

GA500

INDUSTRIAL AC MICRODRIVE

The GA500 industrial AC microdrive is engineered to help you easily handle nearly any application. Sustainability, flexibility and ease of use are all designed into the drive, helping you make complicated tasks simple. It offers value with integrated features that would commonly be offered separately as external components, resulting in reduced cost, less installation space, and decreased set-up time.



RATINGS

| Power Output (HP) | | 240 V Models | | | | | | | | | 480 V Models | | | |
|-------------------|-----------------|--------------------------------|-------------|------|-------|--------------------------------|-------------|------|-------|--------------------------------|--------------|------|-------|--|
| | | Single-Phase | | | | Three-Phase | | | | | Three-Phase | | | |
| Normal Duty (ND) | Heavy Duty (HD) | Catalog Code GA50U □□□□□□□□ | Output Amps | | Frame | Catalog Code GA50U □□□□□□□□ | Output Amps | | Frame | Catalog Code GA50U □□□□□□□□ | Output Amps | | Frame | |
| | | | ND | HD | | | ND | HD | | | ND | HD | | |
| 1/6 | 1/6 | B001ABA | 1.2 | 0.8 | 1.1 | 2001ABA | 1.2 | 0.8 | 1.1 | | | | | |
| 1/4 | 1/4 | B002ABA | 1.9 | 1.6 | 1.1 | 2002ABA | 1.9 | 1.6 | 1.1 | | | | | |
| 1/2 | 1/2 | | | | | | | | | 4001ABA | 1.2 | 1.2 | 2.1 | |
| 3/4 | 1/2 | B004ABA | 3.5 | 3 | 1.3 | 2004ABA | 3.5 | 3 | 1.2 | 4002ABA | 2.1 | 1.8 | 2.2 | |
| 1 | 3/4 | | | | | | | | | | | | | |
| 1.5 | 1 | B006ABA | 6 | 5 | 2.4 | 2006ABA | 6 | 5 | 1.4 | | | | | |
| 2 | 2 | | | | | | | | | 4004ABA | 4.1 | 3.4 | 2.4 | |
| 3 | 2 | B010ABA | 9.6 | 8 | 2.5 | 2010ABA | 9.6 | 8 | 2.3 | | | | | |
| 3 | 3 | B012ABA | 12.2 | 11 | 3.2 | | | | | 4005ABA | 5.4 | 4.8 | 2.5 | |
| 4 | 3 | | | | | 2012ABA | 12.2 | 11 | 2.4 | 4007ABA | 7.1 | 5.6 | 2.5 | |
| 5 | 4 | | | | | | | | | 4009ABA | 8.9 | 7.3 | 2.5 | |
| N/A | 5 | B018ABA | N/A | 17.6 | 4 | | | | | | | | | |
| 7.5 | 5 | | | | | 2021ABA | 21 | 17.6 | 3.1 | 4012ABA | 11.9 | 9.2 | 3.1 | |
| 10 | 7.5 | | | | | 2030ABA | 30 | 25 | 5 | | | | | |
| 10 | 10 | | | | | | | | | 4018ABA | 17.5 | 14.8 | 5 | |
| 15 | 10 | | | | | 2042ABA | 42 | 33 | 5 | 4023ABA | 23.4 | 18 | 5 | |
| 20 | 15 | | | | | 2056ABM | 56 | 47 | 6 | 4031ABA | 31 | 24 | 6 | |
| 25 | 20 | | | | | 2070ABM | 70 | 60 | 7 | 4038ABA | 38 | 31 | 6 | |
| 30 | 25 | | | | | 2082ABM | 82 | 75 | 7 | 4044ABA | 44 | 39 | 8 | |
| 40 | 30 | | | | | | | | | 4060ABA | 60 | 45 | 8 | |

APPROXIMATE DIMENSIONS

| Frame Size | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 3.1 | 3.2 | 4 | 5 | 6 | 7 | 8 |
|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|------------|
| Height | 5.04 (128) | | | | | | | | | | | | 10.24 (260) | 11.81 (300) | 13.78 (350) | |
| Width | 2.68 (68) | | | | 4.25 (108) | | | | | 5.51 (140) | | 6.69 (170) | 5.51 (140) | 7.09 (180) | 8.66 (220) | 7.48 (190) |
| Depth | 2.99 (76) | 4.25 (108) | 4.65 (118) | 5.04 (128) | 3.19 (81) | 3.90 (99) | 5.08 (129) | 5.41 (137) | 6.06 (154) | 5.63 (143) | 6.42 (163) | 7.09 (180) | 5.51 (140) | 5.63 (143) | 7.36 (187) | 8.03 (204) |

Dimensions shown in inches (mm). Information on this page represents IP20 enclosures. For other enclosure types and enclosure adapters, please visit yaskawa.com.

GA500 SPECIFICATIONS

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| Operating Environment | |
|---|---|
| Ambient Temperature | -10 to +50°C (IP20/Protected Chassis), -10 to +40°C (IP20/UL Type 1), up to +60°C with derating |
| Storage Temperature | -40 to +70°C (short-term temperature during transportation) |
| Humidity | 95% RH or less (non-condensing) |
| Altitude | Up to 1000 m without derating, up to 4000 m with derating |
| Shock | 10 to 20 Hz: 9.8 m/s ² |
| | 20 to 55 Hz: 5.9 m/s ² |
| Protection Design | IP20/Protected Chassis (Standard), IP20/UL Type 1 kit (Optional) |
| Mounting | Side-by-side, DIN rail, external heatsink |
| Conformal Coating (PCBs) | IEC 60721-3-3, Class 3C2 (chemical gases), Class 3S2 (solid particles) |
| Standards | CE, UL, cUL, KC, RCM, EAC, RoHS |
| Functional Safety | IEC/EN 61800-5-2: STO, IEC/EN 61508: SIL3, EN ISO 13849-1: PLc |
| Power Ratings | |
| Overload Capacity | 110%/1 min. (Normal Duty) or 150%/1 min. (Heavy Duty) |
| Rated Voltage | 200 to 240 V, -15 to +10% |
| | 380 to 480 V, -15 to +10% |
| Capacity Range | 240 V, Single-phase: 1/6 to 5 HP (0.1 to 3.7 kW) |
| | 240 V, Three-Phase: 1/6 to 30 HP (0.1 to 22 kW) |
| | 480 V, Three-Phase: 1/4 to 40 HP (0.2 to 30 kW) |
| Input Frequency | 50/60 Hz, +/-5% |
| Output Voltage Accuracy | +/-5% |
| Output Frequency | 0 to 590 Hz (special software for up to 1000 Hz) |
| Control Method | V/f, Open Loop (IM/PM), Advanced Open Loop (PM), EZ Open Loop Vector |
| Motor Control | Induction Motor (IM), Interior or Surface Permanent Magnet Motor (IPM/SPM), Synchronous Reluctance Motor (SynRM) |
| Standard I/O | (7) multi-function digital inputs (24 VDC) |
| | (2) multi-function analog inputs (0 +/-10 VDC, 4-20 mA) |
| | (1) multi-function pulse input |
| | (2) Safe Torque Off (STO) inputs |
| | (1) fault relay output (form C) |
| | (2) multi-function photocoupler outputs |
| | (1) multi-function analog output (0 - 10 VDC, 4-20 mA) |
| | (1) multi-function pulse output |
| (1) RS-485 (Modbus RTU) | |
| Additional Functions | Integrated PID controller with sleep function, automatic load distribution for multiple axes (droop control), automatic main power loss ride through, speed search function for smooth start of coasting motors, braking with over-magnetization for fast stop without braking resistors, energy-saving function, automatic restart after failure, overvoltage suppression, virtual input/output custom configuration, application presets, vibration suppression |
| Options | |
| Communications (Requires Additional Mounting Kit) | CANopen®, CC-Link, DeviceNet™, EtherCAT®, Ethernet/IP™, Ethernet/IP Dual Port, MECHATROLINK-II, MECHATROLINK-III, Modbus/TCP, Modbus/TCP dual port, PROFIBUS-DP®, PROFINET™, LONWORKS |
| Additional Options | Bluetooth keypad, LCD keypad, Attachment for external heatsink, External EMC filters, AC reactors, DC chokes, Network communications adapter, LCD keypad attachment, braking resistors |

IT'S PERSONAL

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