

Schindler Miconic[®] TX

Proven performance for
mid- to high-rise buildings

Schindler Traction Elevator Group Control



Schindler



Miconic® TX advanced universal elevator group control

Sophistication with versatility

Miconic TX delivers unbeatable traffic handling in mid- and high-rise buildings with groups of up to 8 cars. It is ideally suited to residential buildings, offices and hotels.

Miconic TX employs a very refined algorithm and its 'cost of service' strategy minimizes both waiting and travel time for all passengers.

Miconic TX can be provided with a broad range of customer-specified enhancements. Schindler LobbyVision® permits the owner to place cars in or out of service, select secure floors and define regular printouts of elevator performance data.

Miconic TX can be provided with Variodyn® ACVF or solid state SCR DC drives. Miconic TX is also custom tailored for application in modernization.

- Multi-voltage, high current input/output permits easy retention of older car and landing fixtures.
- Configurable parameters permit easy application with all types of existing DC motors.

Benefits of Miconic TX

- Very low average waiting times
- Shorter travel times at peak periods due to fewer stops
- Even distribution of passengers between cars
- High system redundancy, so the group control still functions if one car is switched out
- Smooth change-over between normal traffic mode and up or down peak
- Adaptive distribution of free cars
- Adjustable full load bypass
- Anti-nuisance car call cancellation
- Superior floor-to-floor ride comfort via a fully digital interface with the drive
- Equipped with Schindler Remote Monitoring™ (SRM).

Applications

- Group size: 1 – 8 cars
- Maximum stops: up to 63
- Operation: geared or gearless traction.

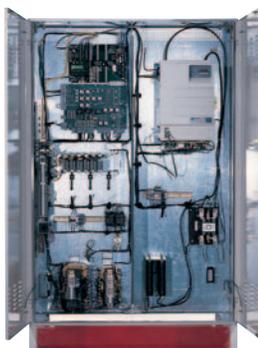
Options

- LobbyVision® building management system
- Front and rear entrances
- Split-group operation for serving separate segments of total rise.

ACVF drive configuration



DC drive configuration



Miconic TX control features

Up peak feature

Miconic TX detects the increase in traffic from the lobby that marks the start of an Up Peak period. It now instructs the cars to return to the lobby after each completes its assigned calls. Only one waiting car opens its doors at a time, ensuring each departing car fills quickly. The full-load threshold and door open time can also be increased. Miconic TX continually reassesses passenger traffic volumes to ensure that the best traffic mode is operational. Even during Up Peak periods it considers counter-direction traffic and ensures continuity of service.

Down peak feature

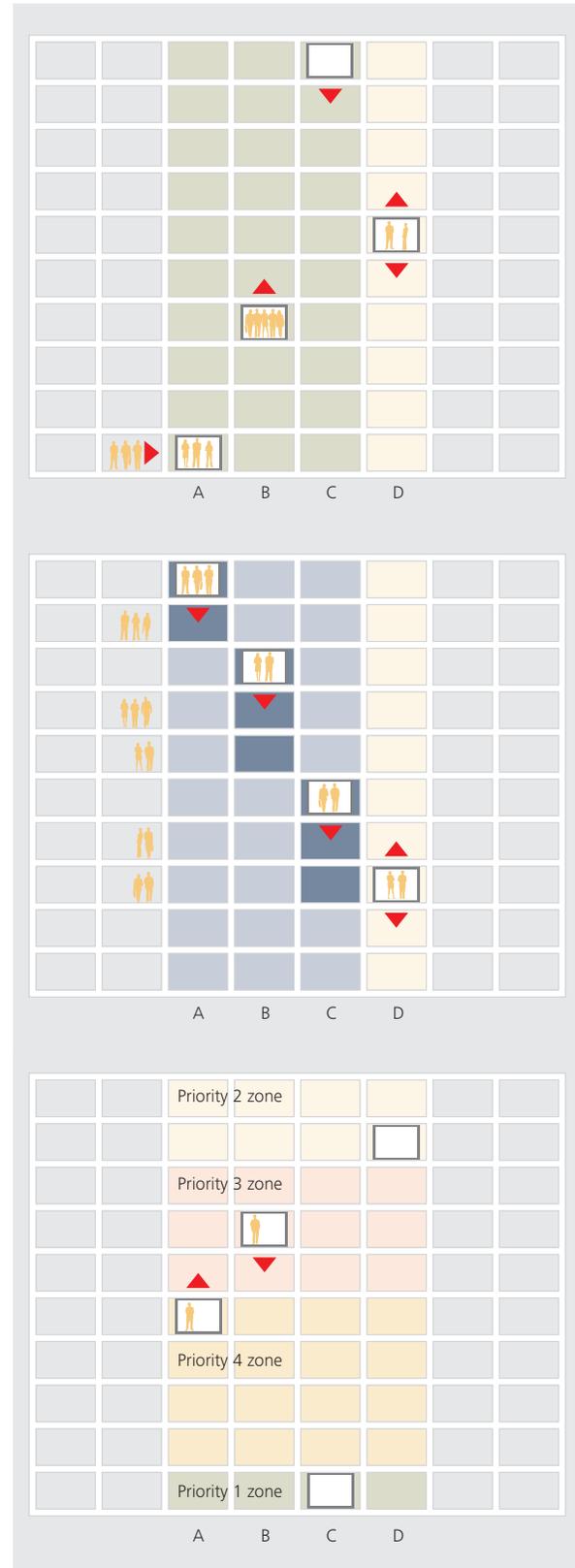
Once Miconic TX detects Down Peak traffic it starts to assemble down-calls typically in groups of 2 to 4 floors. An assigned Down Peak elevator will collect one call group, descend to the lobby and return for another. Journey times are shortened by the greatly reduced number of stops per cycle. Passengers on lower floors benefit — they are no longer kept waiting due to lack of space in descending cars. Even in Down Peak situations, counter-direction calls are not ignored.

Distribution of free cars

Rapid response to new calls is assured by distributing free cars to prioritized positioning zones. As a car becomes free it moves to the highest priority unoccupied zone, and positions at the floor most likely to receive the next hall call.

Split group feature

A Miconic TX group can be programmed to operate as two individual sub-groups, each one serving its own segment of the building's occupants.



Up peak service in operation

Miconic TX has assigned cars A, B and C to up peak traffic.

- Car **A** is waiting at the lobby with doors open to receive a full passenger load.
- Car **B** is delivering passengers on its upward journey and will return directly to the lobby.
- Car **C** has delivered its passengers and is returning directly to the lobby.
- Car **D** is completing calls that existed above the lobby and were assigned during a cyclic scan.

Down peak service in operation

Miconic TX has assigned cars A, B and C to down peak traffic. It has analyzed the current landing calls and assigned each car to a group of 2 or 3 floors.

- Car **A** is collecting passengers from floors 9 and 8, then going directly to the lobby.
- Car **B** is collecting passengers from floors 7, 6 and 5, then going directly to the lobby.
- Car **C** is collecting passengers from floors 4, 3 and 2, then going directly to the lobby.
- Car **D** is handling inter-floor traffic.

Distribution of free car in operation

- In this light traffic situation, only cars **A** and **B** currently have passenger assignments.
- Car **C** has been assigned to wait at the lobby, which is the highest priority zone.
- Car **D** has moved to the zone designated next in priority, and has positioned at the floor that Miconic TX calculates most likely to receive the next hall call.

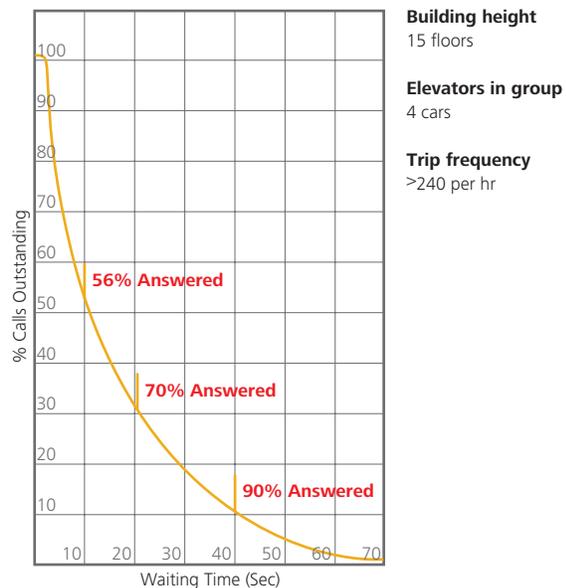
Cost of service algorithm

Each Miconic TX control monitors its own car position, passenger load and in-car calls. The group bus tells it the currently registered hall calls. Miconic TX already has data on acceleration, deceleration and door operating times. From these, the system calculates, for each landing call, the extra journey time for passengers already in the car if it should answer that call. It also calculates the waiting time for the passengers it predicts will be at each active hall call. The sum of these two times is the Total Cost of Service.

All the Miconic TX controls in the group bid their total costs of service, and the one with the lowest bid is assigned to the call. Because the call list is constantly changing, the calculation is complex, and Miconic TX reviews its car assignment options many times per second. Each assignment is finally confirmed once a car begins deceleration to answer a hall call.

Demonstrated performance

This demanding real-life test for Miconic TX involved heavy mixed traffic to and from every one of the building's 15 floors. The results show how well Miconic TX performed. More than 50% of calls were answered within 10 seconds, and 70% within the 20 second optimum time period. 90% came within a comfortable 40 seconds. In any hotel or office building this performance would be rated outstanding.



Miconic TX architecture

Distributed control

Any one of the Miconic TX controls can operate as the Group Master. So the group will continue to operate normally if any individual control is switched out. Each control is linked by its own bus to its car computer and drive control. Along this bus Miconic TX informs its drive of assigned stops, instructs the car to operate doors, and receives car calls. Controls communicate via the group bus, which also carries incoming hall calls. They can also link via a gateway to the building bus for remote monitoring and control.

Smart software

Software controlled options — such as VIP and emergency functions — are downloaded from the extensive Schindler software library into their own customized control memory. The processor's

main software memory remains unchanged during customizing. This protects the essential core operating system while allowing full flexibility to accept future options.

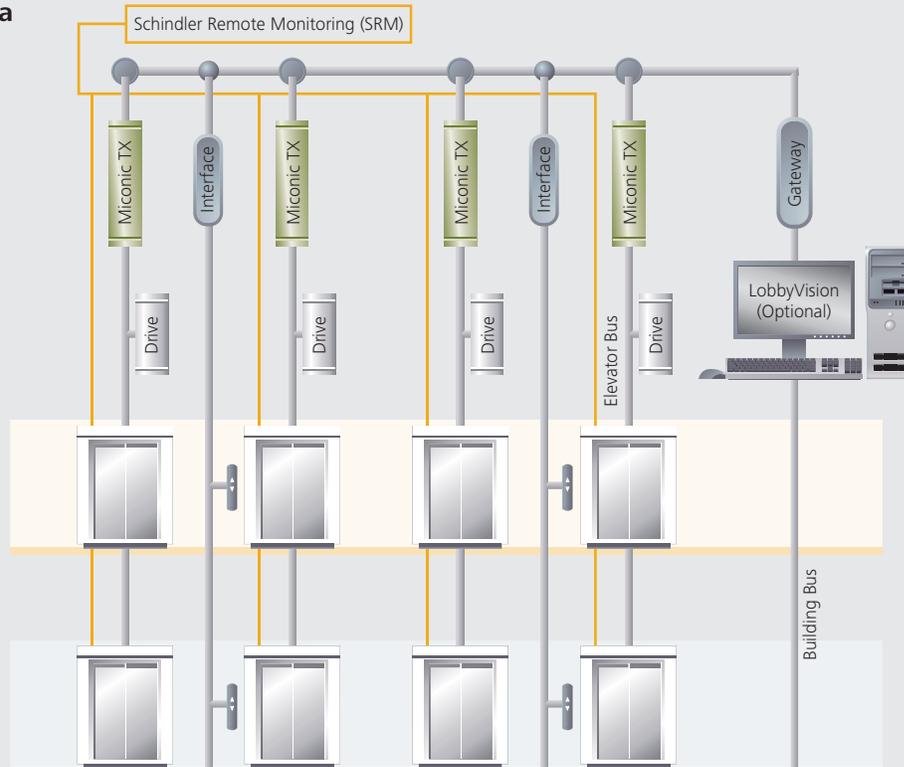
Schindler LobbyVision option

A graphics screen displays the position and status of all the elevators — and other systems — within a building or complex. It allows real-time management of elevator groups, and also incorporates a sophisticated traffic statistics program that outputs collated, printed reports.

Schindler Remote Monitoring (SRM)

Schindler Remote Monitoring (SRM) continuously monitors and records data to help pinpoint problems. It can automatically notify Schindler if a service call is required.

Miconic TX in a four car group





Schindler

Reliable, moving, trailblazing

For generations, Schindler has been providing the finest elevator technology to architects and builders around the world. The company was founded in Switzerland in 1874, and has grown to become the world's second largest elevator manufacturer, operating in more than 100 countries worldwide.

For further information including location of the Schindler office nearest you, please visit:

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