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Dated:	10-Nov-25
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IEC 61508 Functional Safety Capability Statement

Eurofyre Limited Fyreline Digital Controller, 2 Zones (FLDDL2) and Fyreline EN54 Fixed Controller, 2 Zones (FLDC-EN54)

Manufacturer:	Eurofyre Limited Unit C1, Knowle Village Business Park, Mayles Lane, Wickham, Hampshire, UK
Product:	Digital Controller, 2 Zones EN54 Fixed Controller, 2 Zones
Model:	FLDDL2, FLDC-EN54

Application:	Low Demand Mode Safety Instrumented Function
Safety Function:	Upon detection of a fault causing a failure of the FLDDL2 or FLDC-EN54 and its ability to detect and identify a genuine fire condition using a Linear Heat Detection Cable (LHDC), action is initiated (Additional sensing, logic solver and final element subsystems not part of this analysis)
Applied standard:	IEC 61508 Ed2 2010 Parts 1-3
Systematic Capability:	Not Assessed
Applicable report:	Environmental Resources Management Ltd Report: F125_FM002 rev. 1

Assessment Route:	1_H
Hardware Fault Tolerance:	0
Type:	B
Application restrictions:	None

Model No.	λDU (/hr)	λDD (/hr)	λS (/hr)	SFF	SIL AC (HFT = 0)
Fyreline Digital Controller, 2 Zones (FLDDL2)	2.9E-08	2.5E-07	7.3E-08	92%	SIL 2
Fyreline EN54 Fixed Controller, 2 Zones (FLDC-EN54)	2.7E-08	2.2E-07	7.3E-08	92%	SIL 2

SIL AC (Architectural Constraints): Represents the maximum allowable SIL of each hardware element, assuming Hardware Fault Tolerance (HFT) = 0.

It should be noted that for a device to claim compliance with a specified SIL, the SIL AC and SC of the device needs to both be met. In addition to this, the required Average Probability of Failure on Demand (PFDavg) value for the complete Safety Instrumented Function (SIF) needs to adhere to the SIL PFDavg ranges.

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IMPORTANT: It should be noted that this assessment considers only the Eurofyre Limited Fyreline Digital Controller, 2 Zones (FLDDL2) and Fyreline EN54 Fixed Controller, 2 Zones (FLDC-EN54) and does not include confirmation of the response time of the device(s).

The Eurofyre Limited Fyreline Digital Controller, 2 Zones (FLDDL2) and Fyreline EN54 Fixed Controller, 2 Zones (FLDC-EN54) have been assessed and are considered capable for use in a low demand mode safety function up to (and including) SIL 2 with regards to random hardware failures and architectural constraints.

Note 1: The SIL of a complete SIF (sensor, logic solver and final element subsystems) must be verified to calculate the required Probability of Failure on Demand (PFD) / Probability of Failure per Hour (PFH), considering any redundancy, Proof Test Interval (PTI), Proof Test Coverage (PTC), Mission Time and Mean Time To Restoration (MTTR) for all elements included in the SIF. Each subsystem should be verified to ensure compliance with the minimum HFT requirements.

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