HOCHIKI

®

Your Safety, Our Technology

incite fire

WAYFINDING
MONITORED ADDRESSABLE
EMERGENCY LIGHTING SYSTEM

FIREscape®

AS/NZS 2293

HOCHIKI®

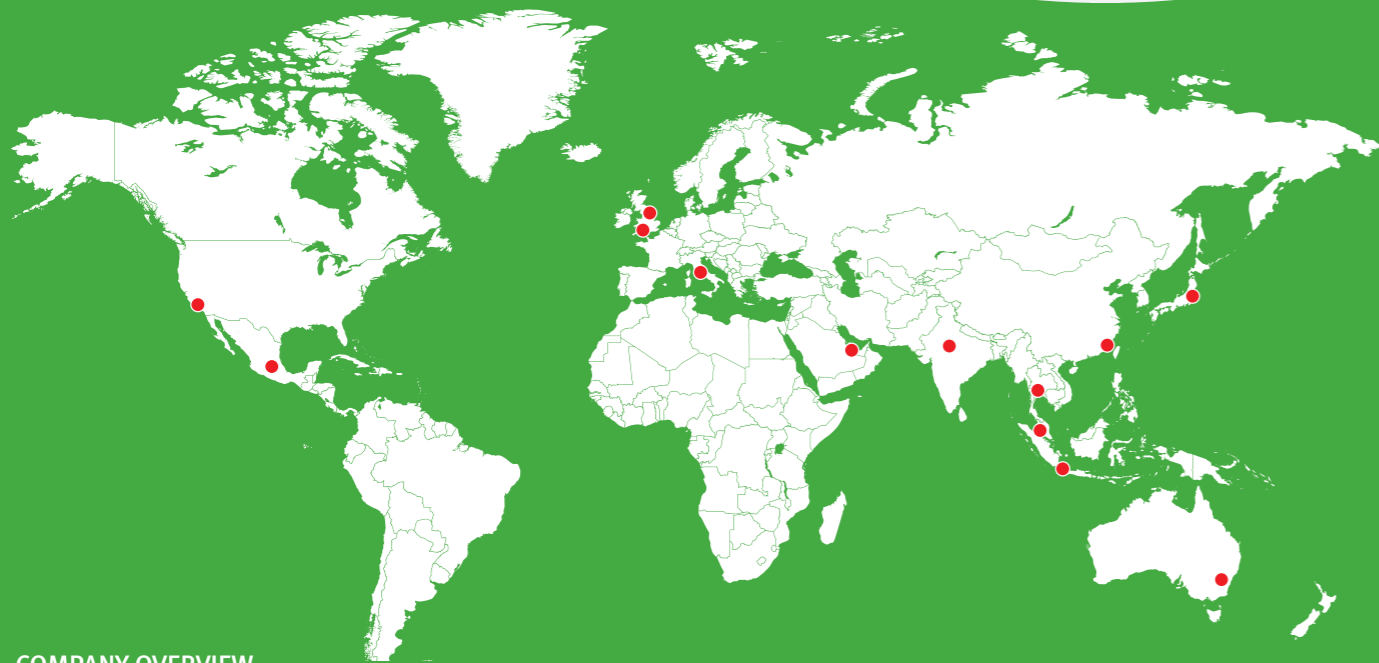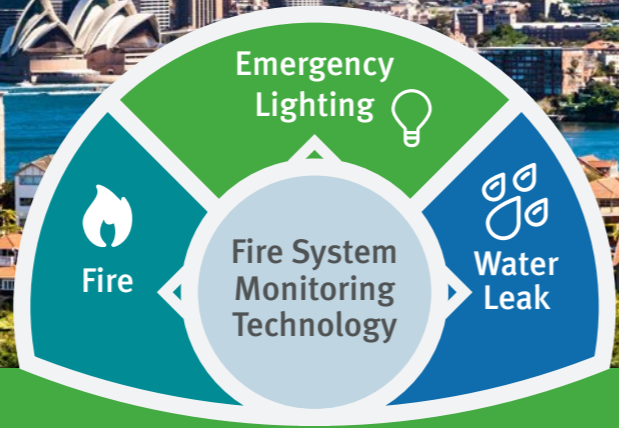**World class leaders in Fire Detection since 1918**

Hochiki has been committed to providing and supporting quality fire detection products in Australia for more than 40 years.

Fire System Monitoring Technology
- Emergency Lighting
- Fire
- Water Leak

FIREscape®

COMPANY OVERVIEW

Established in Japan in 1918, Hochiki is an independent, multi-national, publicly listed company with over 2,100 employees across the globe. One of the world's leading manufacturers of commercial and industrial fire detection and emergency lighting solutions, Hochiki has acquired global acceptance as the benchmark for high-integrity and long-term reliability.

Hochiki's facilities in Japan, the United States of America and Europe design and manufacture products and provide technical support suited to local standards and customer requirements. Total commitment to meeting the needs of individual national markets has reinforced the company's global reputation, resulting in Hochiki products being installed in many prestigious sites, and in over 80 countries worldwide.

Introduction

Efficient evacuation in an emergency can be constrained by the complex nature of buildings and its occupants.

Although emergency signage systems are widely used as a well-established means of facilitating evacuation, research demonstrates that only 38% of people 'see' conventional static emergency signage in simulated emergency situations. Conventional signage only conveys single and passive information, therefore they cannot be adapted to respond to developing evacuation situations and events.

FIREscape's Dynamic X and way-finding capability automatically determines the best path of egress based on the location identified by a building's fire detection and alarm panel and/ or other third party systems. This revolutionary system has been designed to ensure that all building occupants (self help/ assisted help) are not only directed from compromised routes but are given the best possible opportunity to escape, even if they are unfamiliar with the building layout.
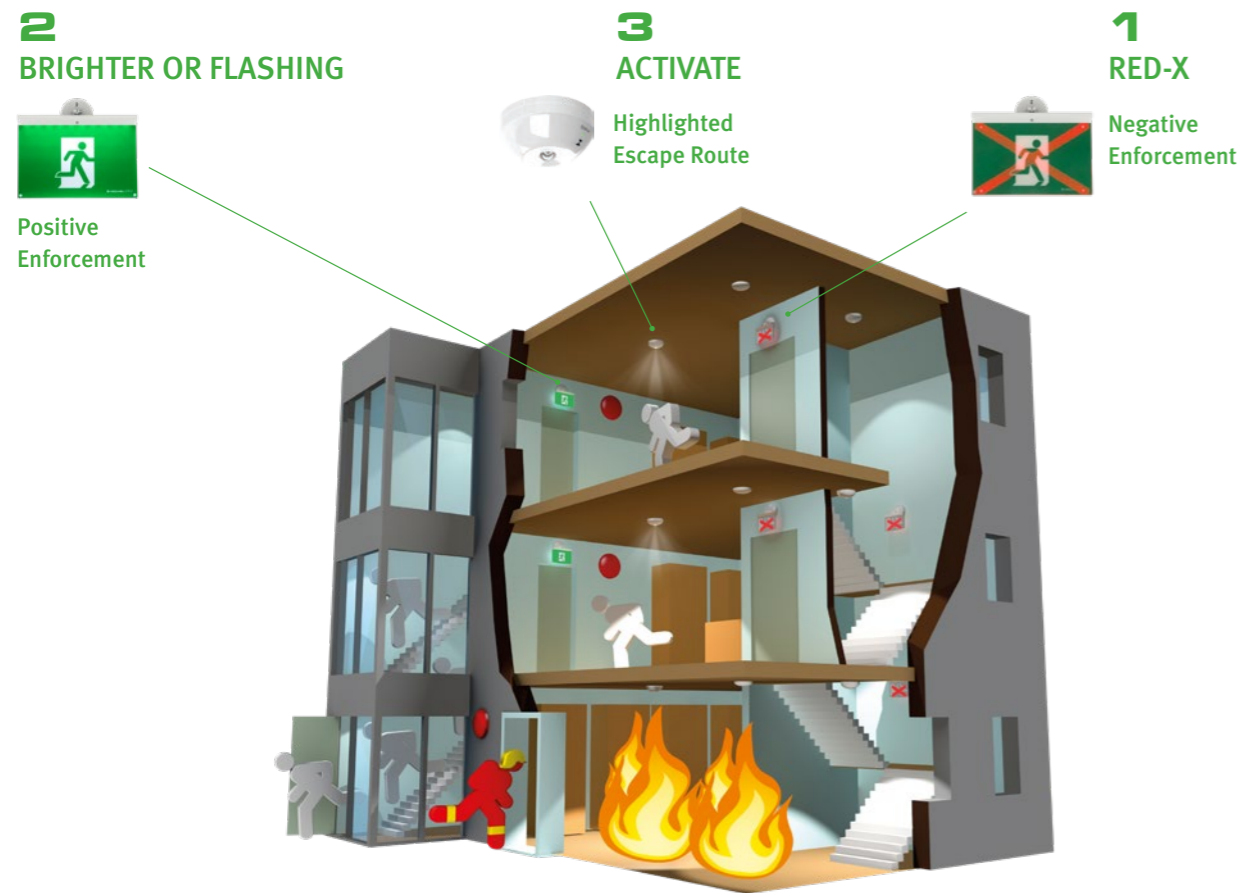
Results

- ▸ Increase occupant awareness of viable/alternative routes and paths of egress
- ▸ Improve responder's situation awareness
- ▸ Reduce evacuation time by enhanced decision making process
- ▸ Reduced casualties

Research based on FSEG Greenwich Uni.

Features

- ▸ Complies and certified to Australian Standards AS/NZS 2293
- ▸ Dynamic Exit & Escape Light activation capability
- ▸ LED technology
- ▸ Self-contained lithium back-up battery
- ▸ Blade style fitting for aesthetics
- ▸ Real time monitoring, testing and automatic reporting
- ▸ Minimum 10 year luminaire and system life expectancy
- ▸ Massive savings on ongoing running/operational costs (power, testing, maintenance etc)
- ▸ Complete remote accessibility and system control (optional graphics package)
- ▸ Utilises Hochiki's world renowned Fire Systems Communications protocol
- ▸ 127 luminaires per line, 254 luminaire per panel
- ▸ Keypad interface, control, fault and diagnostics

Example Application
Fire engineering solution

2
BRIGHTER OR FLASHING

Positive Enforcement

3
ACTIVATE

Highlighted Escape Route

1
RED-X

Negative Enforcement

EXAMPLE OF WAYFINDING – NON COMPLIANCE

1
RED-X

Negative enforcement

Normally the exit sign is illuminated and carries the AS2293 symbols of a running man, door and direction arrow. In the event of a fire affecting a specific escape route, the appropriate signage is switched off and replaced by an illuminated RED 'X' symbol.

2
BRIGHTER OR FLASHING

Positive enforcement

In the event of a fire situation, the AS2293 exit signs can be programmed to either increase brightness intensity, or flash to increase visual awareness and indicate positive paths of egress.

3
ACTIVATE

Highlighted escape route

AS2293 emergency lighting can be programmed to activate and highlight paths and routes of egress in an emergency event.
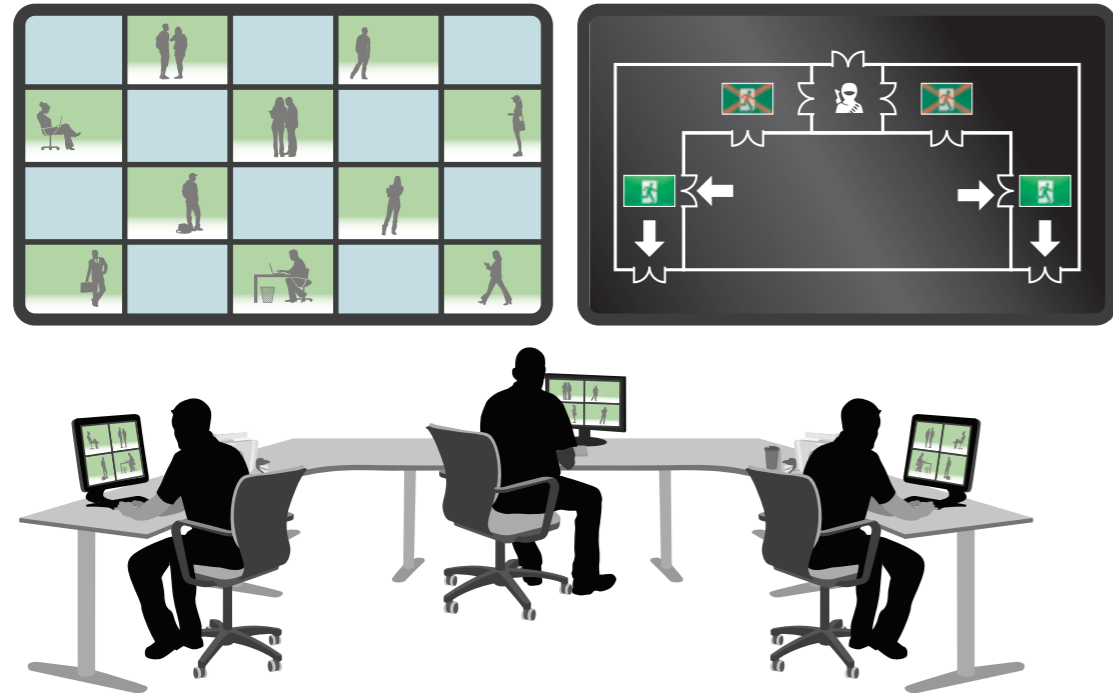
Example Application
Increased visual awareness of viable paths and exits
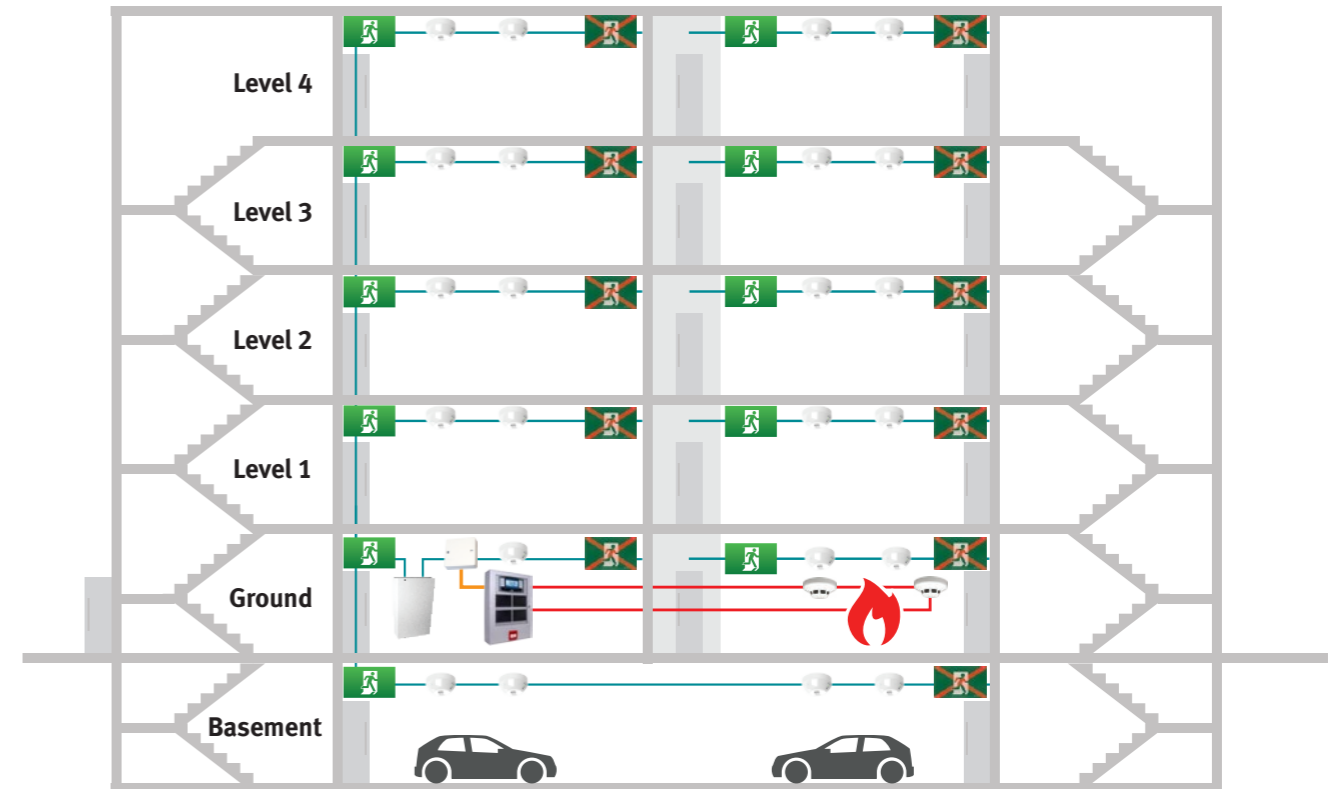
3
ACTIVATE

Highlighted Escape Route

1
RED-X

Negative Enforcement

2
BRIGHTER OR FLASHING

Positive Enforcement

Example Application
Security (CCTV), Graphics, Manual Intervention

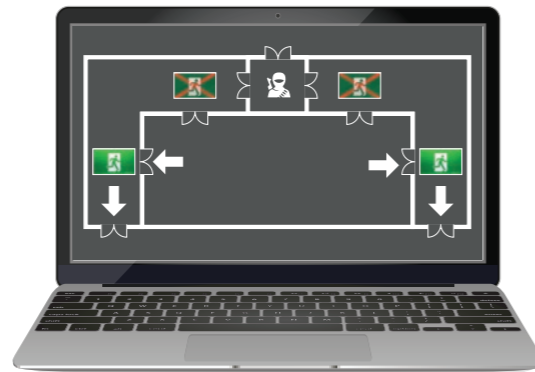# Installation Example

Level 4

Level 3

Level 2

Level 1

Ground

Basement

MANUAL CONTROL

FIREscape Emergency Escape and Dynamic Exit Lighting can be activated via manual intervention (switch) or from the system's graphics package (EL-GRAPH). Security or the building Incident Manager monitoring the evolution of an event have the ability to direct occupants to the nearest optimal evacuation route by activating the appropriate dynamic exits.

DISABLED REFUGE/GUIDANCE

All occupants deserve a safe way into a building, and more importantly out from a building in an emergency event, including those that may have mobility disabilities in negotiating traditional egress routes.

FIREscape can provide appropriate Exit signage that directs occupants to refuge points of assisted help or accessible egress routes.

FIREscape also provides early activation of emergency escape lighting illuminating critical areas, including points of emphasis like:

▶ Fire assembly points
▶ Disabled refuge areas
▶ Examination / treatment rooms
▶ Fire evacuation stairs
▶ Paths of egress
▶ Hazardous areas

 Intelligent Dynamic Exit Sign

 Deactivated AS/NZS 2293 Exit Sign

 Luminarie = escape luminarie

 Emergency lighting panel

 EL-IO Input/Output interface module

 Fire detector

 Fire detection panel
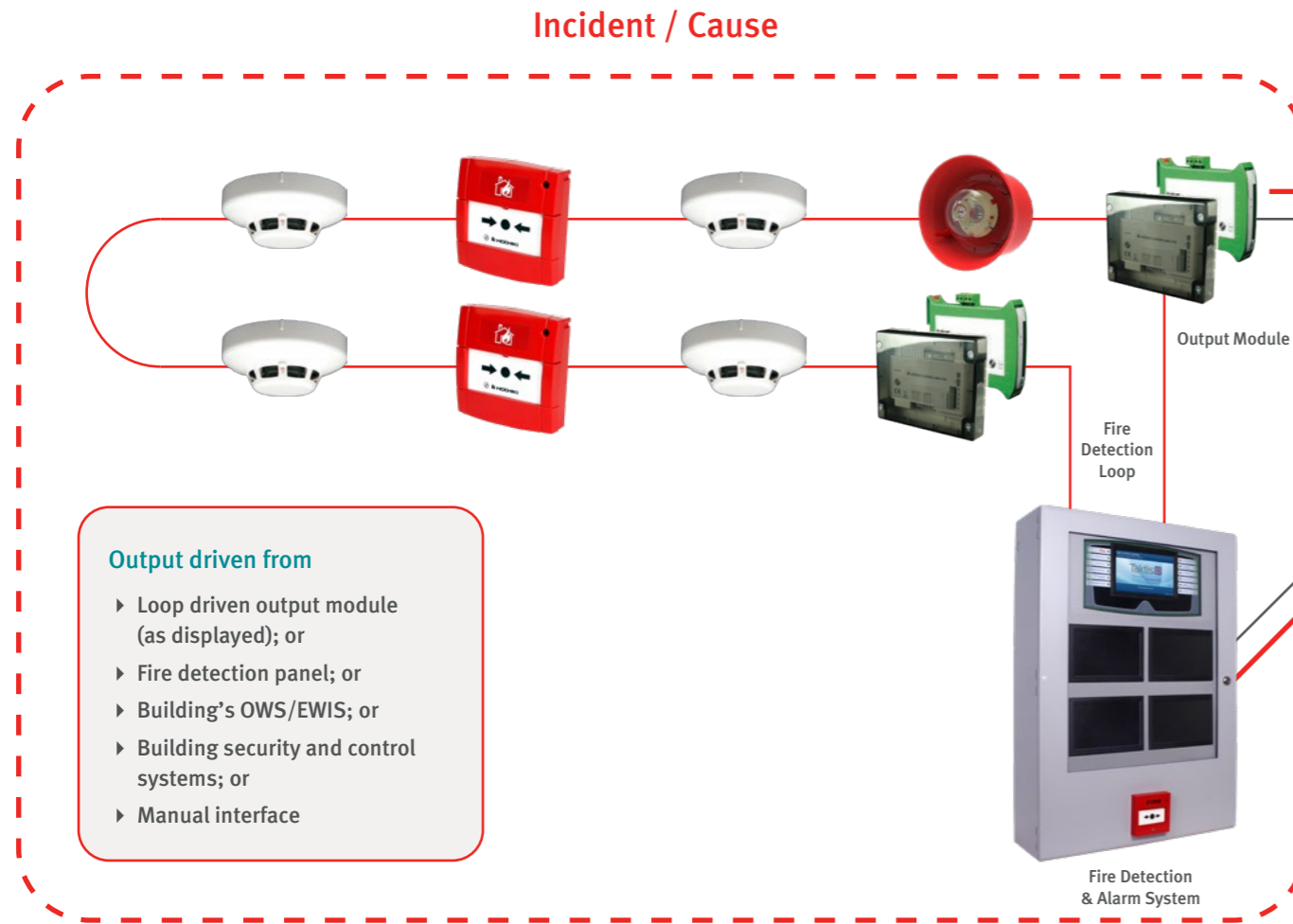
—— Luminarie circuit*
—— IF to fire detection
—— Fire detection cable

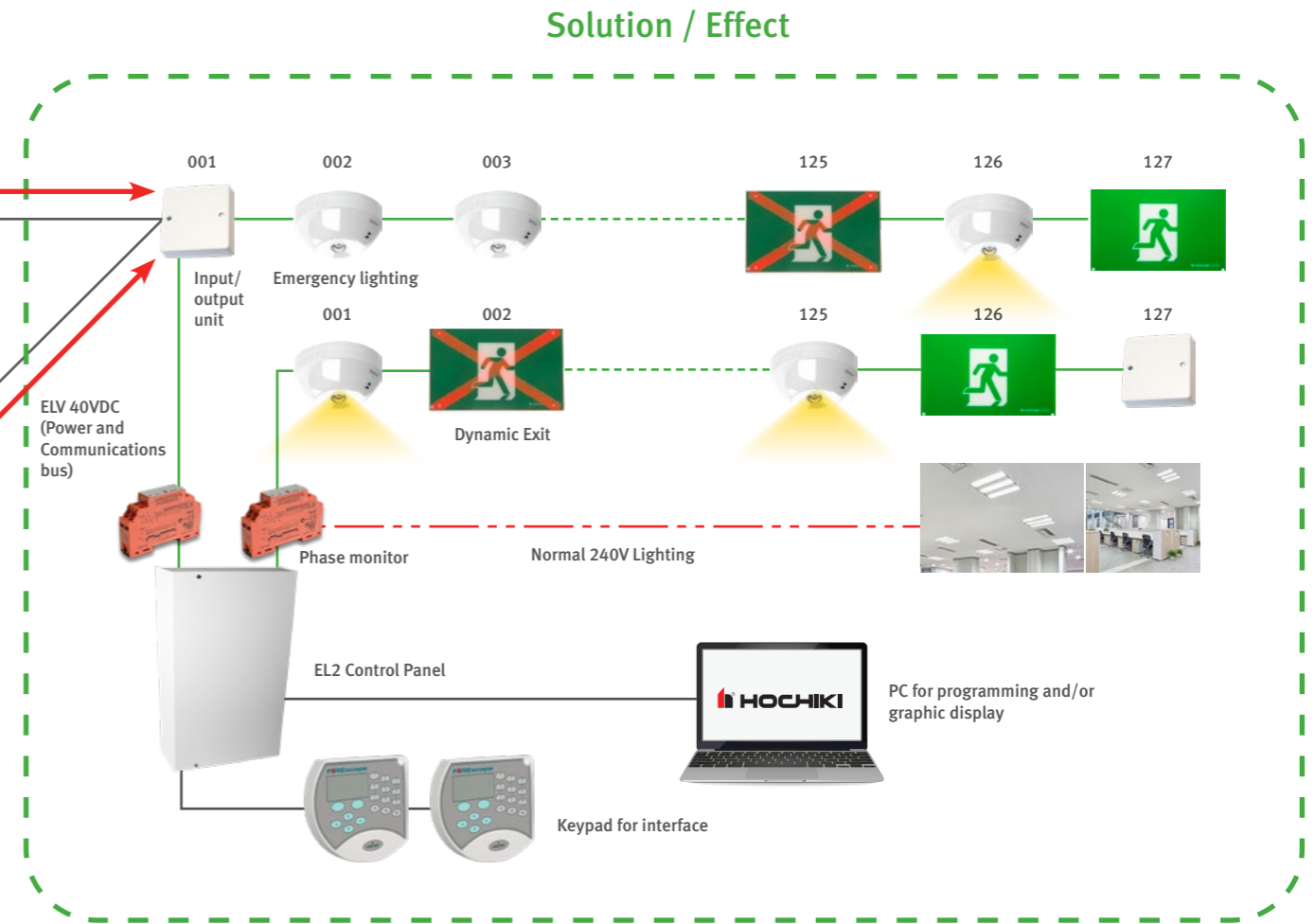* Only specific areas shown due to simplification

Wayfinding System Overview
Interfacing with third party system

FIRE DETECTION AND ALARM SYSTEM

WAYFINDING EMERGENCY LIGHTING SYSTEM

Incident / Cause

Solution / Effect

Output Module

Fire Detection Loop

001 002 003 125 126 127

Input/output unit

Emergency lighting

001 002 125 126 127

Dynamic Exit

ELV 40VDC (Power and Communications bus)

Phase monitor

Normal 240V Lighting

EL2 Control Panel

PC for programming and/or graphic display

Keypad for interface

Fire Detection & Alarm System

Output driven from

- Loop driven output module (as displayed); or
- Fire detection panel; or
- Building's OWS/EWIS; or
- Building security and control systems; or
- Manual interface

NOTE: Dynamic Exit incorporation may be specified by a fire safety engineer as part of a Fire Engineered performance-based solution to satisfy the requirements of the NCC. This fire engineered solution may result in the Dynamic Exit component now forming part of a critical life safety, and essential service measure to a buildings occupant warning and emergency evacuation procedure. With this in mind, consideration should be given to continuous monitoring of Dynamic Exits for faulty / incorrect operation that may otherwise compromise system performance much like any other critical component of a life safety system ie detectors, sounders etc. FIREscape can achieve this by providing indication either at the FDCIE, Emergency Lighting Control Panel Graphics, PC and / or Interface, Dynamic Exit Luminaire etc

- FIREscape's entire addressable system is continuously monitored (real time). This ensures system integrity by providing notification should any Dynamic X Exit signs be compromised or tampered.

- FIREscape requires one single input from the fire panel to activate any chosen number of Dynamic X Exits via "Cause & Effect" programming logic.

- Quick installation of 1 x pair 1.5mm twisted screened cable (power & data) for entire system, as opposed to power & input command potentially 5 cable system (240V Pos, Neg, Earth – Command Pos, Neg).

Features

- AS/NZS 2293 Compliant (normal state)
- Real time monitoring and testing of Dynamic Exit
- Recessed blade option (EL-REC24)
- Hinged to fit any surface
- Interface with any third party systems; fire detection, emergency evacuation building management systems

- Flexible, simple cause and effect programming activation
- Single input can activate multiple Dynamic Exit and/or Emergency Escape Luminaires
- Accommodate up to 64 different event types and scenarios
- Provide fault indication of system via FDCIE, Emergency Lighting Control Panel Keypad, Graphics, PC and/or GSM

Type	Direction	Ordering Code	Kit Contents	Description
24m Dynamic Exit - RED-X	**Straight**	EL-24SX-KIT	EL-24X-AS	Exit sign 24M Frame – Dynamic RED-X
			EL-24G-AS	Reflective worm, back plate & rivets assembly
			EL-24G-S-AS	24m Lens Straight
			EL-24G-X-AS	24m Lens – RED-X
			EL-BAT450-AS	Battery
	Left Arrow	EL-24LX-KIT	EL-24X-AS	Exit sign 24m Frame – Dynamic RED-X
			EL-24G-AS	Reflective worm, back plate & rivets assembly
			EL-24G-L-AS	24m Lens Left
			EL-24G-X-AS	24m Lens – RED-X
			EL-BAT450-AS	Battery
	Right Arrow	EL-24RX-KIT	EL-24X-AS	Exit sign 24m frame – Dynamic RED-X
			EL-24G-AS	Reflective worm, back plate & rivets assembly
			EL-24G-R-AS	24m Lens Right
			EL-24G-X-AS	24m Lens – RED-X
			EL-BAT450-AS	Battery

Description

An LED-based, addressable 24m viewable exit light with a flexible 'flex it' hinge solution. The exit sign operates in two states – displaying an AS2293 compliant 'running man' design to indicate that the escape route is safe to use. This will automatically switch to a red cross display, indicating that the escape route has been compromised and is not safe to use because of the presence of, for example, fire or smoke*.

The exit sign's hinged cup contains the electronics and stand-by battery and allows the unit to attach to the standard Hochiki EL-TSB mounting base. The cup also features a bi-coloured status LED indicating charge/fault status (green for charging, red for fault).

Specification

Cup and bar colour	White and black
X Lens Colour	Green 'Running Man' (safe escape route) / Red Cross (unsafe escape route)
Materials	Fire resistant PC + ABS plastic (FR3010) , Plexiglass-8N (sign)
Fire class	UL94 V-O
Viewing distance	24m
Operation time	3 hour + standby time
Dimensions (mm)	320W x 290H x 100D (inc cup)
Operating Humidity	RH 95% non-condensing
Operating Temperature	0°C to +40°C
Ingress Protection Rating	IP20 (IP66 weatherproof variant available)
Distance from wall in wall installation (mm)	75 (inc 8 for EL-TSB base)
Drop from ceiling in ceiling installation (mm)	295 (inc 8 for EL-TSB base)
Weight including battery (g)	1,023
Operating voltage (max)	41V
Energy consumption	1.03W (charging)
	0.82W (not charging)

* Dependent of panel compatibility and correct cause and effect programming

Type		Direction	Sided	Ordering Code
24m Intelligeht Dynamic Exit - RED- X		Straight	Single	EL-24SX-KIT
		Left Arrow	Single	EL-24LX KIT
		Right Arrow	Single	EL-24RX KIT
24m Exit Sign		Straight	Single	EL-24S KIT
		Left Arrow	Single	EL-24L KIT
			Double	EL-24LD KIT
		Right Arrow	Single	EL-24R KIT
			Double	EL-24RD KIT

Type		Power	Coverage	Ordering Code
Emergency Escape Light		Standard	Corridor	EL-DL2 KIT
			Open	EL-DL3 KIT
		High	Corridor	NF89-C KIT
			Open	NF89-O KIT

Type		Description	Ordering Code
Step Luminaire		Addressable Step Luminaire	EL-SL
Mounting base		Test Switch Base	EL-TSB
Recess adaptor		Recess adaptor for EL-DL2 & 3	NFW68/89-RA
		Recess adaptor for 24m Exit Sign	EL-REC24
Weatherproof housing		Weatherproof enclosure (IP66) for 24m Exit Sign	EL-WPK24-AS
		Weatherproof Luminaire enclosure & bracket (for use with EL-DL3)	EL-DEB
		Weatherproof Luminaire enclosure (for use with EL-DL3)	EL-DE
Control Equipment & Accessories		2 Line Control Panel for up to 254 luminaires / 270mm(w) x 345mm(h) x 90mm(d)	EL-2
		Transformer (must be used with EL-2)	EL-35V
		Keypad Controller	EL-KP
		Phase Monitor	EL-PM
		Input Output Unit	EL-I/O
Accessories		Relay Card	EL-1RC
		Relay Card (8 separate relays)	EL-8RC
		Lithium Ion High Power Battery	EL-BAT2950-AS
		Lithium Polymer Battery	EL-BAT450-AS
		BESA Box Adaptor Plate	EL-BBA1
		Battery Disconnect Card	EL-BDC
		EL-2 Panel to PC Cable	EL-CAB
		Ceiling support	EL-CS
		Expansion Unit	EL-EXP
		Flap support	EL-FS
		Graphics Software	EL-Graph
		Installation & Maintenance Program	EL-IMP
		RS232 Isolator	EL-ISOL
		LAN module	EL-LAN
		Media Convertor	EL-MC
		Bus Controlled Power Supply	EL-PSU
		5 Port Ethernet Switch	EL-SWT5
		8 Port Ethernet Switch	EL-SWT8
		Address Programmer	TCH-B200
		Angled ceiling bracket.	YZU-A
		Fixed angle wall bracket	YZU-B

Fire Detection

Hochiki's Fire Detection range incorporates a variety of high performance sensors, modules and ancillary devices to increase the ease of routine maintenance and commissioning. Enhanced System Protocol (ESP) applies Hochiki's high integrity communication link to all products in the range.

Wireless

Hochiki also caters for hybrid sites with the FIREwave range which integrates wireless technology into Hochiki's Analogue hardwired system to provide maximum flexibility able to meet specific site requirements.

Emergency Lighting

Hochiki offers an Australia's first 40V, completely unique, cost effective and fully compliant emergency lighting system: FIREscape.

FIREscape is a fully self-monitored and self-testing system with a central point of control, making installation and maintenance quick and easy.

Water Leak Detection

Hochiki introduces a brand new standard in water leak detection to the Australian market – LEAKalarm, an innovative, new, fully monitored alarm and detection system providing protection from the greatest risk to buildings and managed facilities.

HOCHIKI

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