HOCHIKI
World Class Leaders in Fire Detection Since 1918

Date: 28th February 2023

**Subject:**

**Hochiki Detectors Recommended Working Life**

To address industry inquires based upon the requirements of AS1851 Routine Testing and Maintenance Standard and general guidelines:

**Hochiki ESP & GTP Protocol Addressable Sensors**

Hochiki ESP & GTP Protocol addressable sensors need only be replaced when entered an irretrievable state outside of their operational thresholds and values which shall display at both the FDCIE and via the TCH-B200 Handheld programmer – Ref: **Appendix A**

**Hochiki Conventional Detectors**

Hochiki Conventional detectors without the ability to indicate a state outside of their operational thresholds and values need only be replaced as a result of a failed "in situ" sensitivity test in accordance with AS1851 App G6 and approved test results – **Ref: Appendix B**

**Other Hochiki FDAS Components**

A general, non-definitive, recommended working life of approx. 10 years is allocated to FDAS components without the ability to report operational performance or service life.

The following are just some of many considerations that can adversely decrease FDAS component and/or system life expectancy.

- Substandard installation of devices outside of manufacturers specifications,
- Irregular applied routine maintenance schedules,
- Harsh environments eg. sodium / corrosive atmospheres

The general 10-year recommendation is due to typical electronic component obsolescence forming the device, notwithstanding continuous product advancements and including changes to International and Australian product standards to which products must comply with.

Should you have any questions or would like to discuss the above further, please don't hesitate to contact the Hochiki Australia office on +61 (0) 2 9738 5566 or sales@hochikiaustralia.com

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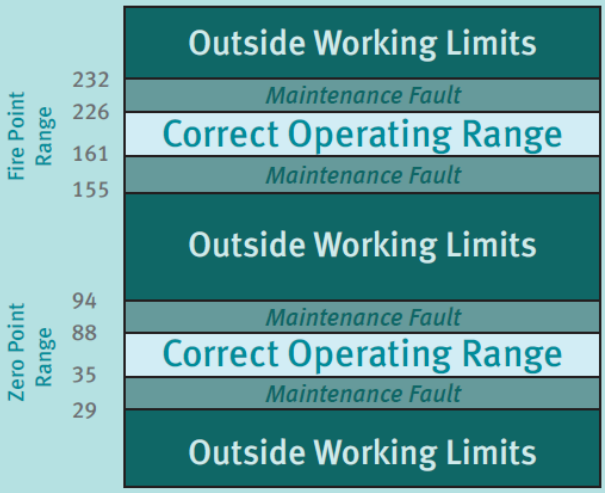
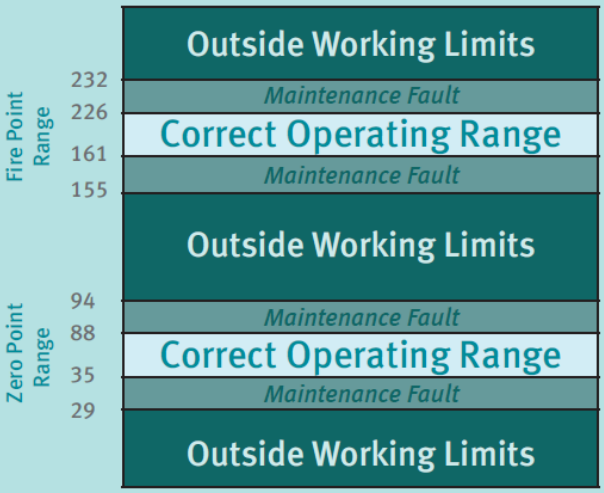
Appendix A:

## Optical Operating Ranges (ALN, ALK, ALG)




Zero Point ~ 61
Fire Point ~ 193

## Multi Criteria Operating Ranges (ACA, ACC)




Zero Point ~ 61
Fire Point ~ 193

## ACB, ATJ Thermal Operating Ranges

As the ACB, ATJ Heat Sensor analogue values are in direct correlation to the temperature within the room in which they are located, there are no graphs displaying values. The values would vary depending on the background temperature within the room itself. However the temperature in °C can be calculated from the value displayed by the TCH-B1/200 using the simple formula below:


$$\frac{\text{ANALOGUE VALUE ON TCH-B100}}{2} - 20 = \text{TEMPERATURE °C}$$

Example: $\frac{82}{2} - 20 = 21°C$

**Please refer to the Hochiki Australia Technology guide on analogue values & sensor calibration for more information**

## Appendix B:

Hochiki Australia would like to advise the correlation evaluation as conducted by the CSIRO between the Hochiki conventional **SLV-AS** photoelectric smoke detector and the industry recognised Tru-Test in Situ test apparatus.

The following correlated test limits are established using 'fast ramp and low-profile' parameters:

| Test method | Nominal sensitivity (S) | Lower limit | Upper limit |
|---|---|---|---|
| **AS1603.2** | 8 %obs.m | 4 %obs/m [1] | 12 %obs/m [1] |
| **Trutest** | N/A | 2.0 %obs/ft [2] | 6.0 %obs/ft [2] |

[1] Limits calculated as 0.5s and 1.5s, where s is the nominal smoke sensitivity, as per AS 1603.2
[2] Trutest detector sensitivity tester defaults to imperial units.