YASKAWA

GA500

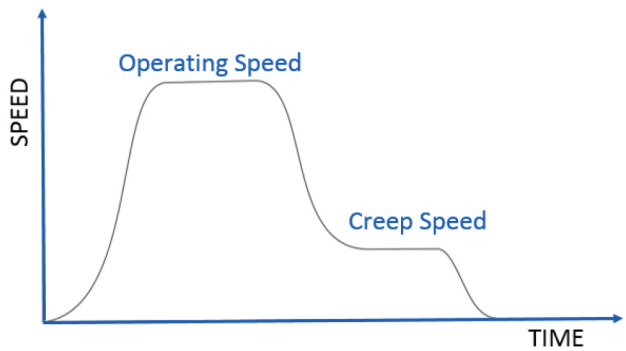
AC DRIVES FOR ELEVATOR APPLICATIONS

With the customer's interest always in mind, Yaskawa leads the industry in developing drives that meet demand with uncompromising quality.

More than 100 years of experience with driving electric motors have led Yaskawa to develop the new GA500 drive. Compact in size and flexible in terms of motor type and connectivity, the GA500 is designed to easily master Elevator application.

The GA500 provides high-performance characteristics offering a set of attractive features:

- Auto-tuning for IM motors (coupled or uncoupled)
- Improved Torque Ripple Suppression for highest passenger comfort
- Precise torque motor performance for comfortable acceleration and deceleration characteristics
- Smooth ride performance during transitions from acceleration to nominal speed and deceleration to levelling speed
- Torque Compensation suppress shock and prevent speed variations during brake release
- Acceleration and deceleration compensation prevents vibration and overshoot
- Eliminate unwanted sounds using high switching frequencies and intelligent thermal design.
- All drives are fitted with a dynamic braking transistor as standard.
- Robust design ensures operation up to 4000m altitude and 60°C ambient temperature.
- Advanced high speed elevator control



FEATURES AND BENEFITS

- Program without Main Power
- Wireless Access Via Bluetooth to Adjust the Drive & Perform Maintenance
- Menu Driven Programming with Custom Monitors & Data Logging
- Monitor Performance Life
- Designed for Extreme Quiet Motor Operation
- Rescue Operation Control Flexibility
- Integrated Dual Functional Safety Digital Inputs
- Integrated 24 VDC Control Power for Customer use
- High-speed Scanning to Analyze Detailed Behavior
- Cost Effective Network Integration
- Connect to Various Host Controllers
- Unique Energy Saving Functions
- Flexible Drive Mounting
- Longer Motor Service Life
- Less Downtime
- Hassle-Free Installation

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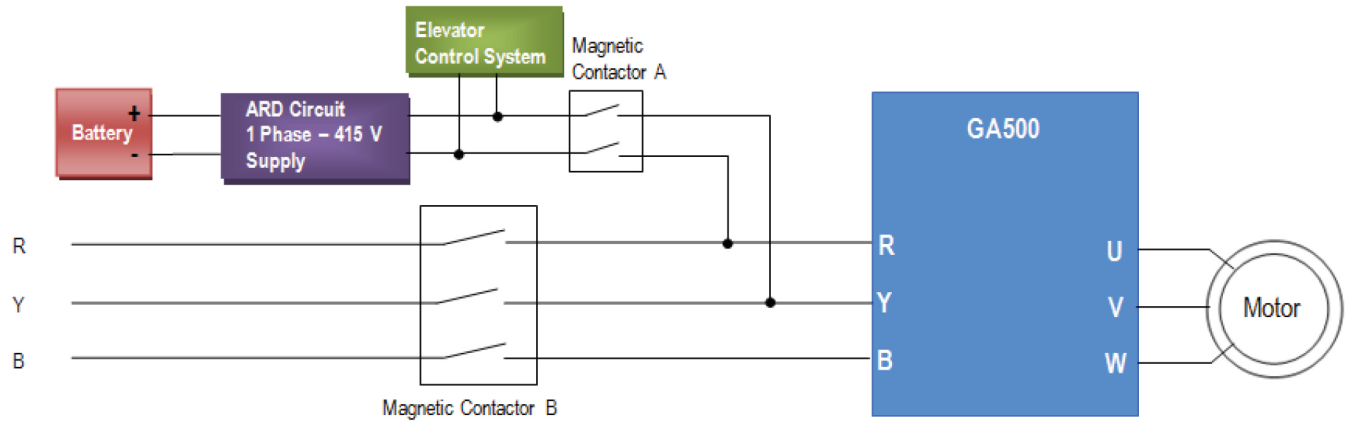
Automatic Rescue Device

GA500 can be used along with an ARD Device which in the event of a power outage allows the elevator to travel to the nearest floor by switching to a backup battery or UPS (Uninterruptable Power Supply) for power. Switching the main power supply to a battery or UPS requires magnetic contactors that must be controlled by an external controller. Wiring methods and the sequence used for the magnetic contactors depend on the application.



Motor Control	
Control methods	V/F and Vector control
Motor Parameter Tuning	Rotating/Static
Additional Functions	
Automatic main power loss ride through	
Braking with over-magnetization for fast stop without braking resistors	
Protective Functions	
Stall prevention, overload prevention, overheat prevention, overcurrent and ground fault protection.	
Self-monitoring	
Monitoring of main components (fans, IGBTs, capacitors, charging circuit) with maintenance alarm notification	

Conformity / Standards	
Standards	CE, UL, cUL, EAC, REACH, RoHS
Functional safety	IEC/EN61508 SIL3 (STO), PLe
Control / Programming	
Control inputs	7 digital, 2 analog (1×V/I, 1×V), 1 pulse
Control outputs	1 relay, 2 photo coupler, 1 pulse, 1 analog
Virtual input/output	For connection of I/O functions without physical wiring
	Multiple assignment of I/O functions for easier wiring
Programming interface	Mini-USB on the front cover; digital operator with Bluetooth® (optional)
Keypad	7-segment LED with 5 digits, tactile soft buttons
Serial communication	Memobus/Modbus, RS-485, up to 115 kBps

Voltage Class: 400VAC

CIPR-GA50T-----	Duty	4001	4002	4004	4005	4007	4009	4012	4018	4023	4031	4038	4044	4060
Max Applicable Motor kW	HD	0.2	0.4	0.75	1.5	2.2	3	3.7	5.5	7.5	11	15	18.5	22
	ND	0.4	0.75	1.5	2.2	3	3.7	5.5	7.5	11	15	18.5	22	30
Rated Input Current	HD	1.2	1.8	3.2	4.4	6	8.2	10.4	15	20	29	39	50.5	59.7
	ND	1.2	2.1	4.3	5.9	8.1	9.4	14	20	24	38	44	59.7	80.7
Rated Output Current	HD	1.2	1.8	3.4	4.8	5.6	7.3	9.2	14.8	18	24	31	39	45
	ND	1.2	2.1	4.1	5.4	7.1	8.9	11.9	17.5	23.4	31	39	44	60
Braking Transistors	Built-In													
DC Reactor	External Option													
Carrier Frequency	HD	8 kHz without derating drive capacity												
	ND	2 kHz without derating drive capacity												