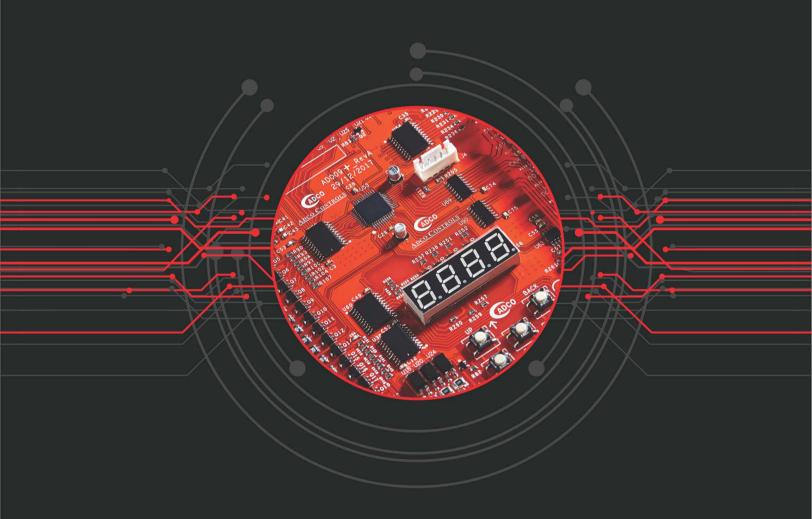
# **Developing** the **Future** with you....







# Force - Within



With a resolute determination to outdo our best performance, we aim to stand at par with world leaders. We tread on roads less travelled and envision to be recognized as the most innovative organization across the nation.

#### Aim

Our mission is to stay updated with the newest technology in international market and making the best of it. Expanding our horizons in terms of new trends, skills and knowledge, thereby proposing something new to our clients each time.

#### Assets

ADCO stands high on its service excellence that finds its roots in organization's foundational values of sincerity, creativity, integrity, dedication and value addition.







Ajay Davda - Managing Director

We feel extremely glad to introduce our company in the world of ELEVATORS. We have been manufacturing high tech, cost effective yet robust micro-controller based controls systems Since 1995.



Our highly skilled team is capable of achieving almost all the tasks that so far have come across by putting their constant efforts with innovative ideas involving the latest technologies and strong approach towards the quality. We always give quality service to our customers because we believe that "OUR CUSTOMER IS OUR GOD".

We have an expertise in the field of elevators and we develop our systems according to the requirement of an industry. We do have clients in INDIA as well as abroad.

Our quality service includes manufacturing all types of elevator control systems, associated cards and all types of relevant accessories.

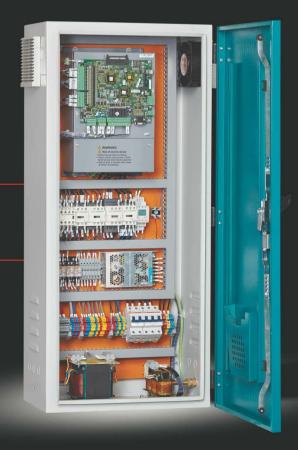
So the bottom line is that if you really want to end up your search in the field of ELEVATORS then we are ONE STOP DESTINATION for your needs.

We highly appreciate your any sort of quotes regarding any of your requirements of elevator control systems.





Special For Wall Mounting







- The elevator integrated drive and controller is designed with closed loop vector controller for higher performance.
- Zero-speed torque compensation system without load weighing device helps save cost.
- Dynamic PWM carrier modulation technology ensures reduced motor noise.
- The elevator integrated drive and controller is suitable for both synchronous and asynchronous motor.
- Dual 32-bit embedded microprocessor.
- All Type of encoder is supported.
- This product is applicable for residential lift, goods lift, car lift, ramp elevator, Home Lift, Hospital Lift.
- This product Parallel and Serial communication both option available.
- Redundancy control through Multi-CPUs. equipped with CAN Bus, Mod Bus and GSM Communication Technology.
- Based on displacement calculation methods derive N velocity profile to achieve optimum direct-to-floor distance control
- Simple 4 wire serial communications to commission duplex group control Group control with less than 8 elevators is based on fuzzy logic control theory in-built real-time clock to facilitate time-sharing control and elevator management
- Flexible emergency backup power; 220Vac UPS power input makes emergency evacuation easy.
- Automatic identification operation between short-floors.
- Handheld Operation Tools: Mini Keypad, PDA, PC to facilitate easy commissioning.
- 60 fault codes to facilitate easy diagnostics.
- Power on reset run to groupand floor is not required.
- Shaft position learning is standard.
- Direct-to-floor landing. Smooth ride comfort, optimal travel mean time.
- Power on reset run is not needed.
- Practical reliable power Failure auto rescue emergency operation using 220V. 1ph UPS/ARD.
- Automatic identification operation between short-floors with different floor heights.
- Advance door opening and re Leveling using option card.
- 7 segment LED display for floor position indicator.
- Wide variety of door function control lo meet different needs in freight lift doors requirement.
- Parallel wiring control for all digital input and output.
- Optimum Exclusive function, quick easy start-up periods.
- Pre-factory default parameters setting facilitate zero parameter setting at site.
- All inputs and outputs are user programmable.
- Suitable for auto door as well as manual door.

# Applications:-

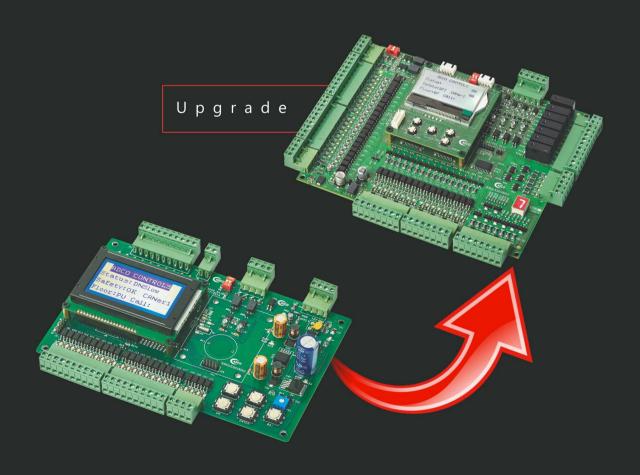
- Simplex. Duplex. 3-8 Group control elevator.
- High Speed. Medium speed. Low speed.
- Superior elevator, passenger elevator, medical elevator, residential elevator. Disabled elevator etc.
- Elevator rated speed < 4.0 m/sec
- Floor level 1 Each CCB | Car Call Board can adopt up to max. 16 floors. Above 16 serial link additional CCB up to 64 floors and in parallel communication up to 16 floor and with extension board Up to 32 floors.

# Technical Specification

Power Rating :-2.2 kW to 45 kW, 3 Phase 380/400/415V 2.2 kW to 30 kW. 3 Phase 220V 2.2 kW to 3.7 kW. 1 Phase 220V











- Operations: Regular V3F, Down Collective V3F and Collective Selective V3F also suitable for Auto Door, Double Door (Two Side Opening).
- Duplex Operation using just two Wire communication no extra hardware require.
- Speed: Up to 2 m/sec.
- All system parameters can be adjusted by using 5 buttons and LCD placed on the card.
- Call Register LED and Call Push Button are on single wire.
- On board Seven Segment Display.
- All the Input and Output are Opto isolated and available in both 12VDC and 24VDC.
- All the Input and Output are carrying LED indication on board.
- An error code are display on display as well as it is memories in the card.
- Each floor can be named by an alphanumeric character (L, P, E, F, H, b, o, 0, 1, 2, 3....).
- 7-segment and signalization outputs are short-circuiting protected.
   In a short circuit case the concerned output is shut down until problem is removed.
- It also detect the landing lock short at particular floor.
- Also detect lock short in Auto Door. if Door not open within predefined time
- Power down memory, in case of power fail it will reach at nearest floor instead of going to correction end.
- PCBs are solder in Fully Automatic Pick & Place Robotic Machine.
   Which will remove all human error.
- Relay Output on Board which will reduce panel wiring and complexity
- Using CAN bus you can Program and Monitor the mother board with
- External Graphical Program Tool Saving errors on system with date and time information enables to track past errors in detail.
- 2 CAN BUS serial ports.

#### **Parallel Communication**

- 8 Stop Down Collective and 6 Stop Collective Selective
- With AD9007 24 Stop Down Collective and 16 Stop Collective
- With AD9006 15 Stop Down Collective and 11 Stop Collective Selective.

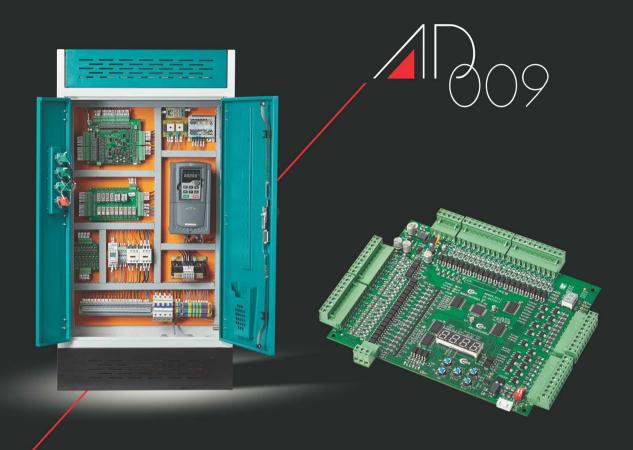
#### **Serial Communication**

- No of Stop: 48
- With AD\_CTB Board and LOP Display Board High Speed CAN Communication
- Only COP Serial with AD\_CTB and LOP Parallel Function.
- Only 15 cables are enough for system to work by using serial car connection (AD\_CTB) which reduces labor and cable costs.

#### **Special Feature:**

Special CAN-Open Protocol for Delta Drive for Direct Landing Function and give more better performance than integrated Controller.

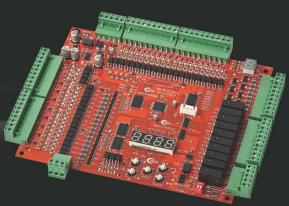








Relay Output on Board which will reduce panel wiring and complexity



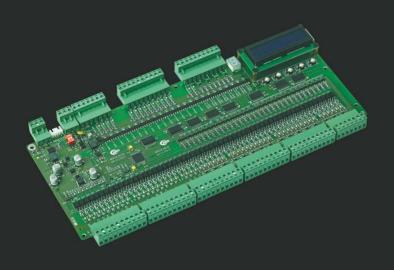




- 8 Stop Down Collective and 6 Stop Collective Selective
- With AD9007 24 Stop Down Collective and 16 Stop Collective Selective.
- With AD9006 15 Stop Down Collective and 11 Stop Collective Selective.
- Operations: Regular V3F, Down Collective V3F and Collective Selective V3F also suitable for Auto Door, Double Door (Two Side Opening).
- Duplex Operation using just two Wire communication no extra hardware require.
- Speed: Up to 2 m/sec.
- All system parameters can be adjusted by using 5 buttons and
   4 Seven Segment placed on the card.
- Call Register LED and Call Push Button are on single wire.
- On board Seven Segment Display.
- Serial COP Card (AD\_CTB) attachment using CAN bus.
- All the Input and Output are Opto-isolated and available in
- both 12VDCand 24VDC.
- All the Input and Output are carrying LED indication on board.
- An error code are display on display.
- Each floor can be named by an alphanumeric character (L, P, E, F, H, b, o, 0, 1, 2, 3.....).
- 7-segment and signalization outputs are short-circuiting protected.
   In a short circuit case the concerned output is shut down until problem is removed.
- It also detect the landing lock short at particular floor.
- Also detect lock short in Auto Door. if Door not open within predefined time.
- Power down memory, in case of power fail it will reach at nearest floor instead of going to correction end.
- Only 15 cables are enough for system to work by using serial car connection (AD CTB). Which reduces labor and cable costs.
- Using this Up to 24 Stop Full Serial just 4 Wire Communication can be done easily.
- Same card can be used as Parallel as well as serial.
- PCBs are solder in Fully Automatic Pick & Place Robotic Machine.
   Which will remove all human error.
- 4 Digit Display on board make easier to program parameter and view an error code.
- Using CAN bus you can Program and Monitor the mother board with External Graphical Program Tool







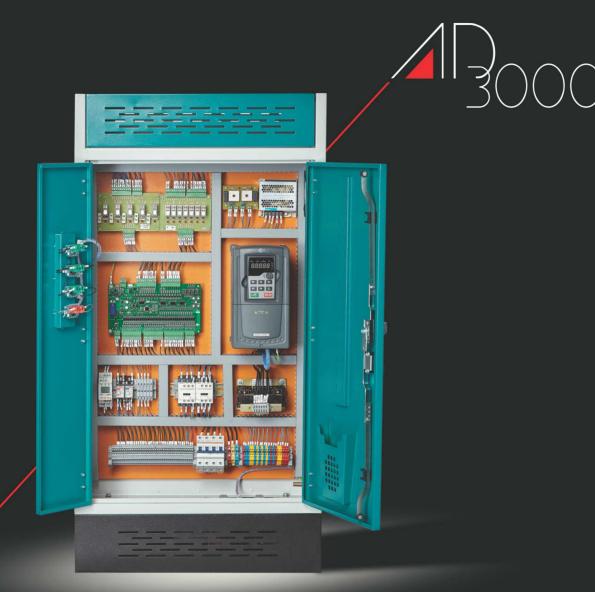


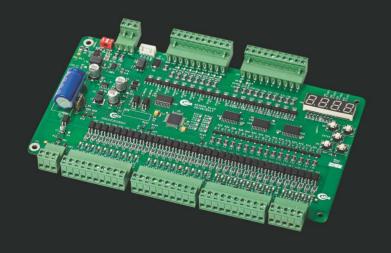




- 16 Stop Down Collective and 11 Stop Collective Selective.
- With AD9007 32 Stop Down Collective and 24 Stop Collective Selective.
- Operations: Regular V3F, Down Collective V3F and Collective Selective V3F also suitable for Auto Door,
- Duplex Operation using just two Wire communication no extra hardware require.
- Speed: Up to 2 m/sec.
- All system parameters can be adjusted by using 5 buttons and LCD placed on the card.
- Call Register LED and Call Push Button are on single wire.
- On board Seven Segment Display.
- Serial COP Card (AD\_CTB) attachment using CAN bus.
- All the Input and Output are Opto-isolated and available in both 12VDCand 24VDC.
- All the Input and Output are carrying LED indication on board.
- An error code are display on LCD.
- Each floor can be named by an alphanumeric character (L, P, E, F, H, b, o, 0, 1, 2, 3....).
- 7-segment and signalization outputs are short-circuiting protected. In a short circuit case the concerned output is shut down until problem is removed.
- It also detect the landing lock short at particular floor.
- Also detect lock short in Auto Door. If Door not open within predefined time.
- Power down memory, in case of power fail it will reach at nearest floor instead of going to correction end.
- Only 15 cables are enough for system to work by using serial car connection (AD\_CTB). Which reduces labor and cable costs.
- AD9007 is Multipurpose Extension Card Which can be used with our any product with CAN bus Output.
- PCBs are solder in Fully Automatic Pick & Place Robotic Machine.
   Which will remove all human error.
- Using CAN bus you can Program and Monitor the mother board with External Graphical Program Tool







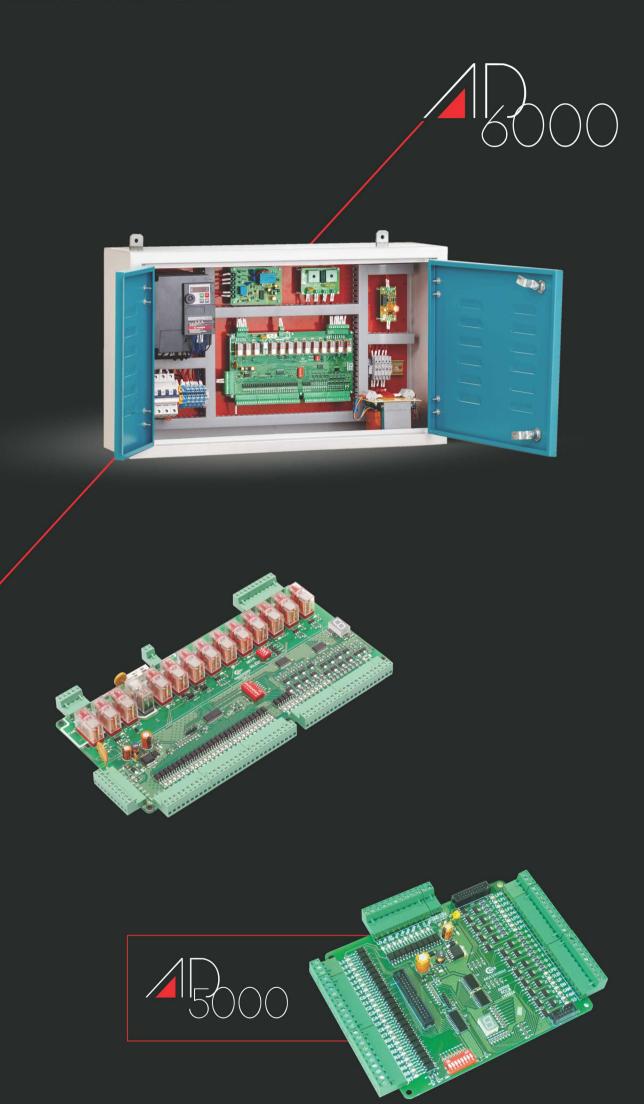






- 8 Stop Down Collective and 6 Stop Collective Selective
- With AD9007 24 Stop Down Collective and 16 Stop Collective Selective.
- With AD9006 15 Stop Down Collective and 11 Stop Collective Selective.
- Operations Traction: Regular V3F, Down Collective V3F and Collective Selective V3F.
- Operations Hydraulic : Hydraulic Manual Door, Hydraulic Auto Door, Hydraulic Double Auto Door 2 Valve, 3 Valve and 4 Valve Configuration.
- Speed: Up to 2 m/sec.
- All system parameters can be adjusted by using 5 buttons and 4 Seven Segment placed on the card.
- Call Register LED and Call Push Button are on single wire.
- On board Seven Segment Display.
- Serial COP Card (AD\_CTB) attachment using CAN bus.
- All the Input and Output are Opto-isolated and available in both 12VDCand 24VDC.
- All the Input and Output are carrying LED indication on board.
- An error code are display on display as well as it is memories in the card.
- Each floor can be named by an alphanumeric character (L, P, E, F, H, b, o, 0, 1, 2, 3....).
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- It also detect the landing lock short at particular floor.
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- Power down memory, in case of power fail it will reach at nearest floor instead of going to correction end.
- Only 15 cables are enough for system to work by using serial car connection (AD\_CTB) which reduces labor and cable costs.
- Using this Up to 24 Stop Full Serial just 4 Wire Communication can be done easily.
- PCBs are solder in Fully Automatic Pick & Place Robotic Machine.
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- 4 Digit Display on board make easier to program parameter and view an error code.
- Using CAN bus you can Program and Monitor the mother board with External Graphical Program Tool











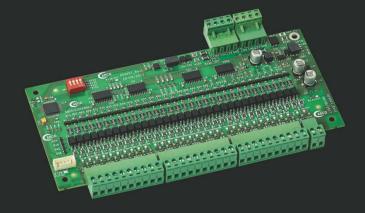
- No of Stop: 8 Stop Down Collective.
- Operations: Manual Door Down Collective V3F Speed: Up to 1 m/sec.
- On board Seven Segment Display.
- All the Input and Output are Opto-isolated and available in both 12VDC and 24VDC.
- All the Input and Output are carrying LED indication on board.
- An error code are display on display.
- Each floor can be named by an alphanumeric character (L, P, E, F, H, b, o, 0, 1, 2, 3.....).
- 7-segment and signalization outputs are short-circuiting protected. In a short circuit case the concerned output is shut down until problem is removed.
- It also detect the landing lock short at particular floor.
- PCBs are solder in Fully Automatic Pick & Place Robotic Machine. Which will remove all human error.



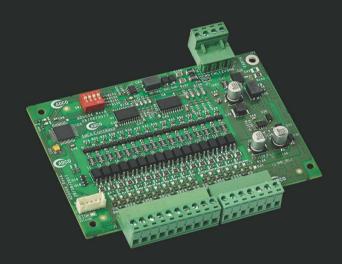


- Relay Board Combine With Ad5000 becomes Ad6000.
- Panel Wiring become very Simple and Panel become small.
- Easy to find panel wiring Error or fault.

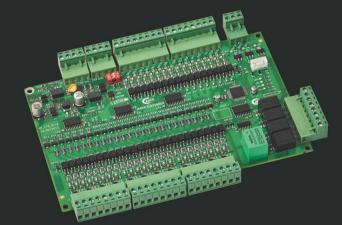














#### **FEATURES:**

- Car Control Card.
- CANBus Socket Connection.
- All Signal Opto Isolated.
- Signalization outputs are short-circuiting protected.
- In a short circuit case the concerned output is shut down until problem is removed.

#### AD9007

 32 Digital Input and Output For Car Call push button and LED.

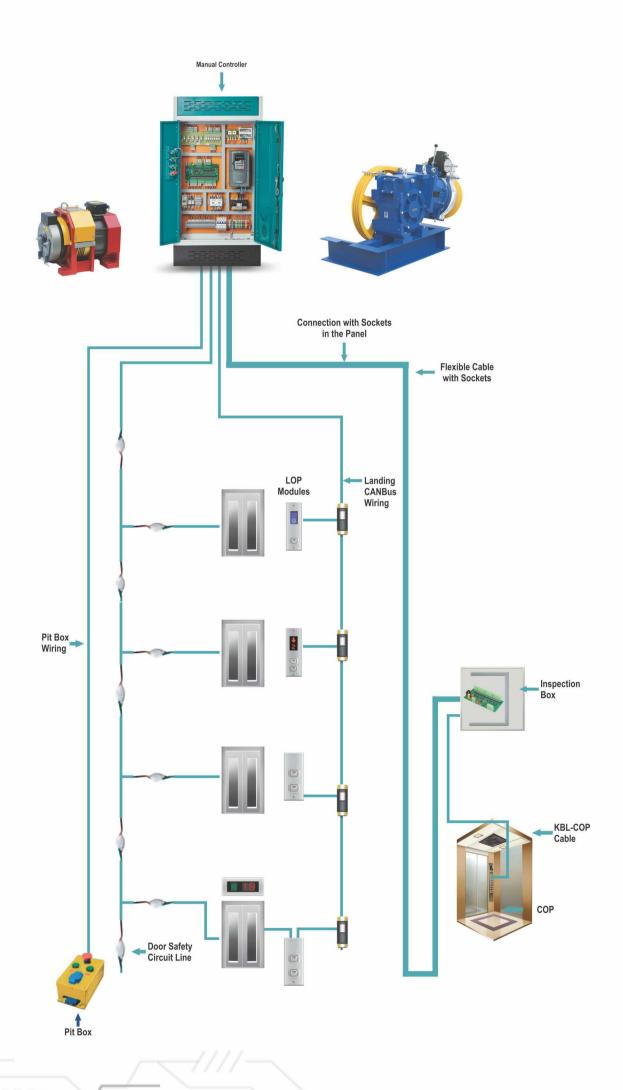
#### AD9006

• 16 Digital Input and Output For Car Call push button and LED.

#### **ADCTE**

- 24 Digital Input and Output For Car Call push button and LED.
- 16 Digital input and 5 Relay output

















 In case of a main power supply failure, the lift stopped between two floors is moved to floor level, the automatic door is opened and passengers are out safely, For lifts with automatic door, in case of a main power supply failure at floor level, the door is remain opened,

# **Technical Specification**

- Input Voltage: Three Phase 440VAC, 50Hz Pure Sine Wave Main Line Voltage
- Output Voltage: Two Phase 440VAC, 50Hz Modified Square wave with power Booster Logic.
- Battery Voltage: 72V (6 Battery of 12V) and Amp depend upon the Motor Rating

#### USE:

- This device is suitable for those buildings without an emergency power source Allocated for the elevator.
- Also have smart Battery Charger for 72V (6 Battery of 12V)
  For Higher HP Motor they have also Current Sensor which
  detect the lowest current direction of the motor, this is optional.
- Overload and Overcurrent Protection.
   Start Time and Travel Time Also Adjustable.





















- AD300 Series High Performance Open Loop Vector Control inverter.
- Applying the most advanced sensorless vector control which keeps pace with the leading international level and 32-bit DSP system.
- The product enhances its reliability to meet the requirements of environment adaptability, customized and industrialized design with more optimized functions, more flexible applications and more stable performance.
- Modular design of Fans and Capacitor for easy replacement and maintenance.
- External LED keypad to copy parameters; Optional LCD keypad provided.
- Emergency Power Supply (EPS) Function with Just a 220VAC Single Phase UPS.
- Double Safety protection examine, output phase loss at all time and check torque output before releasing the mechanical brake.
- Auto tune motor parameter without load disconnection.

# **Technical Specification**

- 4 KW, 5.5KW and 7.5KW Power Rating.
- 440VAC Three Phase Power Supply.
- 220VAC Single Phase for Emergency Power Supply.
- Open loop vector inverters for controlling asynchronous AC induction motors and permanent magnet synchronous motors.
- Up to 0.25Hz/150% starting torque(Asynchronous motor); 2.5Hz/150% starting torque (Synchronous motor)







COMPONENTS

- Unit has Compact Door Drive with PMDC Motor for Auto Door Lift.
- Unit works with any kind of doors.
- It senses the opening span automatically at the time of setup / installation.
- Manual Tuning doesn't required, Self-Learning is automatically executed during set-up.
- User can set Function Parameters by using Keys and Segment.
- Information Manual carries information about the Function Parameters.
- The Connection Diagram mentioned on Drive itself.

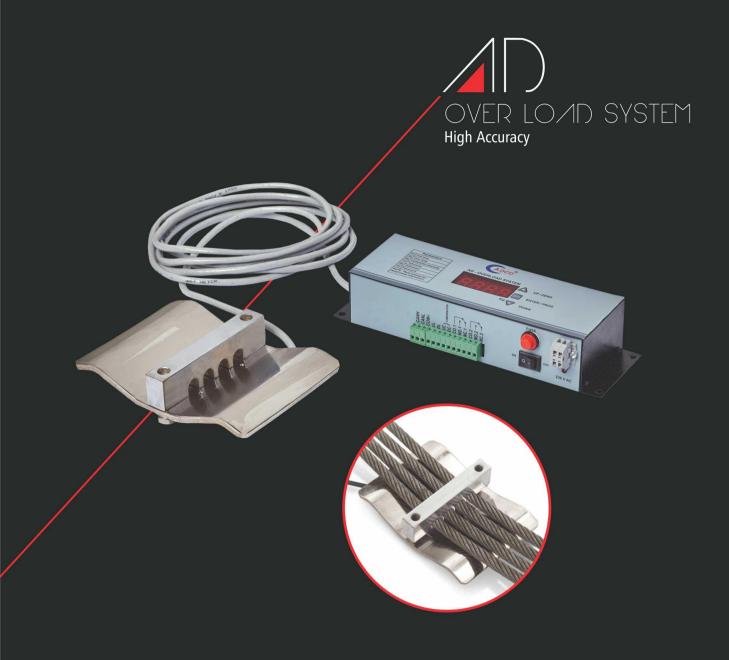
# **Technical Specification**

#### **Door Motor**

- 24V PMDC Motor (Variants: 60W, 100W, Power Capacity depends on the size of the doors).
- Planetary Geared & Worm Geared Variants are available.
- Motor equipped with high resolution Encoder.

#### **Door Drive**

- Auto-Learning for the span of the door travel distance.
- Curved Profile for the operation of door opening & door closing, doesn't require to set any other extra parameters, like; Fast Speed, Slow Speed, Slow Located Distance etc.
- Use motor equipped encoder, so smooth start & stop function without extra limit proxy switches.
- Door Opened & Door Closed acknowledgement signals through Relay output.

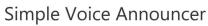


- Capable of measuring up to 5 tons of weight (Cabin weight + structure + payload).
- Two relay outputs available, one for full load and other for over load.
- Easily operates on 230 volt AC supply
- Simple Programming mode for weight setting is available.
- Seven segment display is available for weight readings.
- Several LED indicators are available to highlight certain event indications.
- Lift load detection through measurement of stress of traction ropes.
- Low weight and compact in size .
- Easily installable on the cabin.

#### Overview:

Overload protector is really very useful against the protection of elevator controlling machines and inverter. It is really very useful as it deals with the capability of the elevators as per the requirement hence it enhances the life time of the lift which is currently under the use.







Voice Announcer



Monostable Switch & Bistable Switch











### Regd. Office & Factory:

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#### Sales & Service:

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