

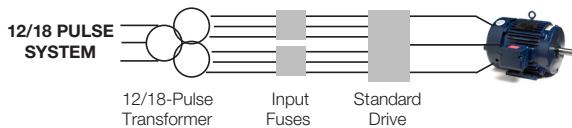
U1000

Industrial Matrix Drive

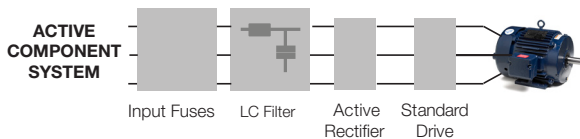
Increase your green space with Yaskawa's Industrial Matrix Drive (U1000), the product that goes beyond conventional drives, providing outstanding harmonic performance and regeneration in a single stand-alone compact drive solution.

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) ¹ |
|-------------------|--------------|------------|---------------------|-------|-------|-------|--------------------------|
| 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) ¹ |
|----------------------|--------------|------------|---------------------|-------|-------|-------|--------------------------|
| 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 | | | | | |
| 0240AUA | 240 / 216 | 200 / 175 | | 44.56 | 19.29 | 17.71 | 388 |
| 0302AUA | 302 / 240 | 250 / 200 | | 44.56 | 27.36 | 17.71 | 571 |
| 0361AUA | 361 / 302 | 300 / 250 | | | | | |
| 0414AUA | 414 / 361 | 350 / 300 | Contact Yaskawa | 62.8 | 42.13 | 17.52 | 1235 |
| 0477AUB | 477 / 434 | 400 / 350 | | | | | |
| 0590AUB | 590 / 477 | 500 / 400 | | 72.24 | 47.64 | 1389 | |
| 0720AUB ² | 720 / 590 | 600 / 500 | | | | | |
| 0930AUB ³ | 930 / 900 | 800 / 750 | | | | | |

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

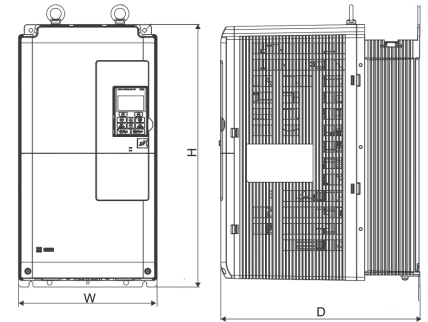


Figure 1

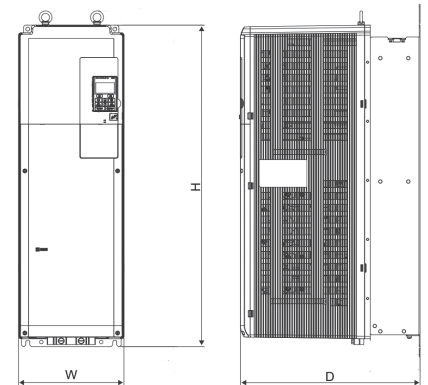


Figure 2

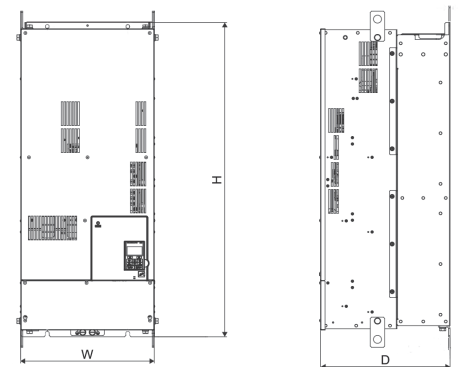


Figure 3

