

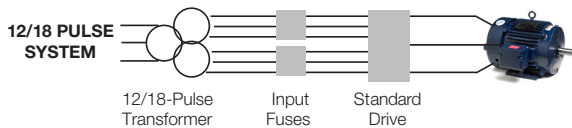
# U1000

## Industrial Matrix Drive

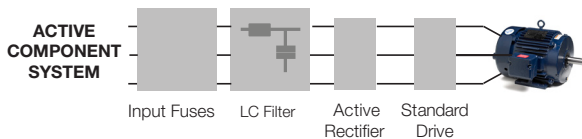
Increase your green space with Yaskawa's Industrial Matrix Drive (U1000), the product that goes beyond conventional drives, providing outstanding harmonic performance and regeneration in a single stand-alone compact drive solution.

Enjoy low harmonic distortion and regeneration in a space-saving design, completely without the need for additional components. Unlike conventional drives, Yaskawa's matrix technology creates a variable output by switching directly from the input power (AC to AC; no DC bus). Additionally, the Matrix drive is a member of the Yaskawa industrial drive family, and provides the same user experience.

### Conventional Low Harmonic Solution



### Conventional Low Harmonic and Regenerative Solution



### U1000 Industrial Matrix Drive



#### 3 WIRES IN, 3 WIRES OUT

- Fewer Components
- Less Space
- Faster Setup
- Higher Efficiency

### Primary Features & Benefits

- Full Regeneration
- Low Input Current Harmonics at All Speeds/Loads
- Facilitates IEEE 519 Compliance
- Eliminate Harmonics with Embedded Across-the-Line Operation
- Near Unity True Power Factor at Full Load
- Higher Efficiency than Common Low Harmonic Solutions
- Compact Design
- Integrated Input Fusing Provides 100kA SCCR
- High Reliability with MTBF in Excess of 28 Years
- Induction and Permanent Magnet Motor Control
- Safe Torque Off (SIL3 and PLe)
- 0-400 Hz Output Frequency
- 120% Overload for 60 Seconds (ND)
- 150% Overload for 60 Seconds (HD)
- Embedded Modbus RTU Communications
- Removable Terminal Block
- High Carrier Frequency (Low Motor Noise) Capability
- Multi-Language LCD Display with Copy Function
- DriveWizard® Software
- Embedded PLC capability (DriveWorks EZ)
- Start into Spinning Motor (Speed Search)



#### 240 V POWER RANGE

- 10 - 100 HP (ND)
- 7.5 - 75 HP (HD)

#### 480 V POWER RANGE

- 7.5 - 800 HP (ND)
- 5 - 750 HP (HD)

#### AMBIENT OPERATING TEMP

- -10°C to 50°C (Open Type IP00)

#### CERTIFICATION

- UL, cUL, CSA, CE, RoHS, RCM, TUV\* (\*Functional Safety)

#### STANDARD I/O

- (8) Digital Inputs
- (3) Analog Inputs
- (1) Pulse Train Input
- (2) Safe Torque Off Rated Inputs
- (4) Relay Outputs
- (2) Analog Outputs
- (1) Pulse Train Output
- (1) Safe Torque Off Rated Output

#### COMMUNICATIONS OPTIONS

- Modbus RTU (Standard)
- EtherNet/IP
- Modbus TCP/IP
- DeviceNet
- Profibus DP
- Profinet

#### MECHANICAL OPTIONS

- NEMA 1 Kit
- External Heatsink

## Dimensions & Specifications

Open Chassis (IP00)

240 V Class			Dimensions (inches)				Weight (lb) <sup>1</sup>
Model: CIMR-UU2A□	Amps ND / HD	HP ND / HD	Fig. No.	H	W	D	
0028AUA	28 / 22	10 / 7.5	1	18.89	9.84	14.17	44
0042AUA	42 / 28	15 / 10		71			
0054AUA	54 / 42	20 / 15		77			
0068AUA	68 / 54	25 / 20					
0081AUA	81 / 68	30 / 25					
0104AUA	104 / 81	40 / 30	2	32.12	10.39	17.71	132
0130AUA	130 / 104	50 / 40					
0154AUA	154 / 130	60 / 50	3	38.97	16.33	15.86	245
0192AUA	192 / 154	75 / 60					
0248AUA	248 / 192	100 / 75		44.56	19.29	17.71	388

480 V Class			Dimensions (inches)				Weight (lb) <sup>1</sup>
Model: CIMR-UU4A□	Amps ND / HD	HP ND / HD	Fig. No.	H	W	D	
0011AUA	11 / 9.6	7.5 / 5	1	18.89	9.84	14.17	44
0014AUA	14 / 11	10 / 7.5					
0021AUA	21 / 14	15 / 10					
0027AUA	27 / 21	20 / 15					
0034AUA	34 / 27	25 / 20					
0040AUA	40 / 34	30 / 25		25.60	10.39	16.53	71
0052AUA	52 / 40	40 / 30					
0065AUA	65 / 52	50 / 40					
0077AUA	77 / 65	60 / 50					
0096AUA	96 / 77	75 / 60					
0124AUA	124 / 96	100 / 75	2	32.12	10.39	17.71	132
0156AUA	156 / 124	125 / 100					
0180AUA	180 / 156	150 / 125	3	38.97	16.33	15.86	245
0216AUA	216 / 180	175 / 150		44.56	19.29	17.71	388
0240AUA	240 / 216	200 / 175					
0302AUA	302 / 240	250 / 200					
0361AUA	361 / 302	300 / 250					
0414AUA	414 / 361	350 / 300	Contact Yaskawa	62.8	42.13	17.52	1235
0477AUB	477 / 434	400 / 350		72.24	47.64		1389
0590AUB	590 / 477	500 / 400					
0720AUB <sup>2</sup>	720 / 590	600 / 500					
0930AUB <sup>3</sup>	930 / 900	800 / 750					

PWM Filter Model No.	Applicable Drive Models	Dimensions (inches)			Weight (lb) <sup>1</sup>
		H	W	D	
EUJ711800M <sup>2</sup>	CIMR-UU4A0720AUB	53.2	27.6	17.3	761
EUJ711820M <sup>3</sup>	CIMR-UU4A0930AUB				

1. This data represents the drive weight only, not shipping weight.
2. Input PWM filter EUJ711800M is required when using CIMR-UU4A0720AUB.
3. Input PWM filter EUJ711820M is required when using CIMR-UU4A0930AUB.

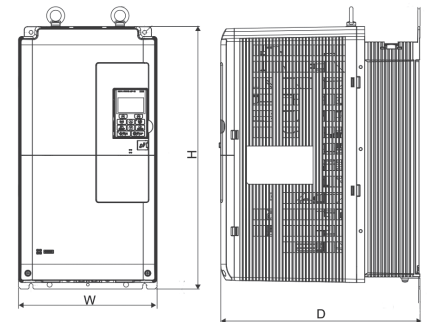


Figure 1

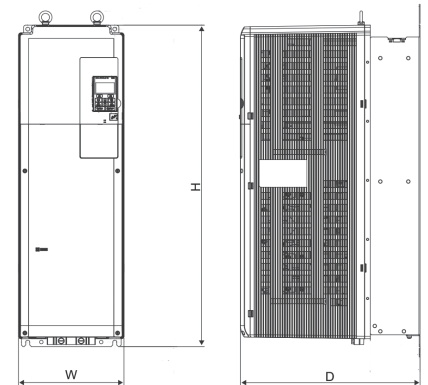


Figure 2

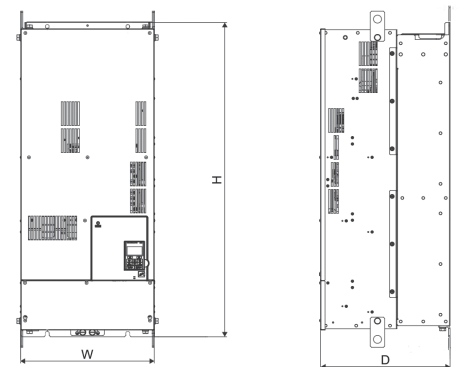


Figure 3



**U1000 MATRIX INNOVATION**

Improved Energy Efficiency with Direct Conversion from AC to AC