

Certificate of Constancy of Performance

This is to certify that:

Haes Technologies Limited
Unit 3
Horton Industrial Park
West Drayton
UB7 8JD
United Kingdom

Holds Certificate Number:

2797 CPR 720738

In respect of:

**EN 12094-1:2003, EN 54-2:1997+A1:2006 and EN 54-4:1997+A1:2002+A2:2006
Electrical Automatic Control and Delay Devices for Gas Extinguishing Systems**

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the above construction product. This certificate attests that all the provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the above standard(s) under system 1 for the performance set out in this certificate are applied and that the factory production control conducted by the manufacturer is assessed to ensure the constancy of performance of the construction product(s). This certificate was first issued on the date below and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods, nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

For and on behalf of BSI, a Notified Body for the above Regulation (Notified Body Number 2797):

Drs. Dave Hagenaaars, Managing Director

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No. 2797 CPR 720738

Manufacturing Plant

**Haes Technologies Limited
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Product Information

EN 12094-1:2003, EN 54-2:1997+A1:2006 and EN 54-4:1997+A1:2002+A2:2006

Model Reference	Type
ESG-1001	ESPRiT Single Flood Zone - 1.2 Amp PSU- with 3 fire detection zones.
ESG-1002	ESPRiT Single Flood Zone - 3.4 Amp PSU- with 3 fire detection zones.
ESG-1003	ESPRiT Dual Flood Zones - 3.4 Amp PSU- with 6 fire detection zones.

Incorporating the following units:

TPCA017	Display PCB
TPCA018	Gas card PCB
TPCA019	PSU PCB
TPCA020	Led extender PCB
TPCA021	Mini RSU PCB
TPCA022	Display RSU PCB
TPCA023	RSU term PCB

Certified for use with Apollo and Hochiki conventional fire detection and alarm devices.

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Also suitable for use with:

ESG-2001	Display RSU (Graphic remote status unit)
ESG-2002	Mini RSU (Remote status unit)
ESG-2006	Hold button (Button for remote extinguishant Hold off)
ESG-2007	Abort button (Button for remote extinguishant Abort)

Options with requirements

Certified with the following options with requirements from BS EN 54 Part 2:1997:

Clause Description

7.8	Output to fire alarm devices
7.9.1	Output to fire alarm routing equipment
7.11	Delays to outputs
7.13	Alarm counter
8.9	Output to fault warning routing equipment
10	Test condition

Certified with the following options with requirements from BS EN 12094 Part 1:2003:

Clause Description

4.17	Delay of extinguishing signal
4.18	Signal representing the flow of extinguishing agent
4.19	Monitoring of the status of components
4.20	Emergency hold device
4.21	Control of flooding time
4.23	Manual only mode
4.26	Triggering of equipment outside the system
4.27	Emergency abort device
4.30	Activation of alarm devices with different signals

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EN 54 Part 2:1997 + A1:2006 and EN 54 Part 4:1997 + A1:2002 + A2:2006

Model Reference	Type
ESA-1001	1 to 2 Loop Argus ESPRiT Addressable Panel - 1.2Amp PSE in Small Housing
ESA-1002	1 to 4 Loop Argus ESPRiT Addressable Panel - 3.4Amp PSE in Large Housing

Incorporating the following units:

ESA- 3000 Argus addressable loop card

Certified for use with Argus protocol fire detection and alarm devices.

Options with requirements

Certified with the following options with requirements from EN 54 Part 2:1997:

Clause	Description
7.8	Output to fire alarm devices
7.9.1	Output to fire alarm routing equipment
7.11	Delays to outputs
7.12.1	Dependencies (Type A)
7.12.2	Dependencies (Type B)
7.12.3	Dependencies (Type C)
7.13	Alarm counter
8.3	Faults from points
9.5	Disablement of addressable points
10	Test condition

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Appendix 1

Harmonised Technical Specification		BS EN 12094-1:2003
Essential Characteristics	Performance	Clause
Response Delay (response time)		
Response delay	Pass	4.8
Operational Reliability		
Functional requirements	Pass	4
Design requirements	Pass	5
Additional design requirements for software controlled e.c.d.s	Pass	6
Performance parameters under fire conditions		
Signal processing and indication	Pass	4.3
Reception and processing of input triggering signals	Pass	4.4
Transmission of extinguishing signal	Pass	4.5
Activation of alarm devices	Pass	4.6
Durability of Operational Reliability		
Cold (operational)	Pass	9.3 (e)
Vibration, sinusoidal (operational)	Pass	9.3 (f)
Vibration, sinusoidal (endurance)	Pass	9.3 (g)

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Appendix 1 (Continued)

Harmonised Technical Specification		EN 54-2: 1997+A1
Essential Characteristics	Performance	Clause
Performance Under Fire Conditions		
General requirements	Pass	4
General requirements for indications	Pass	5
The fire alarm condition	Pass	7
Response Delay (response time to fire)		
Reception and processing of fire signals	Pass	7.1
Output of the fire alarm condition	Pass	7.7
Delays to outputs	Pass	7.11
Operational Reliability		
General requirements	Pass	4
General requirements for indications	Pass	5
The quiescent condition	Pass	6
The fire alarm condition	Pass	7
Fault warning condition	Pass	8
Disabled condition	Pass	9
Test condition	Pass	10
Design requirements	Pass	12
Additional design requirements for software controlled control and indicating equipment	Pass	13
Marking	Pass	14
Durability of Operational Reliability		
Cold (operational)	Pass	15.4
Damp heat, steady state (operational)	Pass	15.5
Impact (operational)	Pass	15.6
Vibration, sinusoidal (operational)	Pass	15.7
Electromagnetic Compatibility (EMC), Immunity tests (operational)	Pass	15.8
Supply voltage variations	Pass	15.13
Damp heat, steady state (endurance)	Pass	15.14
Vibration, sinusoidal (endurance)	Pass	15.15

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Appendix 1 (continued)

Harmonised Technical Specification		EN 54-4:1997+A1 & A2
Essential Characteristics	Performance	Clause
Performance of Power Supply		
General requirements	Pass	4
Functions	Pass	5
Materials, design and manufacture	Pass	6
Operational Reliability		
General requirements	Pass	4
Functions	Pass	5
Materials, design and manufacture	Pass	6
Documentation	Pass	7
Marking	Pass	8
Durability of Operational Reliability		
Cold (operational)	Pass	9.5
Damp heat, steady state (operational)	Pass	9.6
Impact (operational)	Pass	9.7
Vibration, sinusoidal (operational)	Pass	9.8
Electromagnetic Compatibility (EMC), Immunity tests (operational)	Pass	9.9
Damp heat, steady state (endurance)	Pass	9.14
Vibration, sinusoidal (endurance)	Pass	9.15

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