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EZSHUTTLE

Destination Floor Guidance System

Concept

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Destination Floor Guidance System

As cities are becoming urbanized and building proportions are increasing, reducing passenger crowding and shortening riding time are strongly expected. Fujitec's EZSHUTTLE fulfills these expectations.

EZSHUTTLE optimizes elevator operation control by obtaining passengers' destinations at elevator floors instead of inside the car. This special feature of EZSHUTTLE enables elevator control to provide uncongested elevator service to passengers.

EZSHUTTLE is a new-generation Destination Floor Guidance System.

Speed & Efficiency

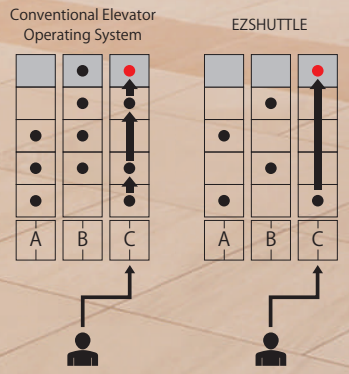
Riding Time Reduction by 50%* and Uncongested Elevator Service

During rush hours in urban office buildings, many passengers occupy the lobby in a short period of time and then, rush to the elevators responding to their up / down hall call registrations.

Currently, a fully occupied elevator receives many car call registrations and must stop at many floors in order to complete all passenger service in its traveling direction. This elevator operation process causes a long riding time for passengers.

In an elevator operating system with EZSHUTTLE, passengers are required to register their destinations at the elevator floors rather than conventionally registering them inside the elevator. The EZSHUTTLE system then guides passengers to their assigned elevators, which will have been selected to minimize the number of destination stops based on the registered destinations.
This passenger guidance and elevator assignment provides passengers with uncongested elevator service and a reduction in passenger riding time by 50%* at peak travel periods.

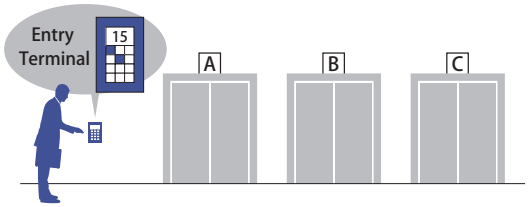
* Based on comparisons of passenger riding time obtained under a conventional elevator operating system and that under a simulated EZSHUTTLE-equipped elevator operating system.



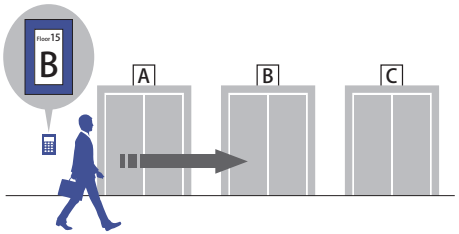
Functions

Using EZSHUTTLE

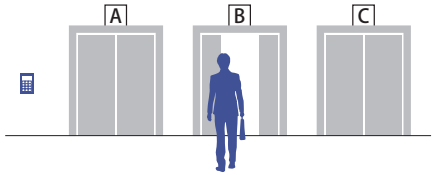
1 Upon registration of your destination, your assigned elevator will be indicated on the entry terminal.



2 Walk to the assigned elevator, and wait for its arrival.



3 Ride on the assigned elevator by checking the Destination Floor Indicator on the car entrance column*.



* Depending on the specifications of elevators, there may be Destination Floor Indicators at the elevator entrance floors.

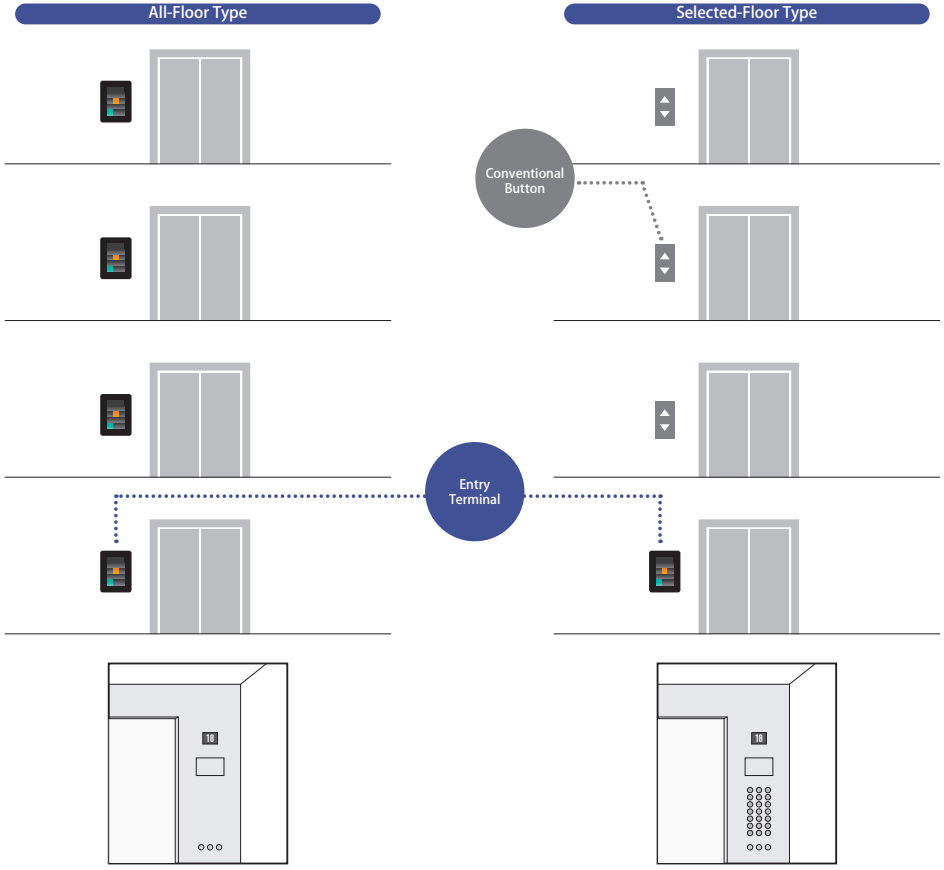
Notes:
While you are waiting, the elevators other than the elevator assigned for you may come earlier. They are not suitable for your departure. You are advised only to take the elevator that the entry terminal indicated for you.

Destination Floor Indicator on Car Entrance Column

Elevator Indication Panel

Two Options for the EZSHUTTLE

There are two options for the EZSHUTTLE. One is All-Floor Type and the other is Selected-Floor Type.



All-Floor Type	Selected-Floor Type
• Entry terminals are installed at every floor. There is no car operating board inside the car. • At all floors passengers' destination is registered on the entry terminals.	• Entry terminals are installed at the selected floors such as the main floor or the building access floor(s). At the other floors, conventional types of hall call buttons are installed. • At the floors with entry terminals, passengers' destination is registered on the entry terminals. At the floors with hall call buttons, passengers' destination is registered on the car operating board inside the car.

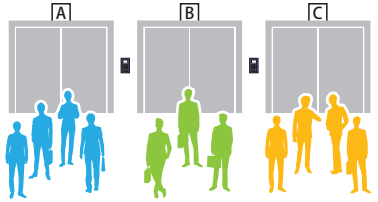
Notes:
When the elevators of Selected-Floor Type serve the passengers at the floors with entry terminals, passengers can only register their destination on the entry terminals.

Functions

Elevator Operating System with EZSHUTTLE

Before Elevator's Arrival

Passengers wait in front of their assigned elevators as indicated on the entry terminals.



Riding the Elevator

Each group of passengers takes the elevator bound for their zoned destinations.

Conventional Elevator Operating System

Before Elevator's Arrival

After registering hall calls, passengers wait in front of the first responding elevator.

Riding the Elevator

Passengers going to different zones ride in the same elevator. Some passengers are left behind by the overcrowded elevator.

Predictive Control

- Predictive Control predicts and assesses the waiting and riding time of all passengers. This prediction and assessment will be reflected in the elevator operating system.
- Regarding the waiting time, the predictions and assessments are made based on both already registered destinations and possible future registrations.

Energy-Saving Control

- Before an assigned elevator responds to a passenger's registration, this control calculates the elevator's travel distance in the future. The suitable elevator will be automatically selected to make the travel distance shortest and save energy.

Minimizing Long Waiting Time

- Assuming that newly registered destinations are applied to the current operation of elevators, all future passenger waiting time will be assessed. Based on this assessment, any future passenger waiting time will be minimized.

Traffic Analysis Service

- Over a month or more, elevator traffic data is stored inside a group control panel. As the need arises, it can be checked and analyzed.
- With the use of Fujitec's independently designed simulator, an analysis of the stored data and recommendations will be made by Fujitec for the optimal performance of the elevators. This will be done at the customer's request and at an additional charge.

Uncongested Elevator Service

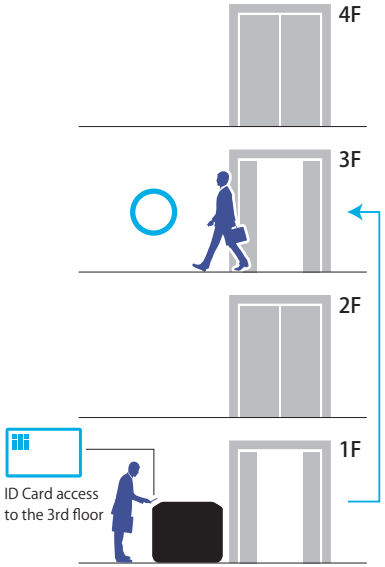
- During the morning rush hours or other up-peak periods, elevators dispatched from the lobby are 30% less congested than conventionally controlled elevators.
- Less congestion allows riding / waiting passengers to smoothly get in /out of elevators at floors.
- In addition, less congestion leads to a decrease in the number of elevator stops, which will reduce riding stress.

Decrease of Floor Bypasses

- Based on the number of registered destinations on the entry terminals at each floor, the number of passengers who can ride in the same elevator will be calculated with a high degree of accuracy. Based on this calculated data, elevators bypassing waiting passengers will be reduced to a large degree.

Specifications

Synchronization with Building Security Management System



Synchronization with Building Security Management System

- EZSHUTTLE can be linked to a building security management system. EZSHUTTLE's passenger ID authentication synchronizes with the building security system and restricts access to specific floors. When a passenger presents their ID card at a security gate equipped with an EZSHUTTLE entry terminal, their destination will be registered automatically both in EZSHUTTLE and the building security system.

Universal Design and Functions

- For passengers requiring extra time to get in/off, pressing the wheel-chair-user button will extend elevator operation time; exclusive service will be provided to those in need.
- Audio guidance can be provided by EZSHUTTLE.

VIP Operation

- EZSHUTTLE provides VIP exclusive service to those carrying special ID cards. When a special ID card has been used to register a destination, the elevator that can respond the fastest will be assigned. The elevator will take the VIP(s) directly to their destination, while rejecting any incoming hall calls.

Prioritized Elevator Operation for Special Floors

- At a pre-determined special floor such as the director's floor, etc., when a passenger has registered a destination floor, EZSHUTTLE promptly assigns an elevator that can respond quickly in order to minimize the wait time at that floor.
- At a regular floor, when a passenger has registered a special floor as their destination, EZSHUTTLE promptly assigns an elevator that can transport them to that floor as fast as possible.

Flexible Building Layout

- Customers and architects can freely plan elevator-served floors in buildings, because they don't need to connect elevator-served floors in the same service zone and are not constrained by the building's structure and allocation of public floors. Therefore, no transit floors are required.
- No connection of elevator-served floors increases rentable space in buildings. The reduction of extra parts and labor for elevator hoistway installation results in a reduction of building construction costs.

List of Specifications

● : Standard Specifications ■ : Optional Specifications (with additional charge) — : Not Available

System Functions	All-Floor Type	Selected-Floor Type
Predictive Control	●	— ∗1
Energy-Saving Control	●	—
Minimizing Long Waiting Time	●	—
Traffic Analysis Service	● ∗2	● ∗2
Uncongested Elevator Service	●	●
Decrease of Floor Bypasses	●	—
Synchronization with Building Security Management System	■	■
Universal Design & Functions	■	■
VIP Operation	■	■
Prioritized Elevator Operation for Special Floors	■	—
Flexible Building Layout	■	—

Fixtures		All-Floor Type	Selected-Floor Type
Entry Terminals		● ∗3	● ∗3
Destination Floor	On Car-Side Entrance Column	● ∗4	● ∗4
	Floors	■ ∗4	■ ∗4
Hall Lanterns	Typical Floors	■	● ∗5
	Main Floor	■	■
Destination Buttons inside Car		— ∗6	●
Elevator Indication Panel		●	●

∗1 Predictive control is made by the corresponding group control system.
∗2 Traffic analysis service is made at the customer's request and at an additional charge.
∗3 The wheel-chair-user buttons will be provided at an additional charge.
∗4 Destination Floor Indicator can be chosen from Faceplate Type (standard) and Built-in Type (option).
∗5 Hall lanterns will not be provided at the floors with entry terminals.
∗6 Destination (Registration) buttons are concealed inside the cabinet of a car operating board.

Fixture Design — Pedestal Models —

AP Type

The elegant and organic form accentuates a building floor.

EP Type

The slim appearance of this form consisting of multiple semi-translucent surfaces builds a sense of openness.

DP Type

The curved form provides a comfortable feeling and creates a calm atmosphere.

FP Type

The Origami (Japanese Paper Folding) - shaped motif has a silent presence and creates a high-quality mood.

	AP Type	EP Type	DP Type, FP Type
Faceplate		Acrylic (non-glare finish) Black Metallic Color	
Body	Painted FRP	Painted Steel and Translucent Smoke Grey Acrylic Panel	Painted Steel

Fixture Design — Wall-Mounted Model —

EW Type

With Card Reader

With Card Reader & ADA Button / Speaker

With Card Reader & ADA Button / Speaker

	EW Type
Faceplate	Acrylic (non-glare finish) Black Metallic Color
Body	—

DW Type

With Card Reader

With Card Reader & ADA Button / Speaker

	DW Type
Faceplate	Acrylic (non-glare finish) Black Metallic Color
Body	Acrylic Pearl White & Black Metallic Color

FW Type

With Card Reader

With Card Reader & ADA Button / Speaker

	FW Type
Faceplate	Acrylic (non-glare finish) Black Metallic Color
Body	Acrylic Silver Metallic Color

Fixture Design — Others —

Destination Floor Indicator on Car Entrance Column

Without Faceplate

With Faceplate

Elevator Indication Panel

PW Type
Entry Terminal with Mechanical Buttons
(instead of Virtual Buttons)

	PW Type
Faceplate	Stainless Steel with Hairline Finish
Body	—

Work by Others

Construction Work

1. Create cutouts and holes on the wall for installation of Entry Terminals.
2. Fill in the cutouts and the holes after the installation of the Entry Terminals.

Electrical Work

1. Conduits from Entry Terminals to the elevator hoistway.
2. Provide electric power for the installation and adjustment work.
3. Provide card readers system, its power supply, wiring and conduits if required.
4. Provide security gates and inner wiring works if required.
5. Conduits and wiring from security gates to the elevator hoistway if required.

* When card readers and / or security gates are applied, provide and install all of electricity supply apparatuses (inclusive of pipes, leads, wires, etc.).

The product images shown are for illustration purpose and may not be exact representation of the actual products.