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## Certificate of Conformity to IEC 61508 Safety Integrity Level (SIL) 2

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### ***Functional Safety of Safety-Related Programmable Electronic Systems***

The **Apollo Fire Detectors Ltd, XP95 and Discovery Protocol Range** have been assessed and are considered capable for use in a low demand Safety Function up to SIL 2, in terms of systematic capability.

The assessment was based on the assumptions, data provided, and recommendations given in:

- **ESC Report: G020\_PU001 rev. 4;**
- **Legacy Protocol Letter from Apollo Fire Detectors Ltd, signed by Mark Schofield, Systems Engineer, dated 18<sup>th</sup> February 2019;**
- **Manual Call Points 55100-940 & 55100-940APO Letter from Apollo Fire Detectors Ltd, signed by Mark Schofield, Systems Engineer, dated 20<sup>th</sup> February 2019;**
- **Manual Call Points 58100-908SIL Letter from Apollo Fire Detectors Ltd, signed by Mark Schofield, Systems Engineer, dated 20<sup>th</sup> March 2019.**

The scope was limited to the protocol software used in the following products:

Device	Description	Protocol software and version
55000-775MAR	Marine Mini Switch Monitor	34100-003SW, rev 2
58100-971MAR	Discovery Manual Call point with Isolator	Integrated as part of 34000-036SW, rev 4
55100-940APO	XP95 Intrinsically Safe Manual Call Point	ASIC
58100-951APO	Weatherproof Manual Call Point with Isolator - Red	Integrated as part of 34000-036SW, rev 4
45681-394MAR	Discovery Marine Sounder Beacon Base	Integrated as part of 34000-095SW, rev 1
58000-400MAR	Discovery Marine Heat Detector	34100-002SW, rev 3
58000-600MAR	Discovery Marine Optical Smoke Detector	34100-002SW, rev 3
58000-700MAR	Discovery Marine Multisensor Detector	34100-002SW, rev 3
58000-700SIL	SIL Discovery Multisensor Detector	34100-002SW, rev 3
58000-500MAR	Discovery Marine Ionisation Smoke Detector	34100-002SW, rev 2
55000-440SIL	XP95 I.S. Heat Detector	ASIC
55000-540SIL	XP95 I.S. Ionisation Smoke Detector	ASIC
55000-640SIL	XP95 I.S. Optical Smoke Detector	ASIC
55000-773MAR	Marine DIN Rail Zone Monitor	ASIC

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Device	Description	Protocol software and version
55000-847SIL	SIL Input / Output Unit with Isolator	ASIC
58100-976MAR	Discovery Waterproof Manual Call Point with Isolator	Integrated as part of 34000-036SW, rev 4
45681-393SIL	Discovery Sounder VID Base with Isolator	Integrated as part of 34000-071SW, rev 8
58000-400SIL	Discovery Heat Detector	34100-002SW, rev 3
58000-600SIL	Discovery Optical Detector	34100-002SW, rev 3
58000-500SIL	Discovery Ionisation Smoke Detector	34100-002SW, rev 2
58100-908SIL	Discovery Manual Call Point with Isolator	Integrated as part of 34000-036SW, rev 4

Note 1: Devices that do not contain protocol software are excluded from this assessment.

The assessment was carried out to determine compliance with IEC 61508 Part 3 with regards to:

- Systematic Capability;
- Residual soft error probability in accordance with IEC 61784 Part 3.

Managing Director: Kenneth G L Simpson  
Member of the IEC 61508 committee  
Assessment Date: February 2019, valid to February 2021  
Certificate: G020\_CT001 rev. 3

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