



SIL2
Capable

Range Overview



INTRODUCTION

Established early in the 20th Century, Hochiki is one of the world's leading manufacturers of commercial and industrial fire detection and emergency lighting solutions. With a heritage of innovative design and leading-edge technologies, Hochiki's products have acquired global acceptance as the benchmark for high-integrity and long-term reliability.

QUALITY, PERFORMANCE, RELIABILITY

Dedicated to the improvement of life safety, Hochiki invests continually in Research and Development, testing, and manufacturing procedures to achieve absolute product innovation and efficiency. Specialist engineers undertake essential research into the physical properties of fire as well as the design and development of products and related software. Testing is carried out under real fire conditions in one of the world's largest fire test laboratories where all procedures ensure optimum performance and long-term reliability of all Hochiki products.

WHAT IS SIL APPROVED?

SIL is an acronym for Safety Integrity Level, and is a system used to quantify and qualify the requirements for Safety Instrumented Systems. The International Electro-technical Commission (IEC) introduced the following industry standards to assist operators with quantifying the safety performance requirements for hazardous operations:

IEC 61508 Functional Safety of Electrical/Electronic Programmable Electronic Safety-Related Systems

IEC 61511 Safety Instrumented Systems for the Process Industry Sector

These standards have been widely adopted in the hydrocarbon and oil and gas industries as a means of improving safety and availability of Safety Instrumented Systems. Safety Integrity Levels are part of a larger scheme called Functional Safety that deals with techniques, technologies standards and procedures that help operators protect against hazards. Simply put, SIL levels are targets applied to the reliability and performance of the safety systems used to protect hazardous activities such as hydrocarbon refining or production.

There are four SIL levels. The higher the perceived associated risk, the higher the performance required of the safety system and therefore the higher the SIL rating number. The IEC standards define the performance requirements of the safety systems for the required SIL rating.

Once the scope of an activity is determined, the operator can identify the possible hazard(s) and then assess their potential severity. The risk associated with a hazard is identified by assessing the likely frequency of occurrence and the potential consequences if the hazard is realised. The operator must then assign a number for the severity of consequence and frequency.



Hochiki is a wholly independent, multinational, publicly listed group of companies with over 2000 employees working across six manufacturing plants, 38 sales offices and 14 subsidiaries.

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.



91%

of customer reviews rated our product quality as "VERY GOOD" or "EXCELLENT"

88%

of our customers are extremely likely to recommend our products based on quality

92%

of our customers rated us as VERY GOOD or EXCELLENT.

Statistics from the Hochiki customer service survey

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.

 **HOCHIKI**
World Class Leaders in Fire Detection Since 1918

SIL2 APPROVED

SAFETY INSTRUMENTED SYSTEM

Once the SIL ratings have been determined, the operator can then design a risk reduction strategy to protect against these hazards. This is accomplished by applying multiple layers of protection (see the diagram below). Risk reduction can be an expensive procedure therefore the operator will look to reduce the risk to a level “as low as reasonably practicable” – ALARP

There are multiple layers of protection used to develop the required safety strategy. Safety Instrumented System is the layer that applies to Hochiki’s SIL 2 approved fire detection equipment. The SIS assists in reducing the frequency of the likely manifestation of the hazard and therefore improves the reliability of the system. The consequence of a failure is not addressed by SIS but by other aspects of the risk reduction strategy.

These numbers are then entered into a matrix (below) to allow the operator to assign the required SIL rating to protect against the hazard. Many tools are available to assist an operator with this process, for example HAZOP (Hazard & Operability) software.

Frequency	5	SIL3	SIL4	X	X	X
	4	SIL2	SIL3	SIL4	X	X
	3	SIL1	SIL2	SIL3	SIL4	X
	2	-	SIL1	SIL2	SIL3	SIL4
	1	-	-	SIL1	SIL2	SIL3
		1	2	3	4	5
		Severity of Consequence				

Safety Council and is considered capable for use in a SIL 2 low demand Safety Function with regard to random failure rates.

Individual certificates are available to download from our web site.



PRODUCTS APPROVED TO SIL2



ALN-EN(WHT)/SIL
Photoelectric Smoke Sensor



ALN-E(WHT)/SIL
Multi Heat Sensor



HCP-E(SCI)/SIL
A Manual Call Point Isolator



HCP-W(SCI)/SIL
IP67 Weatherproof Manual
Call Point Isolator



CCP-W-IS/SIL
IP67 Conventional
Weatherproof Call Point



CCP-E-IS/SIL
Conventional Manual Call
Point



ATJ-EN(WHT)/SIL
Multi Heat Sensor



ATJ-E(WHT)/SIL
Multi-Heat Sensor



CHQ-WSB2/SIL
Addressable Loop-Powered
Wall Sounder Beacon



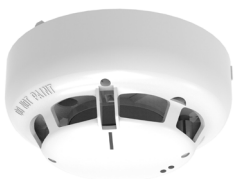
CHQ-WS2/SIL
Addressable Loop-Powered
Wall Sounder



SLR-E-IS/SIL
Conventional I.S.
Photoelectric Smoke Detector



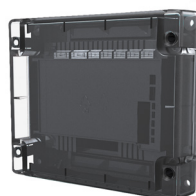
DCD-1E-IS/SIL
Conventional I.S. Rate of Rise
Heat Detector



ACC-EN(WHT)/SIL
Multi Sensor



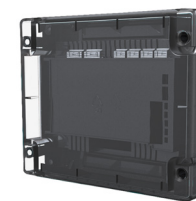
ACC-E(WHT)/SIL
Multi Sensor



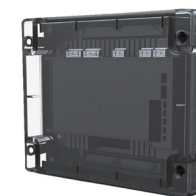
CHQ-DZM(SCI)/IS/SIL
I.S. Compatible Dual Zone Module



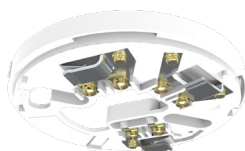
CHQ-PCM(SCI)/SIL
Plant Control Module



CHQ-ISM/SIL
Sounder Control Module



CHQ-DSC2(SCI)/SIL
Dual Sounder Controller



YBN-R/3(SCI)
Sensor Mounting Base



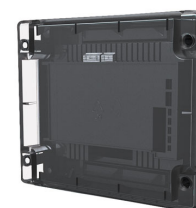
YBO-BS/SIL
Addressable Loop-Powered
Base Sounder



YBO-BSB2/SIL
Addressable Loop-Powered
Base Sounder Beacon



CHQ-DZM(SCI)/SIL
Dual Zone Module



CHQ-DIM2(SCI)/SIL
Dual Input Module



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Assessed to ISO 9001

Environmental Certificate No.164EMS
Assessed to ISO 14001



Business Member



Fire Industry Association



Affiliate Member



The CPD Certification Service



Your Safety  Our Technology