

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

FMD 09 Flow Monitor

Manufactured by:

Dr. Födisch Umweltmesstechnik AG

Zwenkauer Straße 159
D-04420 Markranstädt / OT Kulwitz
Germany

has been assessed by CSA Group
and for the conditions stated on this certificate complies with:

Environment Agency Guidance

“MCERTS for stack emissions monitoring equipment at industrial installations”

- Continuous emissions monitoring systems (CEMS)

Published 20 October 2020

EN 15267-1:2009, EN15267-2:2009, EN 15267-3:2007

& QAL 1 as defined in EN 14181: 2014

Certification ranges:

Velocity	2 to 30 m/s
	2 to 60 m/s

Project number:	80128423
Certificate number:	Sira MC170329/01
Initial certification:	21 July 2017
This certificate issued:	27 June 2022
Renewal date:	20 July 2027



Andrew Young
Environmental Team Manager

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The MCERTS certificate consists of this document in its entirety.

For conditions of use, please consider all the information within.

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Approved Site Application

Any potential user should ensure, in consultation with the manufacturer, that the monitoring system is suitable for the intended application. For general guidance on monitoring techniques refer to the Environment Agency Monitoring Technical Guidance Notes available at www.mcerts.net

This instrument is considered suitable for use on waste incineration and large combustion plants. This CEMS has been proven suitable for its measuring task (parameter and composition of the flue gas) by use of the QAL 1 procedure specified in EN14181. The lowest certified range for each determinand shall not be more than 1.5 times the daily average emission limit value (ELV) for incineration plants, and not more than 2.5 times the ELV for other types of applications.

Basis of Certification

This certification is based on the following test report(s) and on CSA Group's assessment and ongoing surveillance of the product and the manufacturing process:

TUV Report No. 936/21212361/C dated March 2012
Mattersteig & Co Test Report No. K-FS-7135-17 dated June 2017

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Product Certified

The flow measuring device FMD 09 consists of the following parts:

- Measuring probe: differential pressure probe Dr. Födisch AG
- Differential pressure transducer
- Temperature sensor
- Evaluation unit
- Optional: absolute pressure sensor
- Optional: cross-over cock for back flushing measuring probe

This certificate applies to all instruments fitted with software version Main version 2.07 and I/O Version 1.13 (serial number 17516) onwards.

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Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: -20°C to +50°C
Instrument IP rating: Unit IP65, Probe IP66

Results are expressed as error % of certification range 2 to 30 m/s, unless otherwise stated.

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Response time						
2 to 30 m/s					10s	<200s
2 to 60 m/s					10s	<200s
Repeatability standard deviation at zero point						
2 to 30 m/s	0.02					<2.0%
2 to 60 m/s	0.3					<2.0%
Repeatability standard deviation at reference point	0.1					<2.0%
Lack-of-fit						
2 to 30 m/s			-1.13			<2.0%
2 to 60 m/s		0.97				<2.0%
Influence of ambient temperature zero point (-20°C to +50°C)			-1.4			<5.0%
Influence of ambient temperature reference point (-20°C to +50°C)	-0.3					<5.0%
Influence of voltage variations (196V to 230V)	0.4					<2.0%
Influence of vibration		-0.9				To be reported

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Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Measurement uncertainty 2 to 30 m/s					Guidance - at least 25% below max permissible uncertainty 2.0%	<7.5% (10%)
Calibration function (field)					0.9935	>0.90
Response time (field)					10s	<200s
Lack of fit (field)		0.6				<2.0%
Maintenance interval					3 months	>8 days
Zero and Span drift requirement	The AMS allows the recording of zero and reference point drift and thus meets the requirements of QAL 3 as specified in EN14181, as the differential pressure transducer is typically tested again the field test					Clause 6.13 & 10.13 Manufacturer shall provide a description of the technique to determine and compensate for zero and span drift.
Change in zero point over maintenance interval	0.0					<2.0%
Change in reference point over maintenance interval			1.0			<4.0%
Availability					99.5%	>95%
Reproducibility		0.8				<3.3%

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Description

The flow measuring device FMD 09 is a highly sensitive system for continuous in-situ measurement of the velocity and temperature of gas flows in pipelines.

In the FMD 09 the measuring gas is measured in the exhaust flow by the dynamic pressure probe. Thereby the differential pressure is continuously measured by the dynamic pressure probe. The signal which results from the differential pressure is a degree for the velocity of the exhaust. The microcontroller integrated in the operating unit generates a proportional signal and evaluates the volume flow.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this certificate. The manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of CSA Group Testing UK Ltd Certificates'.
2. The design of the product certified is held and maintained by TÜV Rheinland for certificate No. Sira MC170329/01.
3. If a certified product is found not to comply, CSA Group should be notified immediately at the address shown on this certificate.
4. The certification marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of CSA Group Testing UK Ltd Certificates'.
5. This document remains the property of CSA Group and shall be returned when requested by CSA Group.

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