WAYFINDING
MONITORED ADDRESSABLE
EMERGENCY LIGHTING SYSTEM

AS/NZS 2293
Hochiki has been committed to providing and supporting quality fire detection products in Australia for more than 40 years.

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 Univ.

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**

1. **RED-X**
   - Negative Enforcement

2. **BRIGHTER OR FLASHING**
   - Positive Enforcement

3. **ACTIVATE**
   - Highlighted Escape Route

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**Example Application**

**Increased visual awareness of viable paths and exits**

1. **RED-X**
   - Negative Enforcement

2. **BRIGHTER OR FLASHING**
   - Positive Enforcement

3. **ACTIVATE**
   - Highlighted Escape Route

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**Example of Wayfinding – Non Compliance**

**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.

**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.

**Highlighted escape route**

- AS2293 emergency lighting can be programmed to activate and highlight paths and routes of egress in an emergency event.
Example Application
Security (CCTV), Graphics, Manual Intervention

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

Installation Example

Level 4
Level 3
Level 2
Level 1
Ground
Basement

Intelligent Dynamic Exit Sign
Deactivated AS/NZS 2293 Exit Sign
Luminarie = escape luminarie
Emergency lighting panel
EL/IO Input/Output interface module
Fire detection panel

* Only specific areas shown due to simplification
**Wayfinding System Overview**

**Interfacing with third party system**

**FIRE DETECTION AND ALARM SYSTEM**

**WAYFINDING EMERGENCY LIGHTING 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

**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

**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.

**Fire Detection & Alarm System**

**Output Module**

**Input/output unit**

**Emergency lighting**

**Dynamic Exit**

**Phase monitor**

**Normal 240V Lighting**

**PC for programming and/or graphic display**

**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).**
### Type | Direction | Ordering Code | Kit Contents | Description
--- | --- | --- | --- | ---
24m Intelligently Dynamic Exit - RED-X | Straight | EL-24SX-KIT | Exit sign 24m frame – Dynamic RED-X | 
24m Intelligently Dynamic Exit - RED-X | Left Arrow | EL-24LX-KIT | Exit sign 24m frame – Dynamic RED-X | 
24m Intelligently Dynamic Exit - RED-X | Right Arrow | EL-24RX-KIT | Exit sign 24m frame – Dynamic RED-X |

### Specification
- **Cup and bar colour**: White and black
- **X Lens Colour**: Green “Running Man” (safe escape route), Red Cross (unsafe escape route)
- **Fire class**: UL 94 V-0
- **Viewing distance**: 24m
- **Operation time**: 3 hours + standby time
- **Dimensions (mm)**: 320W x 290H x 100D (inc cup)
- **Viewing distance (mm)**: 24m (safe escape route), 30m (unsafe escape route)
- **Operating Humidity**: 85% 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 EL for EL-TSB base)
- **Drop from ceiling in ceiling installation (mm)**: 90 (inc EL 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*

### 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).
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.

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.

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.

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