Certificate

Certificate
FSCO-00172

Issue date
2025-10-24

Expiration date
2030-10-24

Report Reference
E534551-20251024-DescriptionFS

This is to acknowledge that

QSD SISTEMI S.R.L

Via Trento 9 Trezzano Rosa, MI, 20060 Italy

has had

Q21, Q22, Q26, Q28, Q11, Q12

evaluated and meets the requirements of the standard(s)

IEC 61508-1, 2nd Ed., Issue Date: 2010-04-01; IEC 61508-2, 2nd Ed., Issue Date: 2010-04-01; IEC 61508-3, 2nd Ed., Issue Date: 2010-04-01

General Conditions and Notes
1)This certificate (in accordance with UL's Functional Safety Certificate Scheme) does not imply that UL has issued product-marking based safety certification (such as Listing, Recognition, or Classification) nor will the referenced report authorize the use of product safety certification marks or other references to UL on these products.
2)This certificate only covers the product version that is listed in the report reference. Any changes applied to the certified product are not covered by this Certificate.

Certification Program Owner:
André Thieme

Any information and documentation involving UL Functional Safety Certificate services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

FUNCTIONAL SAFETY CERTIFICATE OF COMPLIANCE

Q21

HW Version Identification:	SW Version Identification:
148Av5.25	2.0

The certified module provides the following safety ratings:

Safety Function/Goal	Max. Safety Rating	PFH avg /h	PFD avg (1yr)	DC %	Safe Failure Rate (/h)	HFT	SFF %	Type A/B
Flame Loss, Low temperature	SIL 3	2.72^{-9}	--	96.7	1.51^{-7}	0	98.8	B
Illegal flame	SIL 3	2.72^{-9}	--	96.7	1.51^{-7}	0	98.8	B

This product has been assessed for functional safety in accordance with IEC 61508 series and is certified as compliant with SIL 3 requirements, excluding environmental testing (e.g., electromagnetic compatibility, mechanical vibration, temperature, humidity). The responsibility for verifying environmental robustness and compliance with IEC 61508 environmental requirements lies with the system integrator in the context of the final application. This report does not imply compliance with environmental conditions unless separately verified.

Q22

HW Version Identification:	SW Version Identification:
148Av5.25	2.0

The certified module provides the following safety ratings:

Safety Function/Goal	Max. Safety Rating	PFH avg /h	PFD avg (1yr)	DC %	Safe Failure Rate (/h)	HFT	SFF %	Type A/B
Flame Loss, Low temperature	SIL 3	2.72^{-9}	--	96.7	1.51^{-7}	0	98.8	B
Flame Loss, High temperature	SIL 3	2.59^{-9}	--	96.3	1.79^{-7}	0	98.9	B
Illegal flame	SIL 3	2.59^{-9}	--	96.3	1.51^{-7}	0	98.8	B

This product has been assessed for functional safety in accordance with IEC 61508 series and is certified as compliant with SIL 3 requirements, excluding environmental testing (e.g., electromagnetic compatibility, mechanical vibration, temperature, humidity). The responsibility for verifying environmental robustness and compliance with IEC 61508 environmental requirements lies with the system integrator in the context of the final application. This report does not imply compliance with environmental conditions unless separately verified.

Q26, Q28

HW Version Identification:	SW Version Identification:
148Av5.25, 148Bv5.25	2.0

The certified module provides the following safety ratings:

Safety Function/Goal	Max. Safety Rating	PFH avg /h	PFD avg (1yr)	DC %	Safe Failure Rate (/h)	HFT	SFF %	Type A/B
Flame Loss, Low temperature	SIL 3	2.72^{-9}	--	96.7	1.51^{-7}	0	98.8	B
Flame Loss, High temperature	SIL 3	2.59^{-9}	--	96.3	1.79^{-7}	0	98.9	B
Illegal flame	SIL 3	2.59^{-9}	--	96.3	1.51^{-7}	0	98.8	B
Gas leakage	SIL 3	2.59^{-9}	--	96.3	1.79^{-7}	0	98.9	B

This product has been assessed for functional safety in accordance with IEC 61508 series and is certified as compliant with SIL 3 requirements, excluding environmental testing (e.g., electromagnetic compatibility, mechanical vibration, temperature, humidity). The responsibility for verifying environmental robustness and compliance with IEC 61508 environmental requirements lies with the system integrator in the context of the final application. This report does not imply compliance with environmental conditions unless separately verified.

Q11, Q12

FUNCTIONAL SAFETY CERTIFICATE OF COMPLIANCE

HW Version Identification:	SW Version Identification:
148Av5.25	2.0

The certified module provides the following safety ratings:

Safety Function/Goal	Max. Safety Rating	PFH avg /h	PFD avg (1yr)	DC %	Safe Failure Rate (/h)	HFT	SFF %	Type A/B
Flame Loss, Low temperature	SIL 3	2.72^{-9}	--	96.7	1.51^{-7}	0	98.8	B
Flame Loss, High temperature	SIL 3	2.59^{-9}	--	96.3	1.79^{-7}	0	98.9	B
Illegal flame	SIL 3	2.59^{-9}	--	96.3	1.51^{-7}	0	98.8	B

This product has been assessed for functional safety in accordance with IEC 61508 series and is certified as compliant with SIL 3 requirements, excluding environmental testing (e.g., electromagnetic compatibility, mechanical vibration, temperature, humidity). The responsibility for verifying environmental robustness and compliance with IEC 61508 environmental requirements lies with the system integrator in the context of the final application. This report does not imply compliance with environmental conditions unless separately verified.

Conditions of Safe Use of the Certified Product:

1) The product must be installed, operated, and maintained as specified in:

Document Identifier	Revision	Issue Date	Title
Q2-D5.1	N/A	2025-10-24	Information for Use

2) The manufacturer of the certified product shall keep record of the failure analysis for all returned products.

Certificate Revision Records

Issue Date	Revised Date	Report Reference No	Summary of Change Records
2025-10-24	2025-10-24	E534551-20251024-DescriptionFS	First release

Including further sites:

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