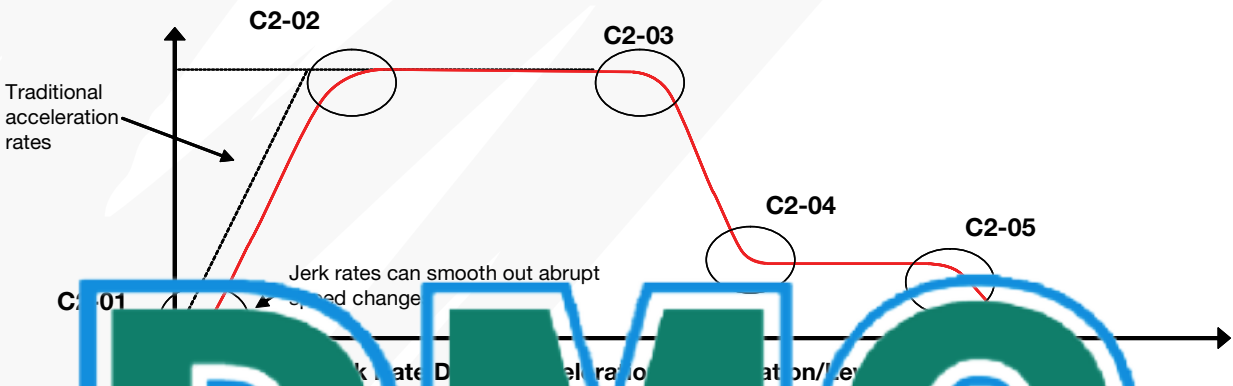
- ▶ The drive is equipped with a USB port for connecting to a PC with iQrise DriveWizard 2010 installed
- ▶ To adjust and edit parameters, access all monitors, create customized operation sequences, and observe drive performance with the oscilloscope function
- ▶ Parameter file storage
- ▶ Parameter upload/download function



**Note:** To obtain a copy of iQrise DriveWizard 2010, contact a YASKAWA representative.

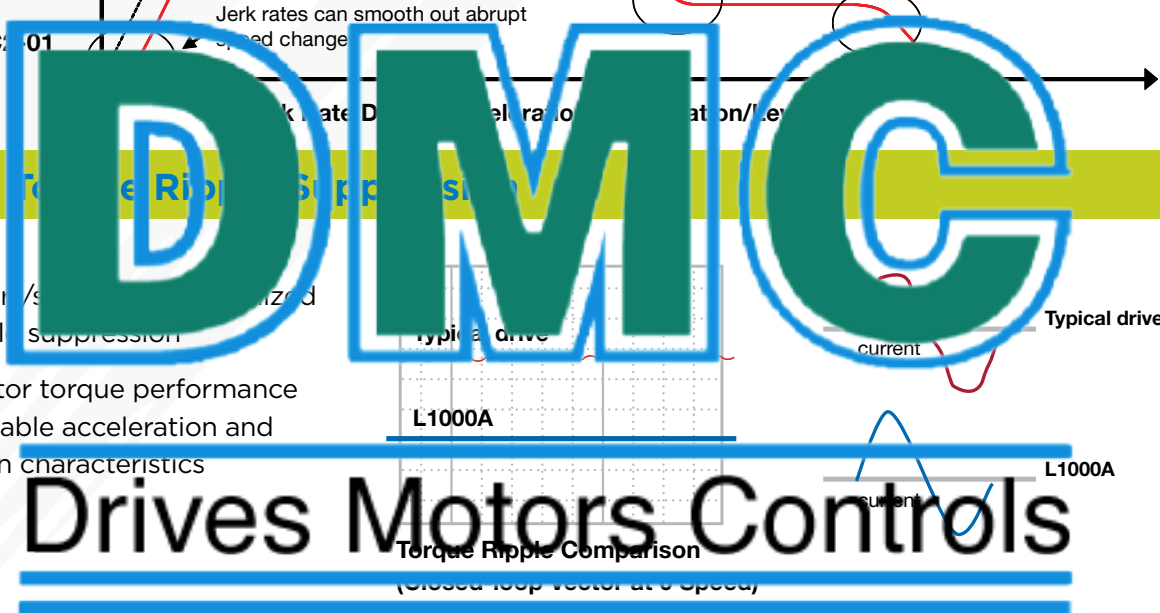
## Independent Jerk Rates

- ▶ Smooth ride performance during transitions from acceleration to nominal speed and deceleration to leveling speed
- ▶ The jerk rates are used to smooth out any speed changes due to sudden changes in the motor speed
- ▶ Selectable units: seconds, ft/s<sup>3</sup>, or m/s<sup>3</sup>



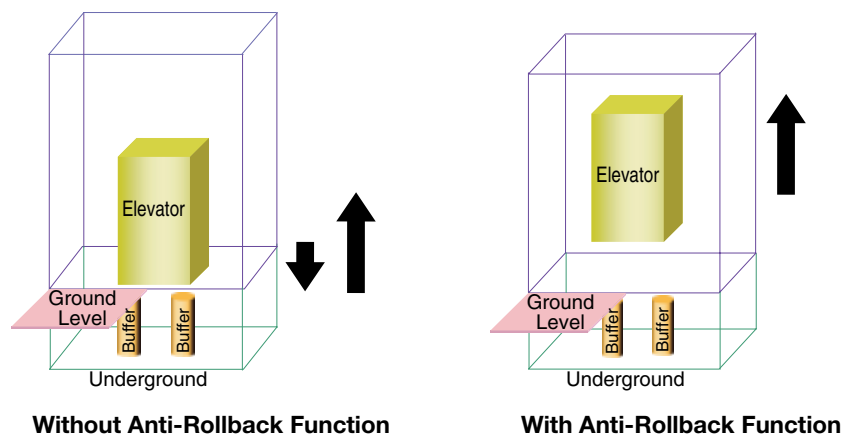
## Improved Torque Ripple Suppression

- ▶ Smooth start/stops with minimized torque ripple suppression
- ▶ Precise motor torque performance for comfortable acceleration and deceleration characteristics



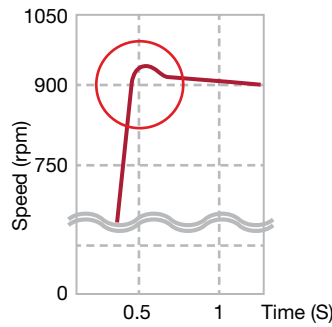
## Torque Compensation at Start (Anti-Rollback) without Load Sensor

- ▶ New sensorless torque compensation function includes the YASKAWA advanced anti-rollback function, preventing shock at start to ensure a smooth start
- ▶ The anti-rollback function provides the right amount of torque compensation to suppress shock and prevent speed variations when the brake is released

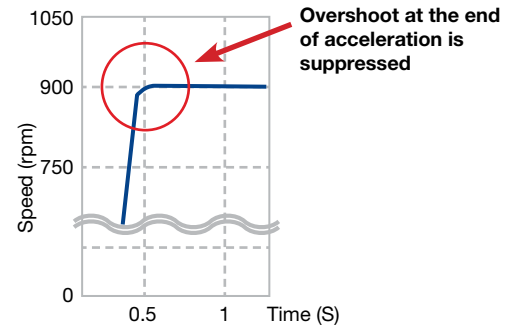


## System Inertia Compensation

- ▶ Inertia compensation provides ideal speed response
- ▶ Acceleration and deceleration compensation prevents vibration and overshoot
- ▶ Adjustment of jerk settings for acceleration and deceleration to ensure a perfectly smooth ride



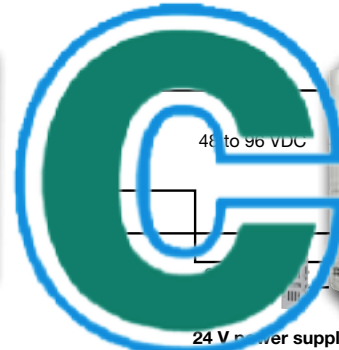
Typical Speed Control



w/Inertia Compensation

## UPS and Light-Load Direction Search Function for Rescue Operation

- ▶ A single-phase 270 VAC (or 48 to 96 VDC battery (power supply) provides the necessary power to evacuate
- ▶ In case of power failure, the A can bring the car to the next floor for evacuation
- ▶ A "light-load direction search" function triggered by the controller detects the light-load direction of the elevator



24 V power supply unit (attaches to drive)

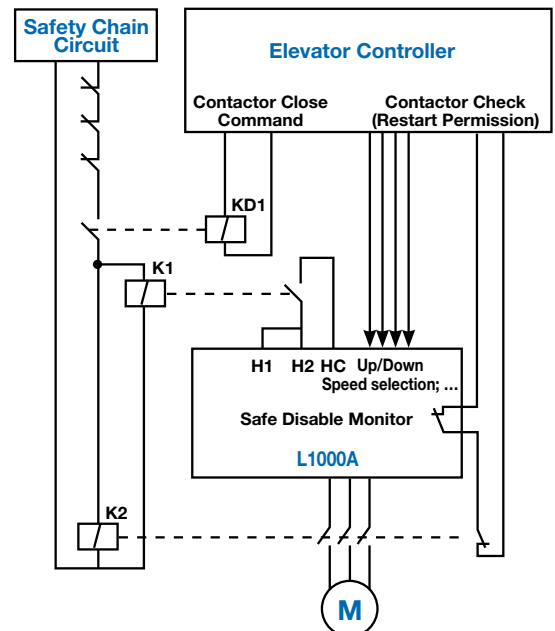
UPS Wiring and Operation

Back-up Battery Wiring and Operation

# Drives Motors Controls

## Standard Safety Features

- ▶ One contactor solution according to EN81-1
- ▶ L1000A is TÜV-compliant according to EN954-1 Cat. 3, Stop Category 0, ISO13849-1 (Cat.3 Pld) and IEC/EN 61508 SIL2
- ▶ An External Device Monitor (EDM) function has also been added to monitor the safety status of the L1000A
- ▶ Monitor status of input power supply: Immediately detects phase loss from the input power supply. Detection remains active when the L1000A is either running or stopped.



## Removable Terminal Board with Parameter Backup Function

In the event of a failure requiring a drive replacement, the removable terminal board offers benefits to reduce downtime:

- ▶ Removable terminal board allows quick drive replacement without removing the control wiring
- ▶ Saves parameter data for fast re-initialization of previous parameter settings

L1000A Terminal Board



Parameter		
Name	Number	Setting
Digital Operator Display Unit Selection	o1-03	6
Control Method Selection	A1-02	0
Speed Reference Selection	b1-01	1
Up/Down Command Selection	...	1

# DMC

## Long Performance Life

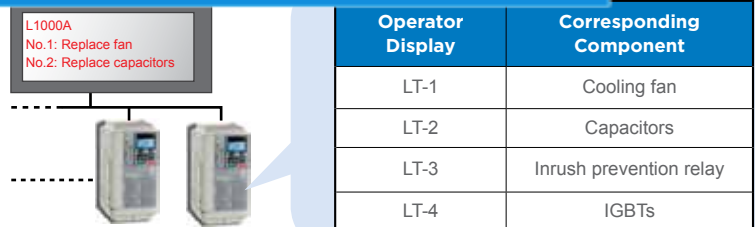
- ▶ Ten Years of Durable Performance  
Cooling fan, capacitors, relays, and IGBTs have been carefully selected and designed for a life expectancy of up to 10 years.

\* Assumes the drive is running continuously for 24 hours a day at 80% load with an ambient temperature of 45°C

- ▶ Performance Life Monitors  
YASKAWA's L1000A drive is equipped with performance life monitors that notify the user of part fatigue and maintenance periods to prevent problems before they occur.

▶ Drive outputs a signal to the control device indicating components may need to be replaced.

## Drives Motors Controls



## Certifications





# Model Number Key

CIMR-L U 2 A 0018 D A A

AC Drive

L1000 Series

Design Revision Order

No.	Region Code
U	USA

No.	Environmental Specification
A	Standard

Note: Contact YASKAWA for more information on environmental tolerance specifications.

# DMC

No.	Phase
2	3-phase
4	3-phase, 500 to 100 VAC
5	3-phase, 500 to 600 VAC

Enclosure Type
IP00
IP00 with protective cover

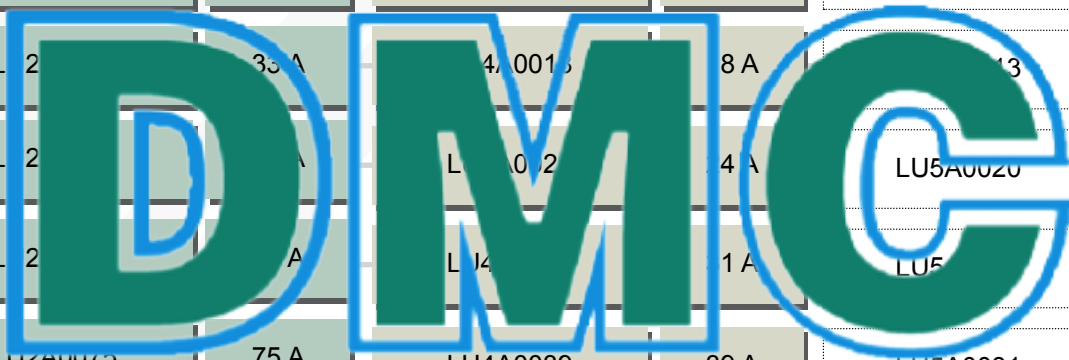
No.	Customize Specifications
A	Standard model

No.	Output Current Code (A)
	See chart on next page

## Drives Motors Controls

## Product Lineup

HP	Three-Phase 200 to 240 VAC		Three-Phase 380 to 480 VAC		Three-Phase 500 to 600 VAC	
	Model CIMR-	Rated Output	Model CIMR-	Rated Output	Model CIMR-	Rated Output
2	LU2A0011	11 A				
3	LU2A0014	14 A	LU4A0007	7 A		
5	LU2A0018	17.5 A	LU4A0009	9.2 A	LU5A0007	7 A
7.5	LU2A0025	25 A	LU4A0015	14.8 A	LU5A0011	11 A
10	LU2A0033	33 A	LU4A0021	21 A	LU5A0013	13 A
15	LU2A0045	45 A	LU4A0027	27 A	LU5A0020	20 A
20	LU2A0055	55 A	LU4A0033	33 A	LU5A0025	25 A
25	LU2A0075	75 A	LU4A0039	39 A	LU5A0031	31 A
30	LU2A0085	85 A	LU4A0045	45 A	LU5A0037	37 A
40	LU2A0115	115 A	LU4A0060	60 A	LU5A0048	48 A
50	LU2A0145	145 A	LU4A0075	75 A	LU5A0060	60 A
60	LU2A0180	180 A	LU4A0091	91 A	LU5A0072	72 A
75	LU2A0215	215 A	LU4A0112	112 A	LU5A0090	90 A
100	LU2A0283	283 A	LU4A0150	150 A	LU5A0115	115 A
125	LU2A0346	346 A	LU4A0180	180 A		
150	LU2A0415	415 A	LU4A0216	216 A		
200			LU4A0260	260 A		



**Drives Motors Controls**

Dotted lines indicate items not yet available

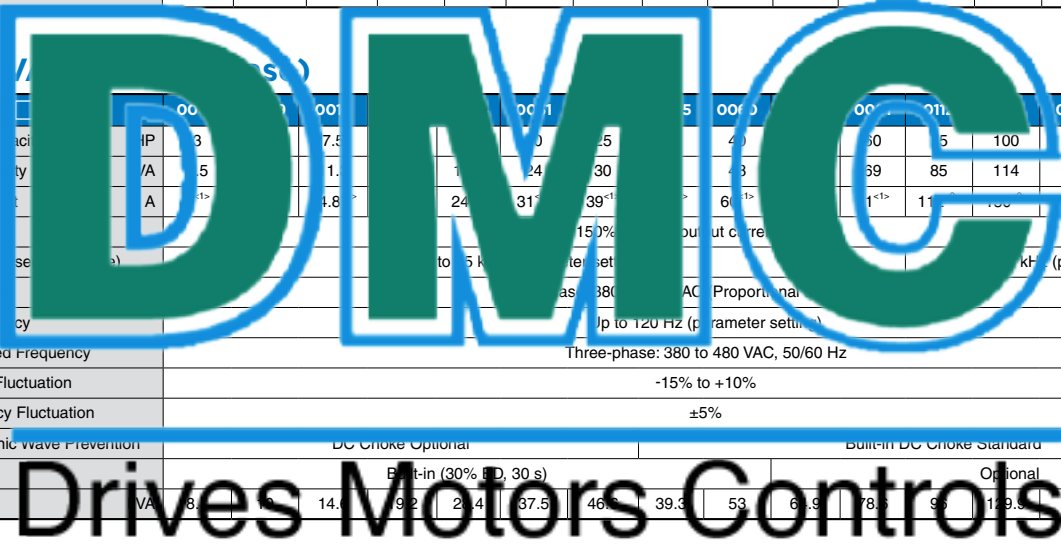
# Standard Specifications

## 200 to 240 VAC (Three-Phase)

Model CIMR-LU2A		0011	0014	0018	0025	0033	0047	0060	0075	0085	0115	0145	0180	0215	0283	0346	0415	
Max. Applicable Motor Capacity		HP	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150
Rated Output Capacity		kVA	3.7	4.6	6.7	9.5	12.6	17.9	23	29	32	44	55	69	82	108	132	158
Rated Output Current		A	11 <sup>&lt;1&gt;</sup>	14 <sup>&lt;1&gt;</sup>	17.5 <sup>&lt;1&gt;</sup>	25 <sup>&lt;1&gt;</sup>	33 <sup>&lt;1&gt;</sup>	47 <sup>&lt;1&gt;</sup>	60 <sup>&lt;1&gt;</sup>	75 <sup>&lt;1&gt;</sup>	85 <sup>&lt;1&gt;</sup>	115 <sup>&lt;1&gt;</sup>	145 <sup>&lt;2&gt;</sup>	180 <sup>&lt;2&gt;</sup>	215 <sup>&lt;2&gt;</sup>	283 <sup>&lt;2&gt;</sup>	346 <sup>&lt;2&gt;</sup>	415 <sup>&lt;3&gt;</sup>
Overload Tolerance			150% of rated output current for 60 s															
Carrier Frequency (User Adjustable)			2 to 15 kHz (parameter setting)									2 to 10 kHz (parameter setting)						
Max. Output Voltage			Three-phase: 200 to 240 VAC (Proportional to input voltage)															
Max. Output Frequency			Up to 120 Hz (parameter setting)															
Rated Voltage/Rated Frequency			Three-phase: 200 to 240 VAC, 50/60 Hz															
Allowable Voltage Fluctuation			-15% to +10%															
Allowable Frequency Fluctuation			±5%															
Reactor for Harmonic Wave Prevention			DC Choke Optional									Built-in DC Choke Standard						
Braking Transistor			Built-in (30% ED, 30 s)									Optional						
Power Supply		kVA	5.8	7.8	9.5	14	18	27	36	44	37	51	62	75	91	124	148	180

## 380 to 480 VAC (Three-Phase)

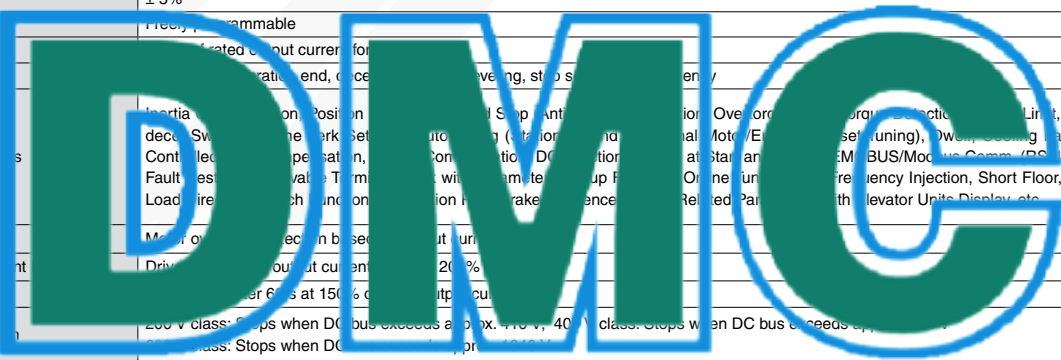
Model CIMR-LU4A		0011	0014	0018	0025	0033	0047	0060	0075	0085	0115	0145	0180	0216	0260			
Max. Applicable Motor Capacity		HP	3	4.5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	200
Rated Output Capacity		kVA	5	6.7	10	14	19	24	30	37	44	55	69	85	114	137	165	198
Rated Output Current		A	15 <sup>&lt;1&gt;</sup>	18 <sup>&lt;1&gt;</sup>	24 <sup>&lt;1&gt;</sup>	31 <sup>&lt;1&gt;</sup>	40 <sup>&lt;1&gt;</sup>	50 <sup>&lt;1&gt;</sup>	60 <sup>&lt;1&gt;</sup>	70 <sup>&lt;1&gt;</sup>	85 <sup>&lt;1&gt;</sup>	110 <sup>&lt;1&gt;</sup>	135 <sup>&lt;2&gt;</sup>	165 <sup>&lt;2&gt;</sup>	216 <sup>&lt;2&gt;</sup>	260 <sup>&lt;3&gt;</sup>		
Overload Tolerance			150% of rated output current for 60 s															
Carrier Frequency (User Adjustable)			2 to 15 kHz (parameter setting)									2 to 10 kHz (parameter setting)						
Max. Output Voltage			Three-phase: 380 to 480 VAC (Proportional to input voltage)															
Max. Output Frequency			Up to 120 Hz (parameter setting)															
Rated Voltage/Rated Frequency			Three-phase: 380 to 480 VAC, 50/60 Hz															
Allowable Voltage Fluctuation			-15% to +10%															
Allowable Frequency Fluctuation			±5%															
Reactor for Harmonic Wave Prevention			DC Choke Optional									Built-in DC Choke Standard						
Braking Transistor			Built-in (30% ED, 30 s)									Optional						
Power Supply		kVA	8	11	14	19	24	31	37	44	53	64	78	91	119	145	179	227



<1>: Carrier frequency default is 2 kHz for models 2A0115, 4A0001 and below. Higher carrier frequencies require derating.  
 <2>: Carrier frequency default is 5 kHz for models 2A0145 to 2A0346, 4A0112 to 4A0216. Higher carrier frequencies require derating.  
 <3>: Carrier frequency default is 2 kHz for models 2A0415 and 4A0200.

# Common Specifications

Item	Specifications
Control Method	Sinewave PWM (Flux Vector Control, Open Loop Vector Control, V/f Control, PM Flux Vector control)
Frequency Control Range	0.01 to 120 Hz
Frequency Accuracy (Temperature Fluctuation)	Digital reference: $\pm 0.01\%$ , $-10$ to $+40^\circ\text{C}$ Analog reference: $\pm 0.1\%$ , $25 \pm 10^\circ\text{C}$
Frequency Setting Resolution	Digital reference: 0.01 Hz Analog reference: 0.03/60 Hz (11 bit)
Output Speed Resolution	0.001 Hz
Frequency Setting Signal	$-10$ to $+10\text{V}$ , $0$ to $+10\text{V}$
Starting Torque <sup>&lt;1&gt;</sup>	200% at 0.3 Hz (Open Loop Vector Control), 200% at 0 rpm (Flux Vector Control, PM Flux Vector Control)
Speed Control Range <sup>&lt;1&gt;</sup>	1:40 (V/f Control), 1:200 (Open Loop Vector Control), 1:1500 (Flux Vector Control, PM Flux Vector Control)
Speed Control Accuracy <sup>&lt;1&gt;</sup>	$\pm 3\%$ (V/f Control), $\pm 0.2\%$ (Open Loop Vector Control at $25 \pm 10^\circ\text{C}$ ), $\pm 0.02\%$ (Flux Vector Control, PM Flux Vector Control at $25 \pm 10^\circ\text{C}$ )
Speed Response <sup>&lt;1&gt;</sup>	10 Hz (Open Loop Vector Control), 50 Hz (Flux Vector Control, PM Flux Vector Control)
Torque Limit	Vector control allows separate settings in four quadrants
Accel/Decel Ramp	0.01 to 6000.0 s (4 selectable combinations of independent acceleration and deceleration settings)
Braking Torque	Approx. 20% (approx. 125% with dynamic braking resistor option), Models up to CIMR-LQ2A0115, 4A0060 have a built-in transistor
Torque Accuracy	$\pm 5\%$
V/f Characteristics	Freely programmable
Overload Accuracy	Overload protection based on rated output current for 60 s
Jerk (S-Curve) Rate	Freely programmable
Main Control Functions	Inertia Compensation, Position Control, Stop Anticipation, Overcurrent Torque Restriction, Limit, Speed Reference, Accel/Decel Switch, Brake Setting, Auto Tuning (Flux Vector and Vector Control), Motor/Electromechanical Parameter Setting, Over/Under Voltage, Over/Under Temperature Control, Speed Compensation, Commutation, DC Injection, at Start and Stop, PM BUS/Module Comm. (RS-422/485 max. 115.2 kbps), Fault Reset, Thermal Protection, with thermistor, Trip Function, Online Parameter Setting, Frequency Injection, Short Floor, Rescue Operation (Light Load Release), Machine Control, Position Feedback, Brake Reference, Related Parameters, Elevator Units Display, etc.
Motor Protection	Motor overcurrent protection based on rated output current
Momentary Overcurrent	Drive stops when output current exceeds approx. 200% for 60 s
Overload Protection	Drive stops when output current exceeds approx. 150% for 60 s
Overvoltage Protection	200 V class: Stops when DC bus exceeds approx. 410 V; 400 V class: Stops when DC bus exceeds approx. 475 V; 600 V class: Stops when DC bus exceeds approx. 540 V
Undervoltage Protection	Stops when DC bus voltage falls below the following levels: Three-phase 200 V class: approx. 190 V; Single-phase 200 V class: approx. 160 V; Three-phase 400 V class: approx. 380 V; Three-phase 380 V class: approx. 350 V; Three-phase 600 V class: approx. 475 V
Heatsink Overheat Protection	Protection by thermistor
Braking Resistance Overheat Protection	Overheat sensor for braking resistor (optional EBF-type, 3% ED)
Stall Prevention	Stop rate settings allowed during acceleration and during run. Enable/disable only during deceleration.
Ground Fault Protection	Protection by electronic circuit <sup>&lt;3&gt;</sup>
Charge LED	Charge LED remains lit until DC bus has fallen below approx. 50 V
Area of Use	Indoors
Ambient Temperature	$-10$ to $40^\circ\text{C}$ (IP00 enclosure with top protective cover); $-10$ to $50^\circ\text{C}$ (IP00 enclosure)
Humidity	95% RH or less (non-condensing)
Storage Temperature	$-20$ to $60^\circ\text{C}$ (short-term temperature during transportation)
Altitude	Up to 1000 meters without derating, up to 3000 meters with output current and voltage derating
Vibration/Shock	10 to 20 Hz: $9.8 \text{ m/s}^2$ ; 20 to 55 Hz: $5.9 \text{ m/s}^2$ (2A0011 to 2A0180; 4A0007 to 4A0150) or $2.0 \text{ m/s}^2$ (2A0215 to 2A0415, 4A0180 to 4A0260)
Safety Standard	UL508C, UL, cUL, CE, CSA B44.1
Network Communications	Modbus communications. (RS-422/485 max. 115.2 kbps) standard. Options: CANopen, others
Feedback Devices	Incremental, EnDat, SIN/COS
Protection Design	IP00 with top protective cover, IP00



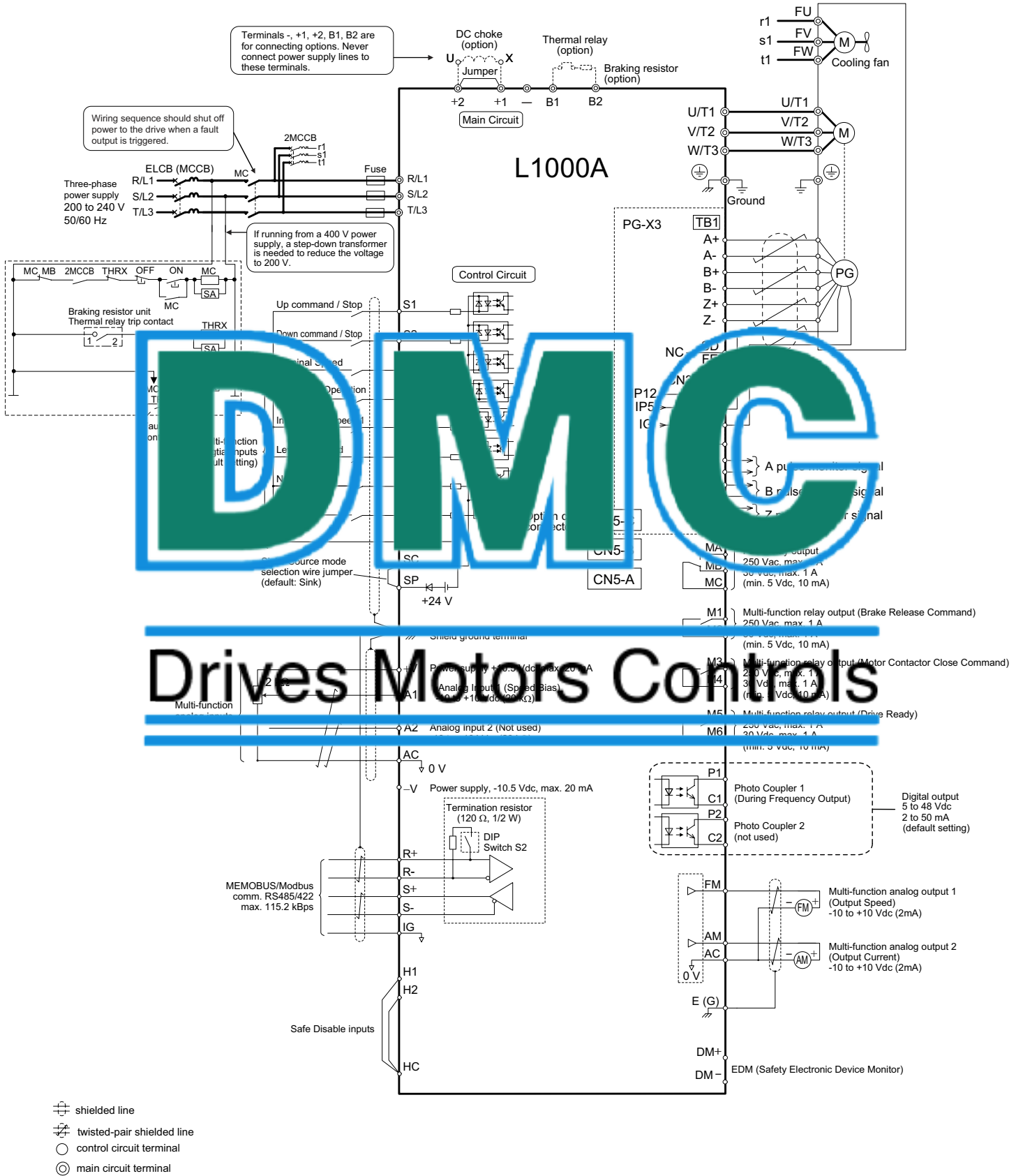
## Drives Motors Controls

<sup><1></sup>: The accuracy of these values depends on motor characteristics, ambient conditions, and drive settings. Specifications may vary with different motors and with changing motor temperature. Contact YASKAWA for consultation.

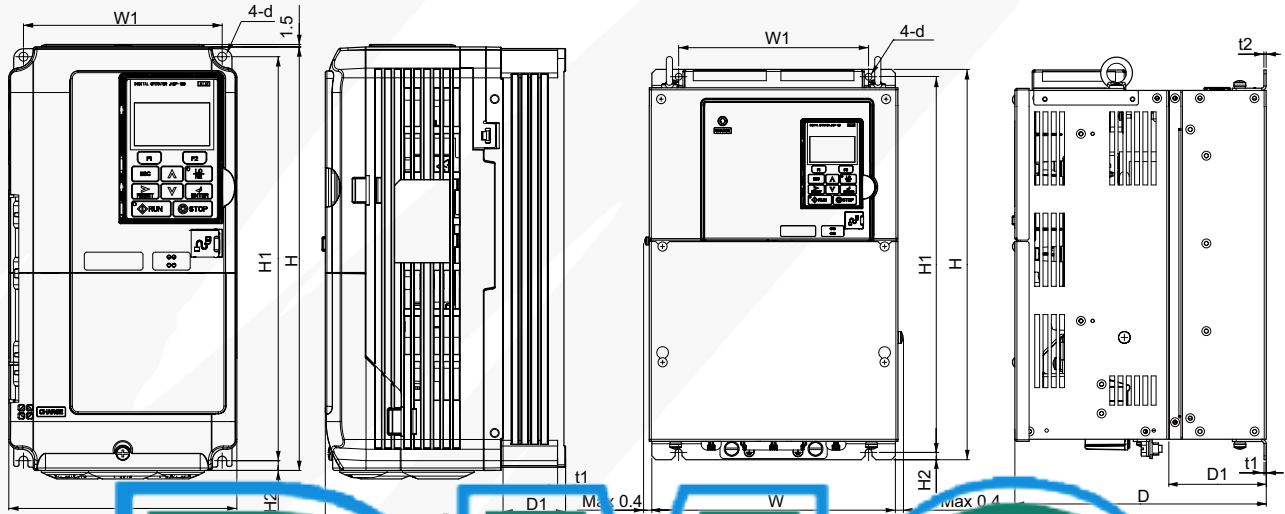
<sup><2></sup>: Overload protection may be triggered when operating with 150% of the rated output current if the output speed is less than 6 Hz.

<sup><3></sup>: Ground protection cannot be provided when the impedance of the ground fault path is too low, or when the drive is powered up while a ground fault is present at the output.

# Connection Diagram



## IP00 Enclosure with Top Protective Cover Dimensions



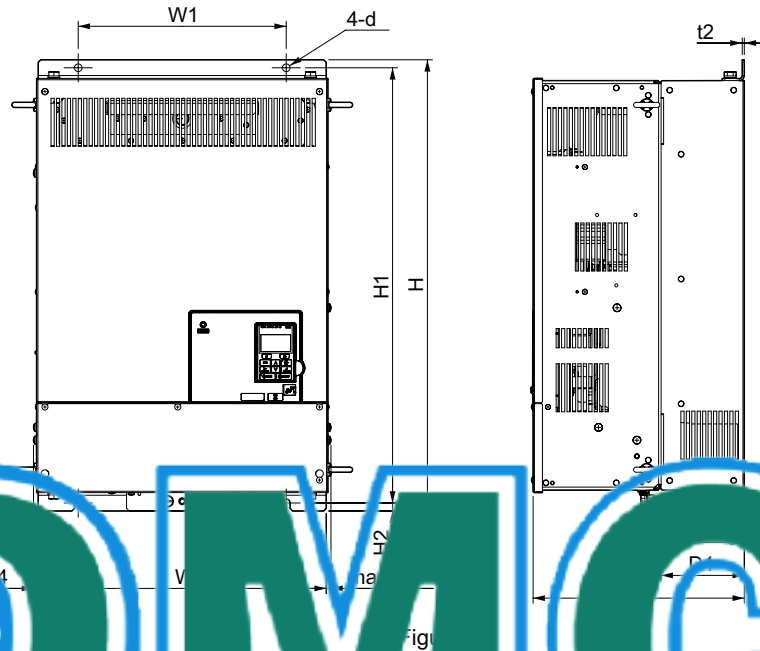
### 200 to 240 VAC Models

Model CIMR-LU□	Figure	H	W	D	H1	H2	W1	D1	t1	t2	d	Weight (lb)
2A0011	1	10.2	5.5	6.5	9.8	0.2	4.8	2.2	0.2	-	M5	7.7
2A0014		10.2	5.5	6.5	9.8	0.2	4.8	2.2	0.2	-	M5	7.7
2A0018		10.2	5.5	6.6	9.8	0.2	4.8	2.2	0.2	-	M5	7.7
2A0025		10.2	5.5	6.6	9.8	0.2	4.8	2.2	0.2	-	M5	8.8
2A0033		10.2	5.5	6.6	9.8	0.2	4.8	2.2	0.2	-	M5	8.8
2A0047		11.8	7.1	7.4	11.2	0.3	6.3	2.2	0.2	-	M5	12.3
2A0060		13.8	8.7	7.8	13.2	0.3	7.6	3.1	0.2	-	M6	19.2
2A0075		13.8	8.7	7.8	13.2	0.3	7.6	3.1	0.2	-	M6	21.4
2A0085		15.7	9.8	10.2	15.2	0.3	7.7	3.9	0.1	0.1	M6	46.3
2A0115		17.7	10.8	10.2	17.1	0.3	8.7	3.9	0.1	0.1	M6	55.1
2A0145	2	21.7	12.8	11.1	21.1	0.3	10.2	4.3	0.1	0.1	M6	81.6
2A0180		21.7	12.8	11.1	21.1	0.3	10.2	4.3	0.1	0.1	M6	83.8

### 380 to 480 VAC Models

Model CIMR-LU□	Figure	Dimensions (in.)										Weight (lb)
		H	W	D	H1	H2	W1	D1	t1	t2	d	
4A0007	1	10.2	5.5	6.5	9.8	0.2	4.8	2.2	0.2	-	M5	7.7
4A0009		10.2	5.5	6.5	9.8	0.2	4.8	2.2	0.2	-	M5	7.7
4A0015		10.2	5.5	6.6	9.8	0.2	4.8	2.2	0.2	-	M5	8.6
4A0018		10.2	5.5	6.6	9.8	0.2	4.8	2.2	0.2	-	M5	8.9
4A0024		11.8	7.1	6.6	11.2	0.3	6.3	2.2	0.2	-	M5	11.9
4A0031		11.8	7.1	7.4	11.2	0.3	6.3	3.0	0.2	-	M5	11.9
4A0039		13.8	8.7	7.8	13.2	0.3	7.6	3.1	0.2	-	M6	18.3
4A0045		15.7	9.8	10.2	15.2	0.3	7.7	3.9	0.1	0.1	M6	46.3
4A0060		17.7	10.8	10.2	17.1	0.3	8.7	3.9	0.1	0.1	M6	55.1
4A0075		2	20.1	12.8	10.2	19.5	0.3	10.2	4.1	0.1	0.1	M6
4A0091	20.1		12.8	10.2	19.5	0.3	10.2	4.1	0.1	0.1	M6	79.4
4A0112	21.7		12.8	11.1	21.1	0.3	10.2	4.3	0.1	0.1	M6	90.4
4A0150	21.7		12.8	11.1	21.1	0.3	10.2	4.3	0.1	0.1	M6	92.6

## IP00 Enclosure Dimensions



### 200 to 240 VAC Models

Model CIMR-LU□	Dimensions (in.)											Weight (lb)
	Figure	H	W	D	H1	H2	W1	D1	t1	t2	d	
2A0215	1	27.8	17.7	13.0	26.8	0.5	12.8	5.1	0.1	0.1	M10	167.6
2A0283		27.8	17.7	13.0	26.8	0.5	12.8	5.1	0.1	0.1	M10	176.4
2A0346		31.5	19.7	13.8	30.4	0.5	14.6	5.1	0.2	0.2	M12	216.1
2A0415		31.5	19.7	13.8	30.4	0.5	14.6	5.1	0.2	0.2	M12	218.3

### 380 to 480 VAC Models

Model CIMR-LU□	Dimensions (in.)											Weight (lb)
	Figure	H	W	D	H1	H2	W1	D1	t1	t2	d	
4A0180	1	27.8	17.7	13.0	26.8	0.5	12.8	5.1	0.1	0.1	M10	174.2
4A0216		31.5	19.7	13.8	30.4	0.5	14.6	5.1	0.2	0.2	M12	211.6
4A0260		31.5	19.7	13.8	30.4	0.5	14.6	5.1	0.2	0.2	M12	224.9

## Drive Watt Loss Data

### 200 to 240 VAC Models

Model CIMR-LU□	Carrier Frequency: 8 kHz			
	Rated Amps (A)	Heatsink Loss (W)	Interior Unit Loss (W)	Total Loss (W)
2A0011	11.0	64.0	58.0	122.0
2A0014	14.0	77.0	60.0	137.0
2A0018	17.5	100.7	67.4	168.1
2A0025	25.0	194.4	92.3	286.6
2A0033	33.0	213.8	104.8	318.7
2A0047	47.0	280.2	129.9	410.2
2A0060	60.0	394.9	162.8	557.7
2A0075	75.0	459.8	220.9	680.7
2A0085	85.0	510.3	210.0	721.2
2A0115	110.0	662.4	240.0	912.4
2A0145	140.0	814.9	307.3	1122.2
2A0180	180.0	976.7	378.4	1354.1
2A0215	210.0	1144.0	448.2	1980.2
2A0283	280.0	1514.0	514.9	2523.9
2A0346	340.0	1870.0	616.8	3346.8
2A0415	410.0 <sup>2</sup>	2672.1	854.1	3626.2

\*1: Value assumes the carrier frequency is set to 5 kHz.

\*2: Value assumes the carrier frequency is set to 2 kHz.

### 380 to 480 VAC Models

Model CIMR-LU□	Carrier Frequency: 8 kHz			
	Rated Amps (A)	Heatsink Loss (W)	Interior Unit Loss (W)	Total Loss (W)
4A0007	7.0	33.0	33.0	108.0
4A0009	9.2	68.5	61.0	129.5
4A0015	14.8	135.4	85.7	221.1
4A0018	18.0	149.9	97.0	246.9
4A0024	24.0	208.0	115.1	323.2
4A0031	31.0	262.6	140.8	403.4
4A0039	39.0	329.8	179.4	509.2
4A0045	45.0	348.5	169.6	518.1
4A0060	60.0	484.1	217.2	701.3
4A0075	75.0	563.4	254.0	817.4
4A0091	91.0	722.6	299.0	1021.7
4A0112	112.0 <sup>*1</sup>	908.2	416.4	1324.6
4A0150	150.0 <sup>*1</sup>	1340.3	580.1	1920.3
4A0180	180.0 <sup>*1</sup>	1771.4	541.0	2312.5
4A0216	216.0 <sup>*1</sup>	2360.2	715.1	3075.3
4A0260	260.0 <sup>*2</sup>	2390.9	786.7	3177.6

\*1: Value assumes the carrier frequency is set to 5 kHz.

\*2: Value assumes the carrier frequency is set to 2 kHz.



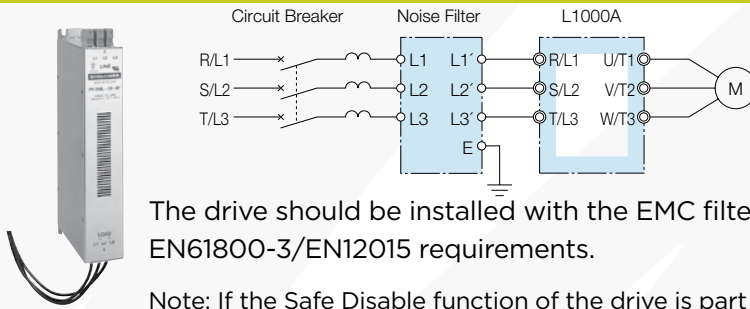
## Options

Name	Purpose	Model
AC Reactors or DC Link Chokes	Harmonic Mitigation	For detailed information contact YASKAWA.
Analog Input	Provides 14-bit high-precision and high-resolution analog speed reference setting. <ul style="list-style-type: none"> <li>• Input signal level: -10 to +10 Vdc (20 k<math>\Omega</math>), 4 to 20 mA (500 <math>\Omega</math>)</li> <li>• Input channels: 3 channels, DIP switch for input voltage/input current selection</li> <li>• Input resolution: Input voltage 13-bit signed (1/8192), Input current 1/6554</li> </ul>	AI-A3
Digital Input	Provides 16-bit digital speed reference setting. <ul style="list-style-type: none"> <li>• Input signal: 16-bit binary, 2 digit BCD + sign signal + set signal</li> <li>• Input voltage: +24 V (isolated)</li> <li>• Input current: 8 mA</li> </ul> Selectable Parameter: 8-bit, 12-bit, 16-bit	DI-A3
CANopen Communications Interface	Used for running or stopping the drive, setting or referencing parameters and monitoring output speed, output current, or similar items through CANopen communication with the host controller.	SI-S3
Analog Monitor	Provides 12-bit outputs analog signal for monitoring drive output state (output speed, output current, output torque). <ul style="list-style-type: none"> <li>• Output voltage: 1-bit signal (0 to 8 Vdc)</li> <li>• Output voltage: 10 to 100 mV (absolute)</li> <li>• Output channels: 2 channels</li> </ul>	AO-3
Digital Output	Provides digital output for monitoring drive output state (digital, zero speed output, etc.). Output line: motor driver, motor lines (8 mA or less), Relay output: 2 channels (250 V or less, etc.), Alarm output: 1 channel	DO-A3
Open Collector PG Interface	For control modes requiring a per-pole motor feedback: <ul style="list-style-type: none"> <li>• PG frequency range: Approx. 50 kHz max.</li> <li>• Power supply output for PG: +24 V, max. current 30 mA</li> <li>• Pulse monitor output: Open collector, +24 V, max. current 30 mA</li> <li>• Power supply output for PG: +12 V, max. current 200 mA</li> </ul>	PG-B3
Line Driver PG Interface	For control modes requiring a PG encoder for motor feedback. <ul style="list-style-type: none"> <li>• Phase A, B, and Z pulse (differential pulse) inputs (RS-422)</li> <li>• PG frequency range: up to 30 kHz (approx.)</li> <li>• Pulse monitor output: RS-422</li> <li>• Power supply output for PG: +5 V or +12 V, max. current 200 mA</li> </ul>	PG-E3
Absolute Encoder	EnDat Encoder Feedback	PG-E3 (EnDat 2.1/01, 2.2/01, 2.2/22)
Absolute Encoder	HEIDENHAIN Encoder Feedback	PG-E3 (HEIDENHAIN ERN1387/487)
LED Operator	Easy long distance viewing	JVOP-182
Braking Resistor	Used to shorten the deceleration time by dissipating regenerative energy	For detailed information contact YASKAWA.
Braking Resistor Unit	Shortened deceleration time results when the L1000A is used with a Braking Resistor Unit. For units above 40 HP.	CDBR series
24 V Power Supply	Provides a separate power supply for the control circuit and option boards. Note: Parameter settings cannot be changed when the drive is operating solely from this power supply.	PS-A10H PS-A10L
USB Copy Unit (RJ-45/USB compatible port)	<ul style="list-style-type: none"> <li>• Adapter for connecting the drive to the USB port of a PC</li> <li>• Can copy parameter settings easily and quickly to be later transferred to another drive</li> </ul>	JVOP-181
LCD Operator Extension Cable	Extension cable for connecting the LCD operator.	UWR0051: 3.3 ft. (1 m) UWR0052: 10 ft. (3 m)



## Drives Motors Controls

## Noise Filter (EMC Filter) Option



Note: Do not connect the input noise filter to the drive output terminals (U/T1, V/T2, W/T3). Connect in parallel when using two filters. Only a single noise filter is required if the filter is made by Schaffner EMC.

The drive should be installed with the EMC filters listed below in order to comply with the EN61800-3/EN12015 requirements.

Note: If the Safe Disable function of the drive is part of the safety concept of an elevator machine or installation and used for a safe stop according to EN60204-1, stop category O. This also applies when using the safe disable function in one motor contactor installations. EMC filters must be used when IEC/EN61508 (functional safety) conformance is required.

### 200 to 240 VAC Models

Model CIMR-LU□	Filter Data (Manufacturer: Schaffner)								
	Model Number	Rated Current (A)	Weight (lb)	Figure (next page)	H	W	D	X	Y
2A0011		18			3.0			12.3	4.5
2A0014		18			3.0			12.3	4.5
2A0018	FS5972-35-07	35	4.6	1	4.0	8.1	2.0	13.2	6.9
2A0025		18			3.0			12.3	4.5
2A0033	FS5972-60-07	60	8.8	1	6.1	9.3	2.6	15.4	8.1
2A0047		18			3.0			12.3	4.5
2A0060	FS5972-100-35	100	7.5	2	3.0	3.5	5.9	10.0	2.6
2A0075		100	7.5	2	3.0	3.5	5.9	10.0	2.6
2A0085	FS5972-170-40	170	13.2	2	7.8	4.7	6.7	14.4	4.0
2A0115		18			3.0			12.3	4.5
2A0145	FS5972-250-37	250	25.8	3	24.0	5.1	9.4	19.6	3.5
2A0180		18			3.0			12.3	4.5
2A0215	FS5972-410-99	410	23.1	3	15.2	10.2	4.5	4.7	9.3
2A0283		18			3.0			12.3	4.5
2A0346	FS5972-300-39	300	24.3	3	15.2	10.2	4.5	4.7	9.3
2A0415		18			3.0			12.3	4.5

Drives Motors Controls

### 380 to 480 VAC Models

Model CIMR-LU□	Filter Data (Manufacturer: Schaffner)								
	Model Number	Rated Current (A)	Weight (lb)	Figure (next page)	H	W	D	X	Y
4A0007	FS5972-10-07	10	2.6	1	13.0	5.6	1.8	12.3	4.5
4A0009	FS5972-18-07	18	3.7		13.0	5.6	1.8	12.3	4.5
4A0015	FS5972-35-07	35	4.6	1	14.0	8.1	2.0	13.2	6.9
4A0018									
4A0024									
4A0031	FS5972-60-07	60	8.8	1	16.1	9.3	2.6	15.4	8.1
4A0039									
4A0045									
4A0060	FS5972-100-35	100	7.5	2	3.0	3.5	5.9	10.0	2.6
4A0075									
4A0091	FS5972-170-40	170	13.2	2	7.8	4.7	6.7	14.4	4.0
4A0112									
4A0150									
4A0180	FS5972-250-37	250	25.8	3	24.0	5.1	9.4	19.6	3.5
4A0216	FS5972-410-99	410	23.1	3	15.2	10.2	4.5	4.7	9.3
4A0260									

## Noise Filter (EMC Filter) Dimensions

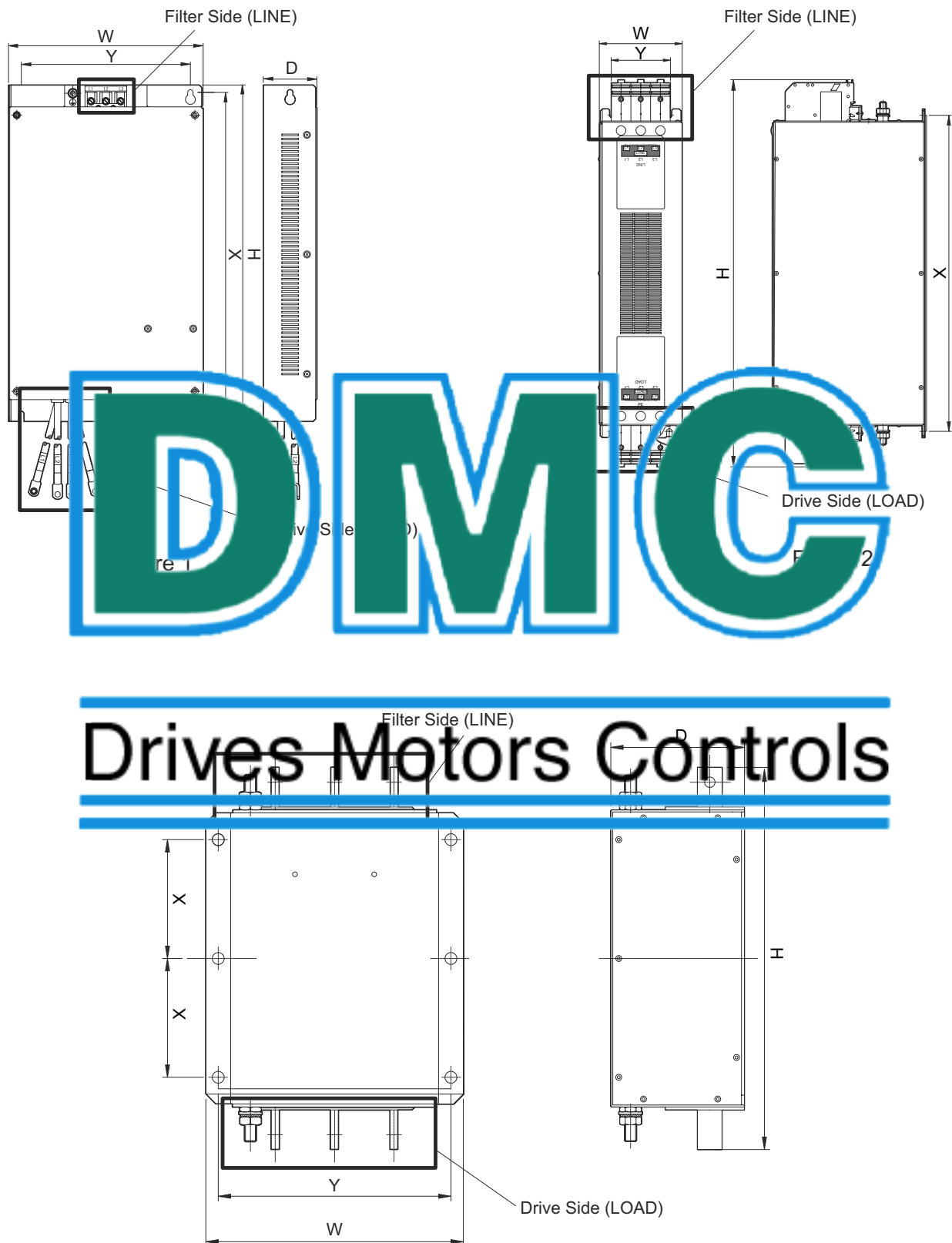


Figure 3

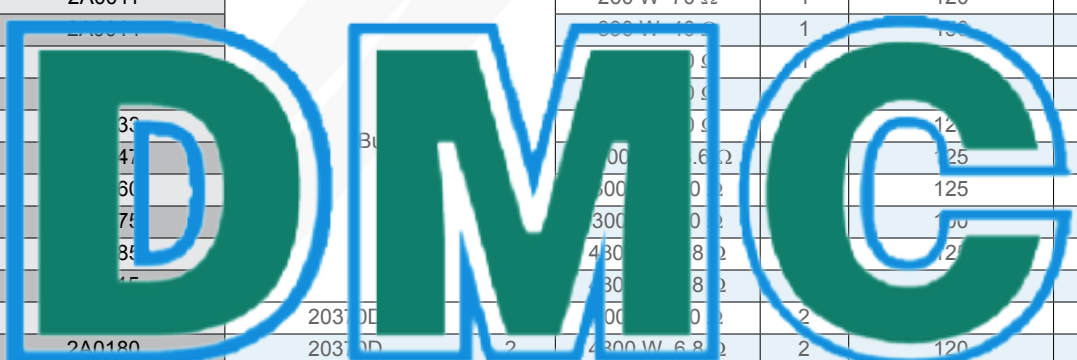
## CDBR Braking Unit Option



The L1000A includes a built-in braking transistor up to 40 HP (200-240 VAC and 380-480 VAC). For L1000A drives above 40 HP with braking torque requirements, a CDBR Braking Unit is available as an option. Please contact a YASKAWA representative for further information on braking resistors. The table below indicates the recommended CDBR Braking Unit and the resistor specification.

### 200 to 240 VAC Models

Max. Applicable Motor (HP)	L1000A	Braking Unit		Braking Resistor Unit			Min.* Connection Resistance (Ω)
	Model CIMR-LU□	Model CDBR-□	Qty.	Resistor Specifications (per unit)	Qty.	Braking Torque (%) (10% ED)	
2	2A0011			260 W 70 Ω	1	120	16
3	2A0014			300 W 48 Ω	1	135	16
5	2A0017			300 W 48 Ω	1	135	16
7.5	2A0020			300 W 48 Ω	1	135	16
10	2A0023			300 W 48 Ω	1	120	9.6
15	2A0026			300 W 48 Ω	1	125	9.6
20	2A0029			300 W 48 Ω	1	125	9.6
25	2A0032			300 W 48 Ω	1	100	9.6
30	2A0035			480 W 8 Ω	1	125	6.4
40	2A0038			300 W 48 Ω	1	100	6.4
50	2A0041	20370D	1	300 W 48 Ω	2	120	9.6
60	2A0180	20370D	2	4800 W 6.8 Ω	2	120	6.4
75	2A0215	20370D	2	4800 W 6.8 Ω	2	100	6.4
100	2A0283	2110B	1	4800 W 6.8 Ω	3	110	1.6
125	2A0246	2110B	1	4800 W 6.8 Ω	4	120	1.6
150	2A0415	2110B	1	4800 W 8 Ω	5	100	1.6



### 380 to 480 VAC Models

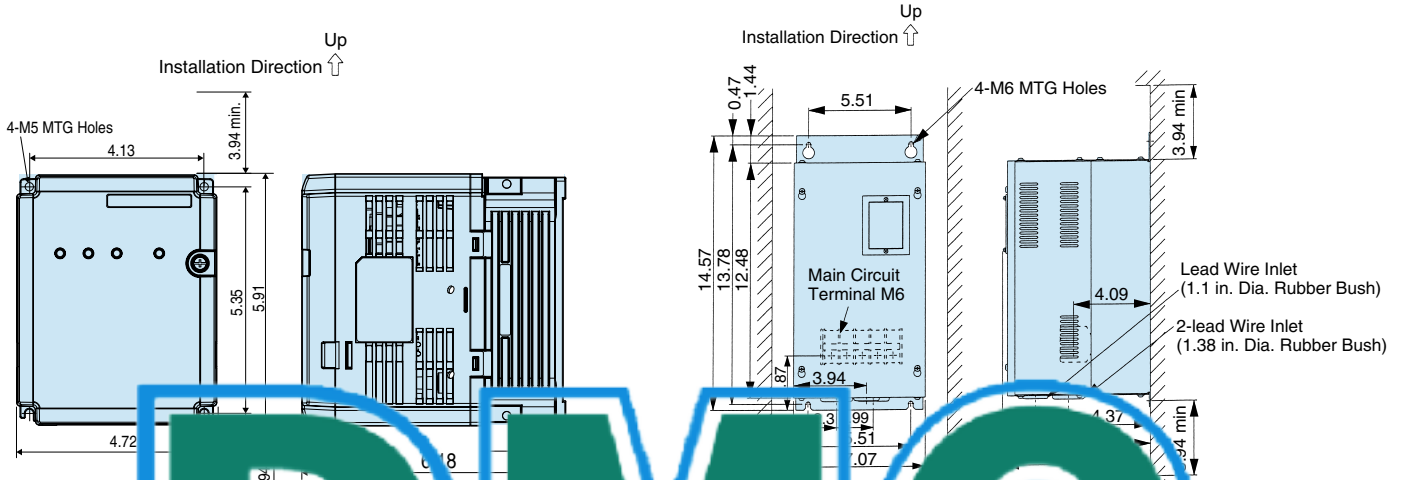
Max. Applicable Motor (HP)	L1000A	Braking Unit		Braking Resistor Unit			Min.* Connection Resistance (Ω)
	Model CIMR-LU□	Model CDBR-□	Qty.	Resistor Specifications (per unit)	Qty.	Braking Torque (%) (10% ED)	
3	4A0007			390 W 150 Ω	1	150	32
5	4A0009			390 W 150 Ω	1	135	32
7.5	4A0015			520 W 100 Ω	1	135	32
10	4A0018			780 W 75 Ω	1	130	32
15	4A0024			1040 W 50 Ω	1	135	20
20	4A0031			1560 W 40 Ω	1	125	20
25	4A0039			4800 W 32 Ω	1	125	19.2
30	4A0045			4800 W 27.2 Ω	1	125	19.2
40	4A0060			6000 W 20 Ω	1	125	19.2
50	4A0075	40450D	1	9600 W 16 Ω	1	125	12.8
60	4A0091	40450D	1	9600 W 13.6 Ω	1	125	12.8
75	4A0112	40450D	2	6000 W 20 Ω	2	135	19.2
100	4A0150	40450D	2	9600 W 13.6 Ω	2	145	12.8
125	4A0180	40450D	2	9600 W 13.6 Ω	2	120	12.8
150	4A0216	40450D	3	6000 W 20 Ω	3	100	3.2
200	4A0260	4220B	1	9600 W 13.6 Ω	4	140	3.2

\* The value shown for the minimum connection resistance is that for a single braking unit. Select a resistance value higher than the connectable resistance value and enough to generate the required braking torque.

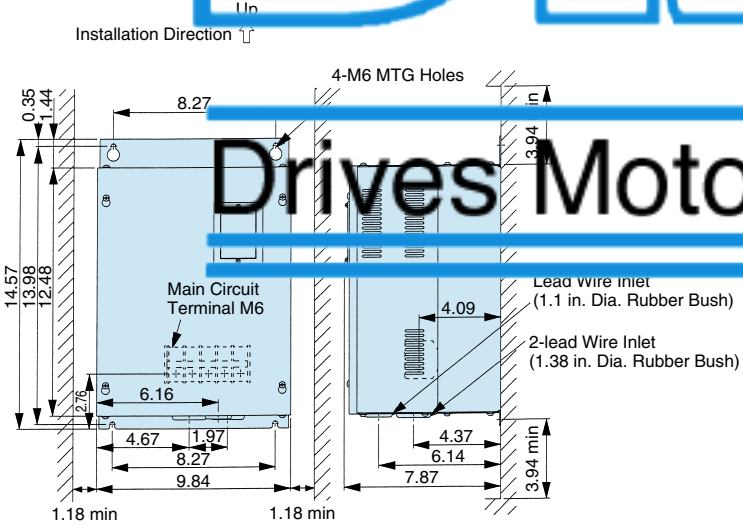
# CDBR Braking Unit Dimensions (in.)

Model: CDBR-20220D, -20370D,  
-40300D, -40450D

Model: CDBR-2110B



Model: CDBR-



## Drives Motors Controls

Model	Feet Loss (W)
20220D	27
20370D	38
2110B	64
40300D	24
40450D	36
4220B	71

Weight: 26.4 lb

## 24-Volt Power Supply Option

The 24 V Power Supply Option maintains drive control circuit power in the event of a main power outage. The control circuit keeps network communications and I/O data operational in the event of a power outage. It supplies external power to the control circuit only.

Note: Parameter settings cannot be changed when the drive is operating solely from this power supply.

Model	Code No.
200 to 240 VAC	PS-A10L
380 to 480 VAC 500 to 600 VAC	PS-A10H



The installed option adds 1.97 in. to the total width of the drive.



### Connection Diagram

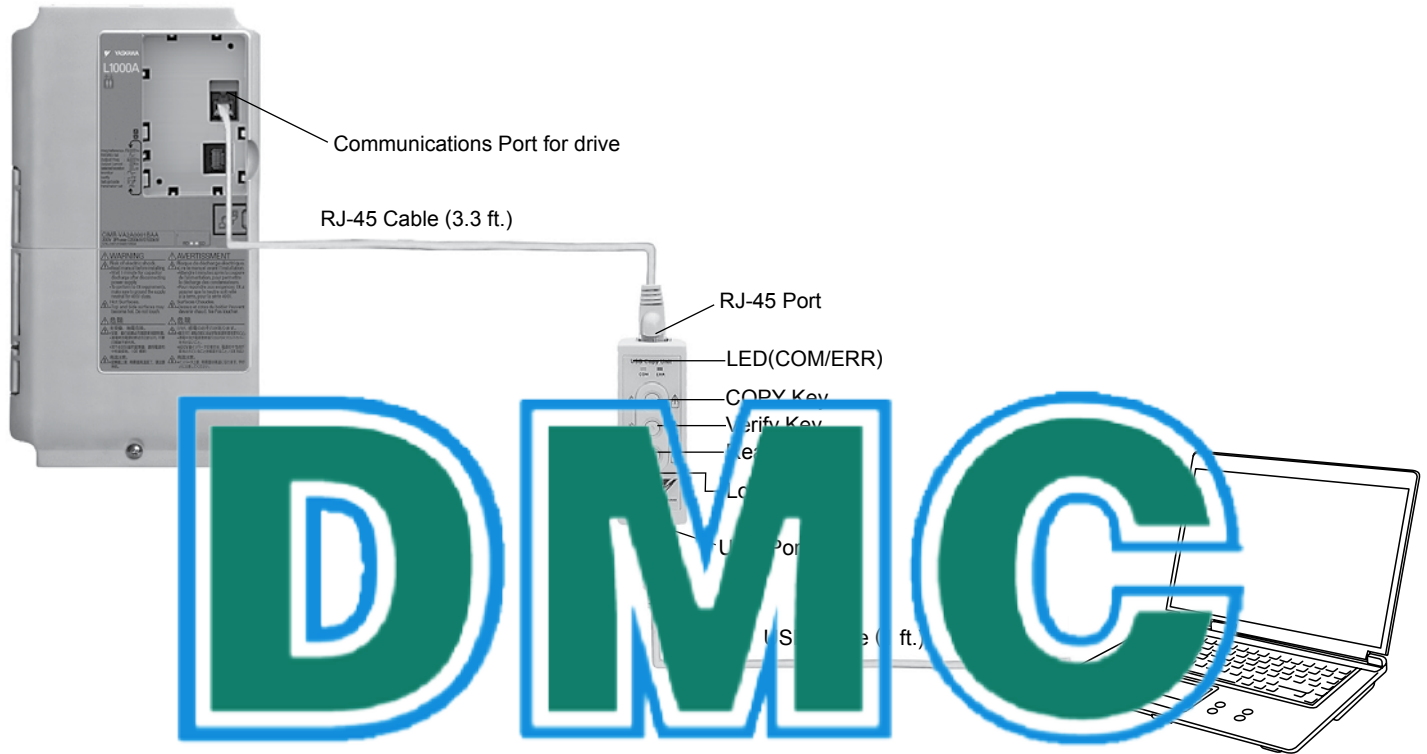


# DMC

## Drives Motors Controls

## USB Copy Unit (Model JVOP-181) Option

### Connection



# DMC

Model	Description
JVOP-181	USB Copy Unit with RJ-45 Cable and USB Cable

### Specifications

Item	Specifications
Port	LAN (RJ-45) USB (Ver.2.0 compatible)
Power Supply	Supplied from a PC or the drive
Operating System	Windows XP SP2, Windows 2000 SP4
Memory	Memorizes the parameters for one drive.
Dimensions	3.5 (H) × 1.2 (W) × 0.8 (D) in.
Accessories	RJ-45 Cable (3.3 ft.), USB Cable (1 ft.)

- Note: 1. Drives must have identical software versions to copy parameter settings.  
 2. Requires a USB driver.  
 3. Parameter copy function is disabled when connected to a PC.

## RC5 Converter (Line Regeneration Unit) Option



RC5 Converter  
Line Regeneration Unit

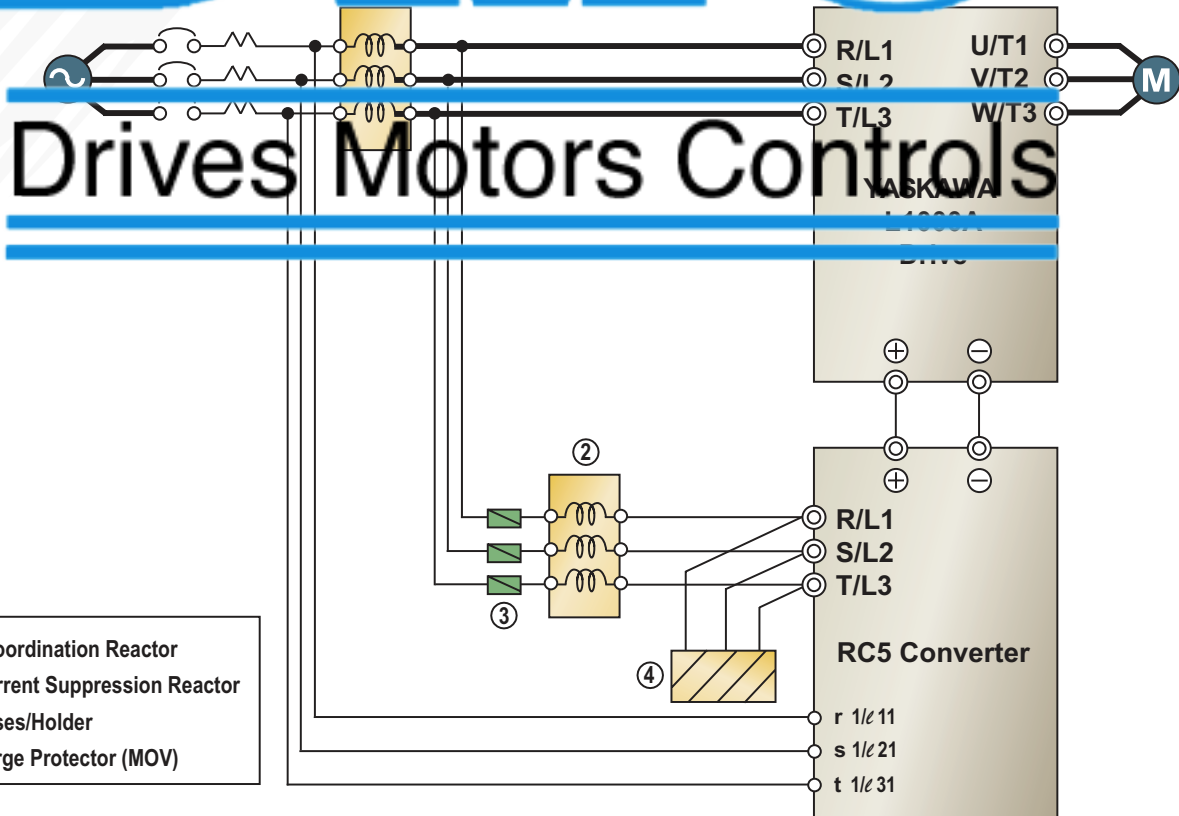
The RC5 Converter is a high-performance line regeneration unit ideal for elevator applications that require a high-demand braking cycle. The RC5 is an excellent, competitive solution that takes excess regenerative energy from the driven motor and supplies it to the incoming AC power source.

In elevator applications, the RC5 is a cost-competitive alternative to DB resistors, especially when energy savings is considered. DB resistors simply dissipate the regenerated energy as heat. The RC5 returns the regenerated energy back to the power grid, reducing the total energy consumption. Payback for high duty cycle applications is typically less than one year with the RC5.

The RC5 is wired in parallel with the L1000A drive and can be independently sized to suit the projected regenerative load. The RC5 includes display monitors (i.e., power, operating time, and others). It mounts inside the panel with the drive, unlike braking resistors which must be mounted externally because of their heat generation. The RC5 is applicable to the FWA drive series including the FWA series. Additional configurations are available. Consider the factors...



RC5 Connection Diagram





## RC5 Converter Specifications & Dimensions

### 200 to 240 VAC Models

Max. Applicable Motor (HP)	L1000A		RC5 Data		Physical Dimensions			Weight (lb)	Standard Enclosure	Heat Loss (W)		
	Model CIMR-LU□	Model CIMR-R5U□	RC5 Kit Number RC5-	RC5 Line Current (A)	H	W	D			Heatsink	Internal	Total
2	2A0011	23P71A	230-5HP-SD	10	11.02	5.51	7.09	9.9	NEMA 1	70	60	130
3	2A0014	23P71A	230-5HP-SD	10	11.02	5.51	7.09	9.9	NEMA 1	70	60	130
5	2A0018	23P71A	230-5HP-SD	10	11.02	5.51	7.09	9.9	NEMA 1	70	60	130
7.5	2A0025	25P51A	230-7.5HP-SD	15	11.02	5.51	7.09	9.9	NEMA 1	70	60	130
10	2A0033	27P51A	230-10HP-SD	20	11.02	5.51	7.09	9.9	NEMA 1	90	80	170
15	2A0047	20111A	230-15HP-SD	30	11.81	7.87	8.07	12.1	NEMA 1	160	110	270
20	2A0060	20151A	230-20HP-SD	40	11.81	7.87	8.07	13.2	NEMA 1	200	130	330
25	2A0075	20181A	230-25HP-SD	50	14.96	9.84	8.86	22.0	NEMA 1	240	150	400
30	2A0090	20221A	230-30HP-SD	60	14.96	9.84	8.86	22.0	NEMA 1	240	180	500
40	2A0110	20301A	230-40HP-SD	80	18.75	12.80	11.22	24.3	NEMA 1	340	220	630
50	2A0140	20371A	230-50HP-SD	100	17.72	12.80	11.22	51.7	Open Chassis	340	290	830

### 380 to 480 VAC Models

Max. Applicable Motor (HP)	L1000A		RC5 Data		Physical Dimensions			Weight (lb)	Standard Enclosure	Heat Loss (W)		
	Model CIMR-LU□	Model CIMR-R5U□	RC5 Kit Number RC5-	RC5 Line Current (A)	H	W	D			Heatsink	Internal	Total
3	4A0007	43P71A	460-5HP-SD	5	11.02	5.51	7.09	7.7	NEMA 1	30	50	80
5	4A0009	43P71A	460-5HP-SD	5	11.02	5.51	7.09	7.7	NEMA 1	30	50	80
7.5	4A0015	45P51A	460-7.5HP-SD	7.5	11.02	5.51	7.09	8.8	NEMA 1	60	60	100
10	4A0018	47P51A	460-10HP-SD	10	11.02	5.51	7.09	8.8	NEMA 1	60	60	120
15	4A0027	40111A	460-15HP-SD	15	11.81	7.87	8.07	13.2	NEMA 1	90	70	150
20	4A0031	40151A	460-20HP-SD	20	11.81	7.87	8.07	13.2	NEMA 1	110	90	200
25	4A0039	40181A	460-25HP-SD	25	14.96	9.84	8.86	23.1	NEMA 1	120	100	220
30	4A0045	40221A	460-30HP-SD	30	14.96	9.84	8.86	23.1	NEMA 1	140	110	350
40	4A0060	40301A	460-40HP-SD	40	14.96	9.84	8.86	23.1	NEMA 1	210	140	350
50	4A0075	40370A	460-50HP-SD	50	17.72	12.80	11.22	55.1	Open Chassis	290	160	450
60	4A0091	40450A	460-60HP-SD	60	17.72	12.80	11.22	58.4	Open Chassis	360	190	550
75	4A0112	40550A	460-75HP-SD	75	24.61	12.80	11.22	75.0	Open Chassis	470	260	730
100	4A0150	40750A	460-100HP-SD	100	24.61	12.80	11.22	79.4	Open Chassis	550	310	860

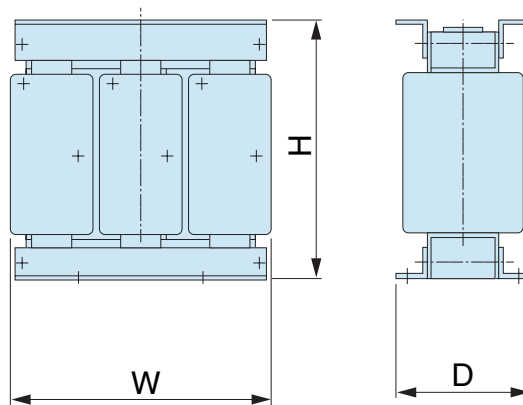
Note: This data represents only the RC5 unit.

## RC5 Dimensions & Weights Reactors

Rated Input Voltage	Basic Drive Model Number CIMR-R5U	Physical Dimensions (in.) L1000A Reactor			Weight (lb) <sup>(1)</sup>	Physical Dimensions (in.) RC5 Reactor			Weight (lb) <sup>(1)</sup>
		H	W	D		H	W	D	
230V	23P71	5.3	6.0	3.2	9	5	6.0	3.3	9
	25P51	5.8	7.2	3.5	11	5.8	7.2	3.5	11
	27P51	5.8	7.2	4	14	5.8	7.2	3.5	11
	20111	7.4	9.0	4.7	23	5.8	7.2	4	14
	20151	7.3	9.0	5.3	24	7.3	9.0	5.3	24
	20181	7.2	9.0	6.3	25	7.2	9.0	6.3	25
	20221	7.2	9.0	6.3	25	7.2	9.0	6.3	25
	20300	7.2	9.0	6.5	29	7.3	9.0	6.5	29
	20370	7	9.0	4.7	29	7	9.0	4.7	29
460V	43F11	4.8	6.0	3	8	4.8	6.0	3.4	11
	45F11	5.3	6.0	3	11	5.8	6.0	3	8
	47F11	5.3	6.0	3	10	5.8	6.0	3	10
	40111	5.3	7.2	3.5	12	5.8	6.0	3.5	12
	40112	5.3	7.2	4	11	5.8	7.2	3.5	11
	40113	5.3	7.2	4	14	5.8	7.2	4	14
	40211	7.2	9.0	4.7	23	7.2	9.0	4.7	23
	40311	9	9.0	5.3	27	7.2	9.0	5.3	27
	40312	9	9.0	5	33	7.2	9.0	6.5	33
	40431	7.2	9.0	6.5	33	7.2	9.0	6.3	25
	40550	7.3	9.0	6.8	37	7.3	9.0	6.5	29
	40750	7.2	9.0	6.8	43	7	9.0	4.7	29

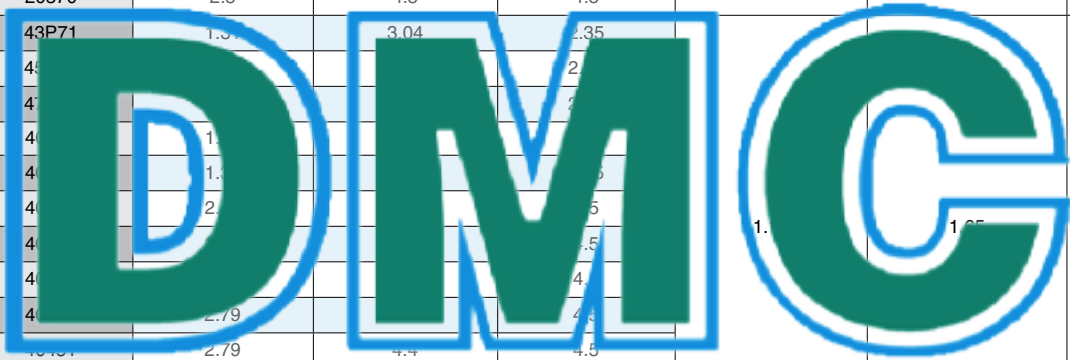
<sup>(1)</sup> The data represents the component unit weight only, not shipping weight

# Drives Motors Controls



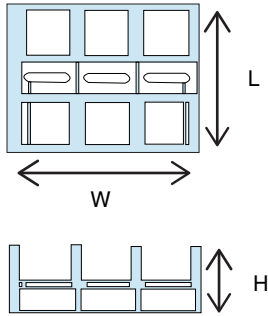
# RC5 Dimensions Fuses Holders and MOVs

Rated Input Voltage	Basic Drive Model Number CIMR-R5U	Physical Dimensions (in.) <sup>(1)</sup> Fuse Holder			Physical Dimensions (in.) MOV		
		H	L	W	H	W	D
230V	23P71	1.38	3	3	1.14	1.65	1.63
	25P51	1.38	3	3			
	27P51	1.38	3	3			
	20111	2.79	4.4	4.5			
	20151	2.5	4.5	4.5			
	20181	2.5	4.5	4.5			
	20221	2.5	4.5	4.5			
	20300	2.5	4.5	4.5			
	20370	2.5	4.5	4.5			
460V	43P71	1.38	3.04	2.35	1.14	1.65	1.63
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	43P71	1.38	3.04	2.35			
	40550	2.79	4.4	4.5			
40750	2.79	4.4	4.5				

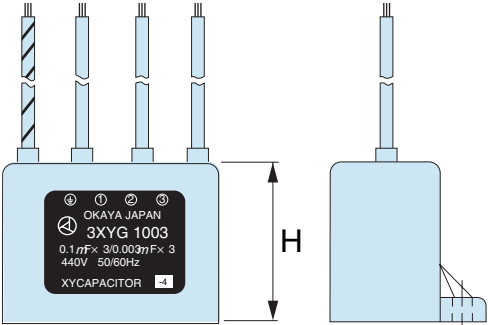
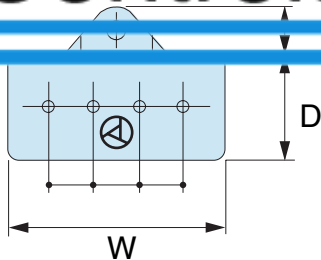


<sup>(1)</sup> The (W) data represents the fuse holder width for three fuses.

# Drives Motors Controls



Fuse Holder Diagram



MOV Diagram

## Regenerative Configured Panel

The Regenerative (RC5) Configured Panel comprises of the appropriate RC5 converter and all necessary external components.

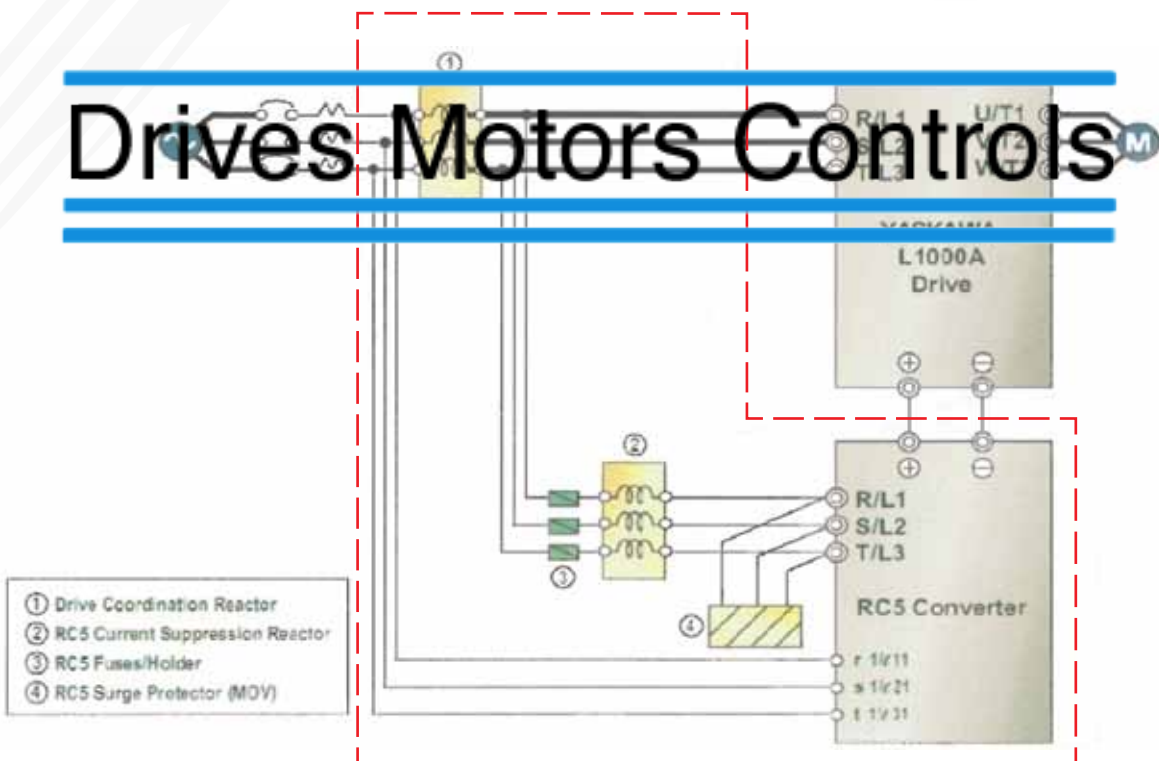
The Regenerative (RC5) Configured Panel is sized based on NEC horsepower so that any drive can be used in conjunction with this package. The drive and regenerative kit should be sized 1:1 based on horsepower.


The Regenerative (RC5) Configured Panel is designed for demanding “hold-back” type applications, such as elevators and escalators. All regeneration energy is transferred to the incoming power lines.

The Regenerative (RC5) Configured Panel (Standard Duty) is sized for applications requiring continuous energy dissipation (100% regenerative torque for 60 seconds). The overload rating is 150% torque for 30 seconds, 200% peak torque.

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RC5 Regenerative Configured Panel



 = Included with Panel

## Regenerative Configured Panel Specification & Dimensions

### 200 to 240 VAC Models

Max. Applicable Motor (HP)	L1000A Model CIMR-LU	Regenerative Configured Panel Part Number RC5-R5UC	Physical Dimensions (in.)			Approx. Weight (lb)	Standard Enclosure	Heat Loss (W)
			H	W	D			Total
15	2A0047	2011	42.43	12.15	12.73	84	NEMA 1 Type Panel	373
20	2A0060	2015	42.43	12.15	12.73	96		458
25	2A0075	2018	42.43	12.15	12.73	107		564
30	2A0085	2022	42.43	12.15	12.73	107		664
40	2A0115	2030	42.43	12.15	12.73	117		818
50	2A0145	2037	45.43	16.15	12.82	144		1040

### 380 to 480 VAC Models

Max. Applicable Motor (HP)	L1000A Model CIMR-LU	Regenerative Configured Panel Part Number RC5-R5UC	Physical Dimensions (in.)			Approx. Weight (lb)	Standard Enclosure	Heat Loss (W)
			H	W	D			Total
15	4A0039	4015	42.43	12.15	12.73	74	NEMA 1 Type Panel	245
20	4A0045	4018	42.43	12.15	12.73	88		302
25	4A0039	4018	43.2	12.15	12.73	88		323
30	4A0045	4022	43.2	12.15	12.73	109		474
40	4A0060	4030	43.2	12.15	12.73	112		484
50	4A0081	4045	45.43	16.15	12.82	150		622
60	4A0081	4045	45.43	16.15	12.82	150	718	

**Drives Motors Controls**

- Note: 1. The Regenerative (RC5) Configured Panel is compliant with CSA B44.4/ACME 17.5.  
 2. Outline drawings are not included in this book. Please refer to [www.yaskawa.com](http://www.yaskawa.com) for outline drawings.  
 3. The Regenerative (RC5) Configured Panel includes the following components: RC5 Converter, MOVs, Input Fuses, and Fuse Block.  
 4. The Regenerative (RC5) Configured Panel Part Number RC5-R5UC2011, 2015, 4011, and 4015 dimensions may be slightly smaller.

# DMC

Drives Motors Controls

**DMC**

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## Drives Motors Controls



**Yaskawa America, Inc.**  
Drives & Motion Division

2121 Norman Drive South  
Waukegan, IL 60085

1-800-YASKAWA (927-5292) • Local: 847-887-7000 • Fax: 1-847-887-7310

DrivesHelpDesk@yaskawa.com • [www.yaskawa.com](http://www.yaskawa.com)

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