

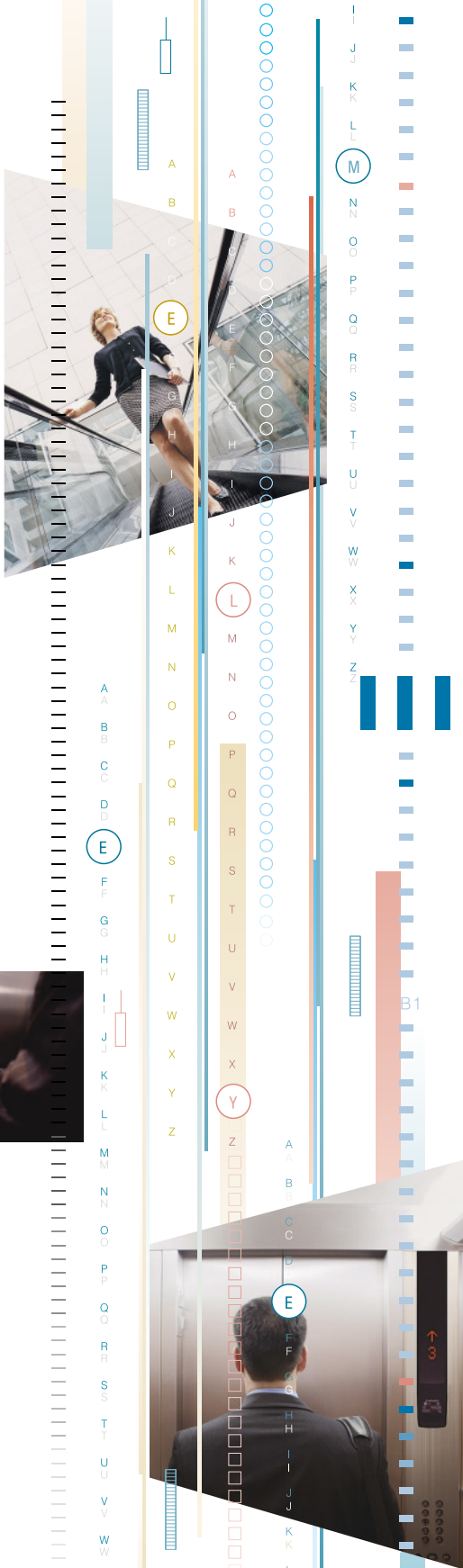


MITSUBISHI ELECTRIC

ELEVATOR MONITORING & CONTROL SYSTEM

Changes for the Better

Quality 
in Motion



||||| Mel Eye

In recent years, the need for a monitoring system utilizing network technology has increased. In large-scale international airports, for example, interfacing with the building and facility management control system has proved an essential oracle. In order to meet this requirement, Mitsubishi Electric Corporation has developed a sophisticated monitoring system - **Mel Eye** which utilizes Web-based technology.

Mel Eye closely observes the operational status of elevators and escalators that handle continually changing passenger traffic. This allows Building Managers to rapidly respond to changing traffic patterns, thus optimizing the performance of elevators and escalators and maximizing the added value of the whole building. The application of the latest network technology has also greatly increased the number of controllable elevators and escalators, which minimizes the cost spent on facilities such as supervisory rooms and monitors. **Mel Eye** is our solution to futuristic building traffic monitoring systems.

Supervisory System **Mel Eye** Enhances Elevator and Escalator Operation Management with the Latest Network Technology

+ Latest network technology

▶ Application of Web server and Web browser

Because the system configuration is hosted on a Web server, the elevators and escalators can be monitored by multiple PCs at any location desired within the network provided. The use of a Web browser interface allows various functions.

▶ Application of Ethernet *

The high-speed broadband network using Ethernet facilitates smooth data communication between the server and the elevators and escalators. Connecting to a special high-security network** enables monitoring from anywhere in the building.

* Ethernet is a trademark of Xerox Corporation in the U.S.A.

** A special high-security network needs to be provided aside from the general LAN circuit.



+ User-friendly screen

▶ Versatile monitoring screens

The system displays the operation mode of each elevator or escalator, or the operational status of each group, on user-friendly screens.

▶ Easy selection of screens

Straightforward mouse operation enables the speedy selection of the required information.

▶ Reliable indications and alarm* for safety

To ensure passenger safety, indications to warn of all failures of elevators and escalators are provided. An optional alarm, which will go off for specific events such as group or individual car control failure can be added to the warning indications.

* The alarm is optional and requires speakers for the PC.



+ Optional features

▶ Remote control

A PC connected to the MelEye system can control the special and emergency* operations of the elevators: for example, Floor lockout, VIP operation, Operation by emergency power source, or Fire emergency return.

* For more details on special and emergency operations, please refer to "Main functions" on page 5 or our product brochures.

▶ Scheduling of operations

All buildings have a flow of people moving to specific floors at specific time periods. Scheduling of special operations such as Intense up peak or Lunch time service can be preset to meet the demand inside the building.

▶ Statistical information

The past fault logs of the elevators and escalators and the operation logs of PC are recorded*. In addition, the traffic analysis function counts the calls of the elevators and measures the users waiting time. These functions enable the Building Manager to analyze the traffic flow statistically, and helps optimize the efficiency of the elevator and escalator operation.

* This function is a standard feature.

▶ Play back information

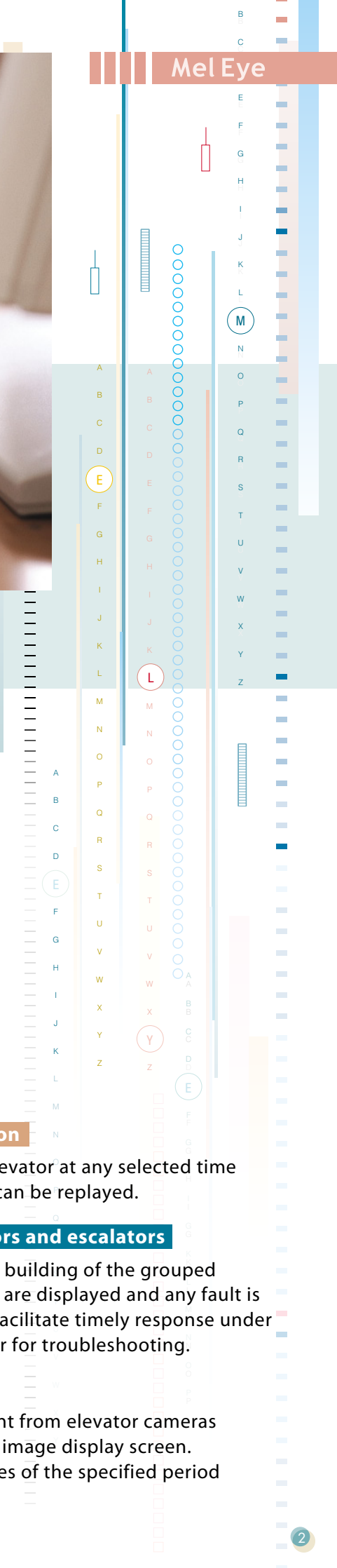
The movement of any elevator at any selected time within the past 30 days can be replayed.

▶ Locations of elevators and escalators

The locations within the building of the grouped elevators and escalators are displayed and any fault is highlighted in order to facilitate timely response under emergency conditions or for troubleshooting.

▶ Image monitoring

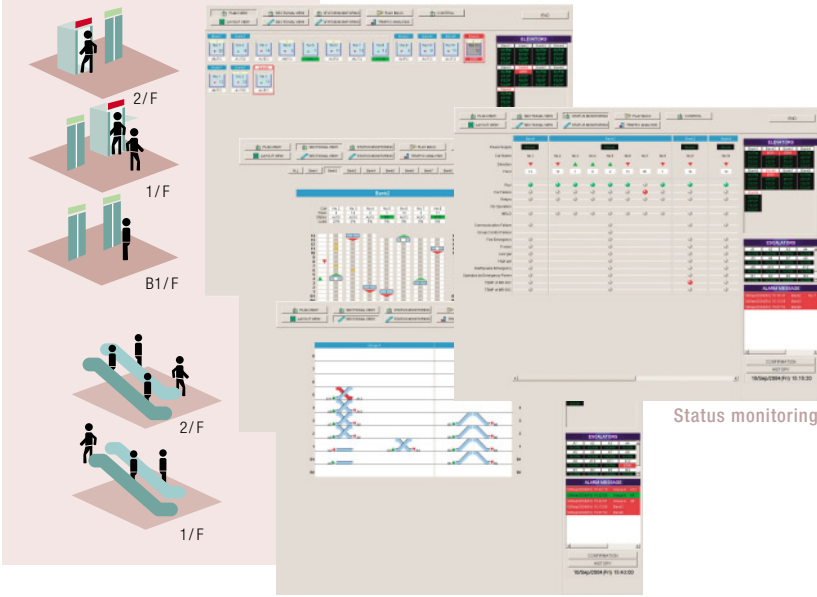
The real-time images sent from elevator cameras can be displayed on the image display screen. Also, the recorded images of the specified period can be played as well.



Versatile Features for Elevator and Escalator Operation Management

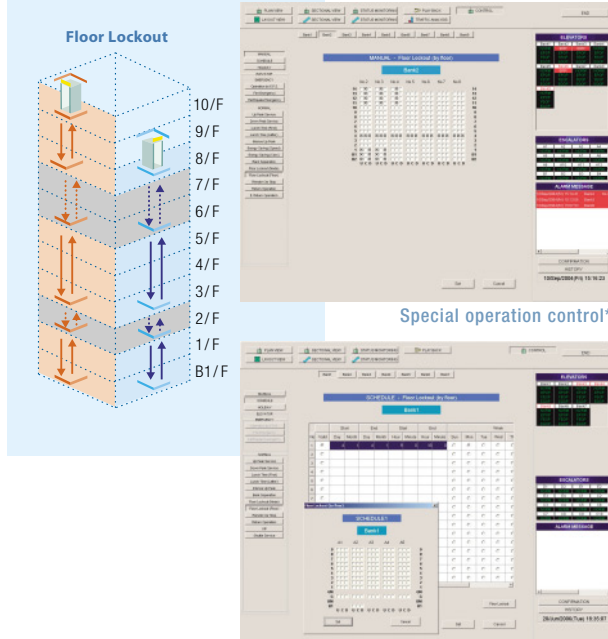
▶ Monitoring screens

MelEye's user-friendly screen shows the detailed operational status of the elevators and escalators in real time.



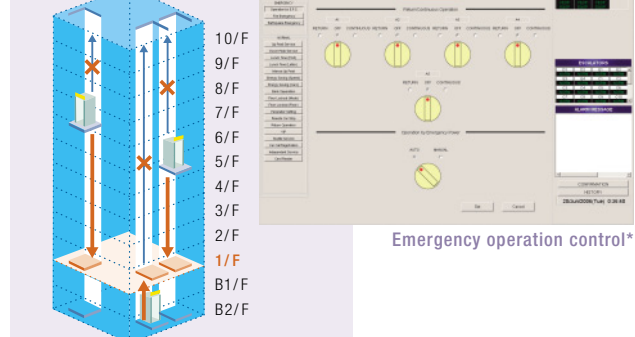
▶ Remote control

A PC allows remote control and schedule of special and emergency operations.



▶ Scheduling of operations

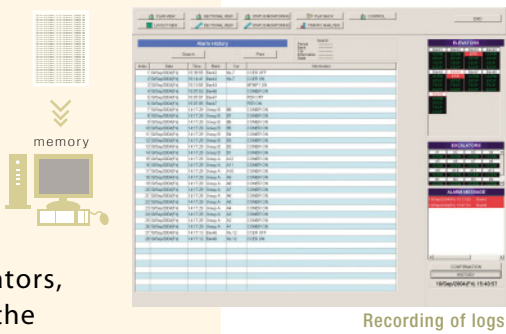
Operation by emergency power source



▶ Statistical information

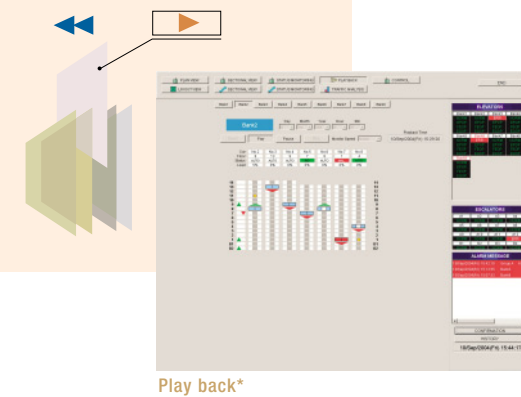
The past fault logs of the elevators and escalators are recorded in addition to the operation logs of the PC.

Operational data of the elevators, such as the number of calls, the average waiting time and long wait rate, are analyzed statistically.



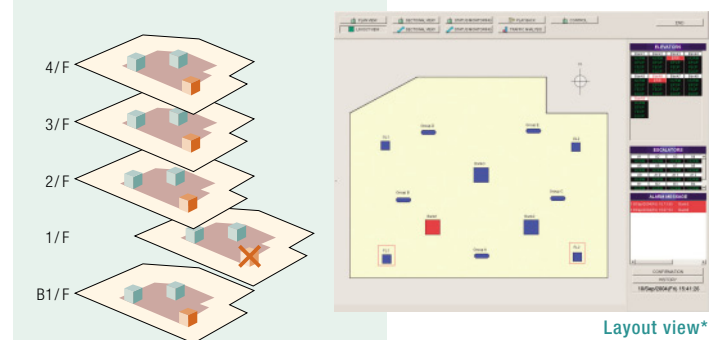
▶ Play back information

The movement of any elevator at any selected time within the past 30 days can be replayed.



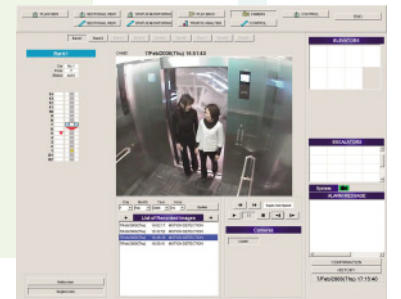
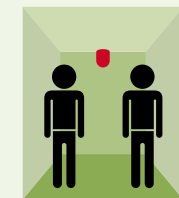
▶ Locations of elevators and escalators

The locations within the building of the grouped elevators and escalators are displayed and any fault is highlighted.



▶ Image monitoring

The real-time images sent from elevator cameras can be displayed on the image display screen. Also, the recorded images of the specified period can be played as well.



■ Main functions

Classification	Function	Description	Application										
			Ele.	Esc.									
Monitoring screens	Status monitoring	<ul style="list-style-type: none"> Monitors the operational status of elevators on three displays: "PLAN VIEW", "SECTIONAL VIEW" and "STATUS MONITORING". Monitors the operational status of escalators on two displays: "SECTIONAL VIEW" and "STATUS MONITORING". 	S	S									
Remote control and scheduling of operations*1	Special operation control	Controls or schedules the following special operations*2 manually by PC: <ul style="list-style-type: none"> Floor lockout (NS) · VIP operation (VIP-S) Intense up peak (IUP) · Lunch time service (LTS) Up peak service (UPS) · Down peak service (DPS) Bank-separation operation (BSO) Remote control car stop (RCS) · Return operation (RET) Main floor changeover operation (TFS) 	0	-									
	Emergency operation control	Controls the following emergency operations: <ul style="list-style-type: none"> Operation by emergency power source (OEPS) Fire emergency return (FER) Earthquake emergency return (EER) 	0	-									
Statistical information	Recording of logs	Records the fault logs of elevators and escalators, as well as the operation logs of the PC, in the past 90 days on HDD in CSV format.	S	S									
	Traffic analysis	Takes statistics of the number of calls, average waiting time and long wait rate of any specified period within the past 30 days and indicates the results in the form of a spreadsheet or histogram.	0	-									
Play back information	Play back	Plays back the movement of the elevator operation of any specified period within the past 30 days.	0	-									
Locations of elevators and escalators	Layout view	Displays the locations of the grouped elevators and escalators installed in the building and highlights any fault.	0	0									
Image monitoring	Image display sent from elevator cameras	The real-time images sent from elevator cameras can be displayed on the image display screen. Also, the recorded images of the specified period can be played as well. <ul style="list-style-type: none"> Video system: NTSC, PAL Image size: 600 × 480 pixel (approx. equivalent to VGA) or 300 × 240 pixel (approx. equivalent to QVGA) Image refresh interval & recording interval: One second Recording medium: CompactFlash 8GB is recommended *3 Continuous recording time: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Image size</th> <th>Recording interval</th> <th>Continuous recording time *4</th> </tr> </thead> <tbody> <tr> <td>600 × 480 pixel (approx. equivalent to VGA)</td> <td>One second</td> <td>Approx. 37 hours</td> </tr> <tr> <td>300 × 240 pixel (approx. equivalent to QVGA)</td> <td>One second</td> <td>Approx. 125 hours</td> </tr> </tbody> </table>	Image size	Recording interval	Continuous recording time *4	600 × 480 pixel (approx. equivalent to VGA)	One second	Approx. 37 hours	300 × 240 pixel (approx. equivalent to QVGA)	One second	Approx. 125 hours	0	-
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300 × 240 pixel (approx. equivalent to QVGA)	One second	Approx. 125 hours											

Notes *1. Scheduled operation does not apply to emergency operations and some of the special operations.
 *2. This table contains only some of the available operations. For further details, please refer to our product brochures.
 *3. CompactFlash is a trademark of SanDisk Corporation in the U.S.A.
 *4. The continuous recording time above is calculated using CompactFlash 8GB for reference only.

S : Standard
 0 : Option
 - : Not applicable

■ The number of connectable elevators or escalators

In case only elevators are installed	In case both elevators and escalators are installed		Number of connectable cameras
	Elevators	Up to 31 groups/ 64 units	
Up to 32 groups/ 96 units	Escalators	Up to 20 units	-

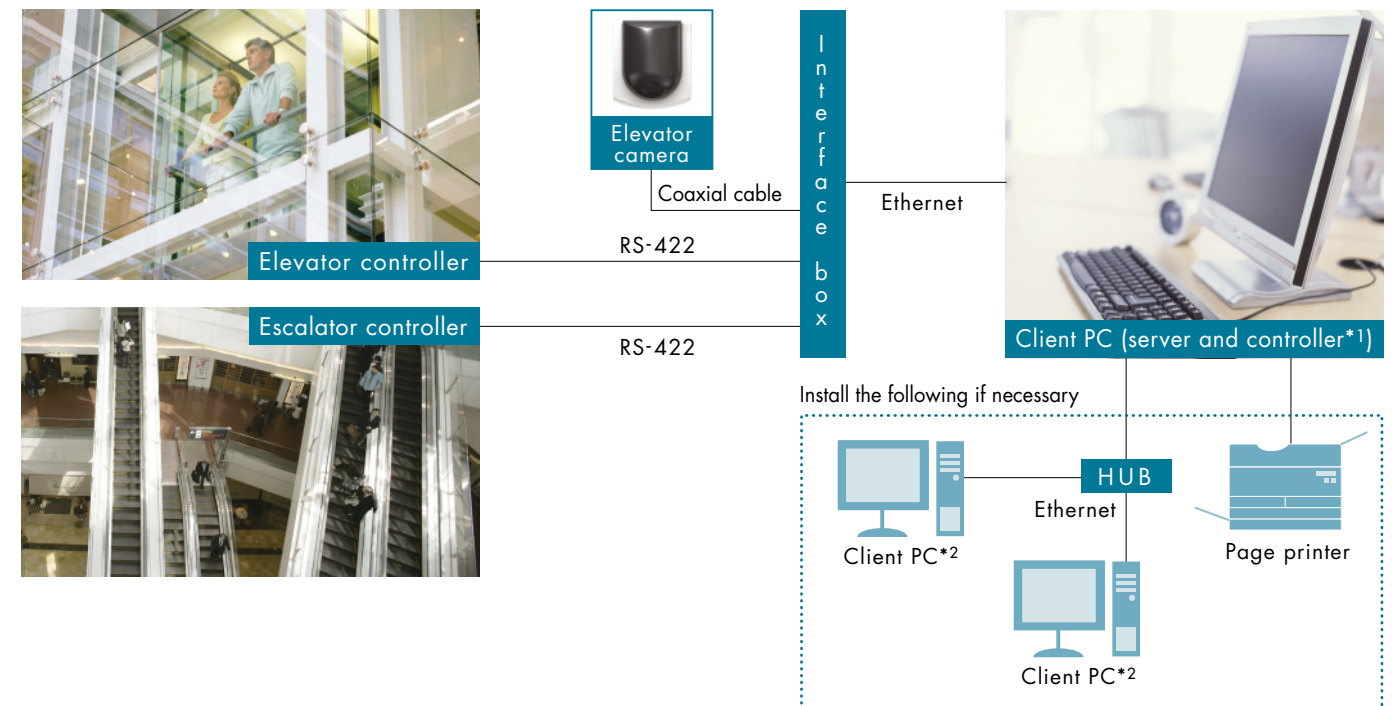
Notes 1. If the group or the unit number exceeds the maximum value in the above, the network needs to be divided. In such cases, please consult our local agent.
 2. Only one unit of camera can be installed per elevator.

■ Equipment specifications

Device	Specification
PC	<ul style="list-style-type: none"> CPU : Intel Core2 1.86GHz Main memory : 2.0GB HDD : 40GB
Monitor	<ul style="list-style-type: none"> 17" - 19" color LCD or CRT display Resolution: 1280 × 1024
HUB	10BASE-T/100BASE-TX
Printer	Page Printer (Option)

Notes
 1. Details to the left represent the minimum specifications.
 2. Depending on the monitoring functions or the number of elevators/escalators, some capacities to the left will be increased.
 3. Provision of power supplies is not included.
 4. Work station, such as a desk and a chair, is not included.
 5. UPS (uninterruptible power supply) for power failure is not included.
 6. Elevator camera and recording medium (CompactFlash) are not included.

■ System configuration



*1 A PC connected to the MeEye system can control the special and emergency operations of the elevators.
 *2 Max. 2 additional PCs

■ Glossary

- Ethernet :**
 This is a trademark of Xerox Corporation. It is a standard of bus formed LAN which was jointly developed by Xerox Corporation, Intel Corporation and DEC Corporation in 1980. It was standardized by IEEE802.3 (Association of Institute of Electrical and Electronics Engineers Inc.).
 - CSV format (Comma Separated Value format) :**
 On the premise that a file is opened by spreadsheet software, the data is separated by commas or linefeeds when it is arranged. It is used for data exchanges among application software such as spreadsheet software or data base software.
- *For more details, please refer to commercial computer glossaries.



Mitsubishi Electric Inazawa Works has acquired ISO 9001 certification by the International Standards Organization (ISO) based on a review of quality management. The plant has also acquired the environmental management system standard ISO 14001 certification.


INTERNATIONAL NETWORK

Inquiries and orders should be directed to the following offices. Some products may not be available for sale in some countries.

Country/Area	Company/Telephone/Fax/Address	Country/Area	Company/Telephone/Fax/Address
China	Mitsubishi Elevator Hong Kong Co., Ltd. Tel: 852-2510-1004 / Fax: 852-2570-3835 7F., 321 Java Road, North Point, Hong Kong Guangdong Ryoden Lift & Escalator Co., Ltd. Tel: 86-760-2333-5230 / Fax: 86-760-8889-8899 Chengnan 5th Road, Zhongshan, Guangdong 528455, P.R.C. Shanghai Mitsubishi Elevator Co., Ltd. Tel: 86-21-64303030 / Fax: 86-21-64300932 811 Jiang Chuan Road, Minhang, Shanghai 200245, P.R.C.	Saudi Arabia	Mitsubishi Electric Saudi Ltd. Tel: 966-1-477-7947 / Fax: 966-1-477-7950 P.O. Box 2391, Riyadh 11451, Saudi Arabia Tel: 966-2-650-3513 / Fax: 966-2-650-3519 Saudi Business Center 9th Fl., Medinah Road, P.O. Box 14166, Jeddah 21424, Saudi Arabia
Hong Kong	Mitsubishi Elevator Hong Kong Co., Ltd. Tel: 852-2510-1663 / Fax: 852-2503-2284 (Hong Kong) Tel: 852-2510-1022 / Fax: 852-2503-2284 (Macau) 7F., 321 Java Road, North Point, Hong Kong	Egypt	MELCO-MEC Egypt for Elevators & Escalators Tel: 20-2-3336-1373 / Fax: 20-2-3748-5302 4 Hayet Al-Tadrees Square-Dokki-Giza-Egypt
Macau	Mitsubishi Elevator Hong Kong Co., Ltd. Tel: 852-2510-1663 / Fax: 852-2503-2284 (Hong Kong) Tel: 852-2510-1022 / Fax: 852-2503-2284 (Macau) 7F., 321 Java Road, North Point, Hong Kong	Kenya	Mits Electrical Company Ltd. Tel: +254-20-3862431/3862432 / Fax: +254-20-3862434 Methodist Ministries Centre, Oloitokitok Road P.O. Box 76187, 00508, Nairobi, Kenya
Taiwan	Taiwan Mitsubishi Elevator Co., Ltd. Tel: 886-2-2733-5353 / Fax: 886-2-2733-6953 Chung-Ling Building, No. 363, Sec. 2, Fu-Hsing S. Rd., Taipei, Taiwan, R.O.C.	South Africa	Melco Elevator (S.A.) (PTY) Ltd. Tel: 27-11-392-3330 / Fax: 27-11-392-3335 P.O. Box 1328, Bramley, Johannesburg 2018, South Africa
Korea	Mitsubishi Elevator Korea Co., Ltd. Tel: 82-2-6670-2051 / Fax: 82-2-6670-2060 9th Floor, Machinery Complex Annex, 13-6, Youido-dong, Youngdungpo-gu, Seoul 150-870, Korea	U.S.A.	Mitsubishi Electric and Electronics USA, Inc. Elevator & Escalator Division Tel: 1-714-220-4700 / Fax: 1-714-220-4812 5665 Plaza Drive, Cypress, California 90630, U.S.A.
Philippines	International Elevator & Equipment, Inc. Tel: 63-2-842-3161 / Fax: 63-2-842-3160 KM. 23 West Service Road, South Superhighway, Cupang, Muntinlupa, Metro Manila, Philippines	Mexico	Mitsubishi Electric de Mexico, S.A. de C.V. Tel: 52-55-9171-7600 / Fax: 52-55-9171-7698 Mariano Escobedo No.69 COL. Zona Industrial, Tlalnepanitla, Edo. de Mexico, C.P.54030, Mexico
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Thailand	Mitsubishi Elevator (Thailand) Co., Ltd. Tel: 66-2-312-0707/0808 / Fax: 66-2-312-0800 10th & 12th Floors Bangna Tower A, 2/3 Moo 14 Bangna-Trad Road KM6.5, Bangkaew, Bangplee, Samutprakarn 10540, Thailand	Republica Dominicana	San Miguel & Cia, C. por A. Tel: 1-809-541-5000 / Fax: 1-809-541-6833 C/Pena Battle No.165 Villa Juana, Santo Domingo, Republica Dominicana Aptdo. Postal No. 20106
Myanmar	Serge Pun & Associates (Myanmar) Limited Tel: 95-1-240-363/246-886 / Fax: 95-1-246-881/882 FMI Centre, 10th & 11th Floors, 380, Bogyoke Aung San Road, Pabedan Township, Yangon, Myanmar	Colombia	Melco de Colombia Ltda. Tel: 57-1-326-7300 / Fax: 57-1-347-8811/8836 Calle 72 No.10-07 Piso 14 Edificio Liberty Seguros, Bogota, D.C., Colombia P.O. Box Apartado Postal 29653
Sri Lanka	ETA MELCO ENGINEERING (Pte.) Ltd. Tel: 94-11-5350000 / Fax: 94-11-5341299 No. 464, 1st & 5th Floors, Galle Road, Colombo - 03. Sri Lanka	Ecuador	Coheco Cia. Ltda. Tel: 593-2-24-34-820 / Fax: 593-2-24-67-644 Av. de Los Naranjos N44-421 y Av. de Los Granados, Quito, Ecuador
U.A.E.	ETA MELCO Elevator Co. LLC Tel: 971-4-2359595 / Fax: 971-4-2725121 Post Box No.11058, ETA STAR House, 5th Floor, Salahuddin Road, Deira, Dubai, U.A.E. Emirates Technical Associates Tel: 971-2-6767597 / Fax: 971-2-6717180 Al Ferdous Tower (Bank of Fujairah Bldg) 14th Floor - 1401-1404, Abu Dhabi, U.A.E.	Peru	Trianon Ascensores S.A. Tel: 51-1- 241-6405/511-98-155-158 (Nextel) / Fax: 51-241-6404 Av. Republica de Panama 4125, Surquillo, Lima 34, Peru
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		Ireland	Mitsulift Hellas SA Tel: 30-210-9401825/9400848 / Fax: 30-210-9412465 82 Grammou & Artemidos Street Moschato Athens 183 45, Greece
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<http://www.mitsubishi-elevator.com/>

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Product group from well-managed forests and other controlled sources.
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