Umwelt Bundesamt

TÜVRheinland®
Precisely Right.

CERTIFICATE

of Product Conformity (QAL1)

Certificate No: 0000069259_01

Certified AMS:	FP330 for waste gas velocity
Manufacturer:	Siemens Östliche Rheinbrückenstr. 50 76187 Karlsruhe Germany
Test Institute:	TÜV Rheinland Energy & Environment GmbH

This is to certify that the AMS has been tested and found to comply with the standards EN 15267-1 (2009), EN 15267-2 (2023), EN 15267-3 (2007), EN ISO 16911-2 (2013) as well as EN 14181 (2014).

Certification is awarded in respect of the conditions stated in this certificate (this certificate contains 6 pages).
The present certificate replaces certificate 0000069259_00 dated 17 June 2020.

TÜVRheinland® CERTIFIED
Suitability Tested
EN 15267
QAL1 Certified
Regular Surveillance
www.tuv.com
ID 0000069259

Publication in the German Federal Gazette (BAnz) of 7 May 2020

German Environment Agency

Dessau, 5 May 2025

This certificate will expire on:
6 May 2030

TÜV Rheinland Energy & Environment GmbH
Cologne, 4 May 2025

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Test institute accredited to EN ISO/IEC 17025 by DAkkS (German Accreditation Body).
This accreditation is limited to the accreditation scope defined in the enclosure to the certificate D-PL-11120-02-00.

Test report:	936/21246254/A dated 23 September 2019
Initial certification:	7 May 2020
Expiry date:	6 May 2030
Certificate:	Renewal (of previous certificate 0000069259_00 of 17 June 2020 valid until 6 May 2025)
Publication:	BAnz AT 07.05.2020 B8, chapter I No. 2.1

Approved application

The tested AMS is suitable for use at plants according to Directive 2010/75/EC, chapter III (combustion plants / 13th BImSchV:2017), chapter IV (waste incineration plants / 17th BImSchV:2013), Directive 2015/2193/EC (44th BImSchV:2019), TA Luft:2002, 30th BImSchV:2019 and 27th BImSchV:2013. The measured ranges have been selected so as to ensure as broad a field of application as possible.

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a six month field test at a waste incineration.

The AMS is approved for an ambient temperature range of -20 °C to +50 °C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing. As changes in legal provisions are possible, any potential user should ensure that this AMS is suitable for monitoring the flue gas velocity relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the installation at which it will be installed.

Note

The legal regulations mentioned correspond to the current state of legislation during certification. Each user should, if necessary, in consultation with the competent authority, ensure that this AMS meets the legal requirements for the intended use. In addition, it cannot be ruled out that legal regulations governing the use of a measuring device for emission monitoring may change during the lifetime of the certificate.

Basis of the certification

This certification is based on:

- Test report 936/21246254/A dated 23 September 2019 of TÜV Rheinland Energy GmbH
- Suitability announced by the German Federal Environment Agency (UBA) as the relevant body
- The ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz AT 07.05.2020 B8, chapter I No. 2.1, Announcement by UBA dated 31 March 2020:

AMS designation:
FP330 for waste gas velocity

Manufacturer:
SIEMENS AG, Karlsruhe

Field of application:
For plants requiring official approval and for plants according to the 27th BImSchV

Measuring ranges during the performance test:

Component	Certification range	Supplementary measurement ranges		Unit
Exhaust gas velocity	2 - 20	2 - 40	2 - 60	m/s

Software version:
1.0.0

Restrictions:
None

Notes:
1. After any malfunction of the filter resulting in high dust loads, the probe must be checked for contamination and cleaned if necessary.
2. The maintenance interval is three months.
3. There are 4 different probes that differ in profile size. SDF 22, 32 and 50 have a fixed width and variable length. The fourth type (SDF-50+) changes its width with its length.

Test Institute:
TÜV Rheinland Energy GmbH, Cologne
Report No.: 936/21246254/A dated 23 September 2019

Publication in the German Federal Gazette: BAnz AT 11.04.2022 B10, Chap. VI notification 42, Announcement by UBA dated 9 March 2022:

42 Notification as regards Federal Environment Agency (UBA) notice of 31 March 2020 (BAnz AT 07.05.2020 B8, chapter I number 2.1)

The current software version of the measuring device FP330 or exhaust gas velocity of the company Siemens AG reads: QAL-1.0.4

The software versions QAL-1.0.0, QAL-1.0.1, QAL-1.0.2 and QAL-1.0.3 are included in this.

In addition to the previously used housing for panel mounting, the evaluation unit can also be installed in a wall-mounting housing in the future.

Statement issued by TÜV Rheinland Energy GmbH dated 20 August 2021

Certified product

This certificate applies to automated measurement systems conforming to the following description:

Flow velocity measurement relies on determining the differential pressure in the sample gas flow by means of a dynamic pressure probe (Type SITRANS FPD330) and a pressure sensor (Model SITRANS P320). The measuring system uses an in-situ method. Measured values detected by the pressure sensor are transmitted to the external evaluation electronics unit (AccuMind QAL) as 4–20 mA signals.

The evaluation unit takes into account the differential pressure signal and waste gas boundary conditions as well as the cross-section of the duct. This is also were parameterisation takes place. The volume flow or flow velocity signal is provided via freely assignable 4–20 mA outputs, whose measuring range can be changed. The port for analogue outputs is located at the back of the evaluation electronics unit.

The probe tube is approved in four versions: 22, 32, 50 and 50+. The only difference lies in the probe cross-section. The selection of the probe type or the probe cross-section depends on the probe length.

General notes

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. 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 systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy & Environment GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate. This certification mark may be applied to the product or used in advertising materials for the certified product.

This document as well as the certification mark remains property of TÜV Rheinland Energy & Environment GmbH. With revocation of the publication the certificate loses its validity. After the expiration of the certificate and on requests of the TÜV Rheinland Energy & Environment GmbH this document shall be returned and the certificate mark must not be employed anymore.

The relevant version of this certificate and its expiration is also accessible on the internet: **qal1.de**.

History of documents

Certification of FP330 is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

Initial certification according to EN 15267
Certificate No. 0000069259_00: 17 June 2020
Expiry date of the certificate: 6 May 2025
Test report: 936/21246254/A dated 23 September 2019
TÜV Rheinland Energy GmbH
Publication: BAnz AT 07.05.2020 B8, chapter I number 2.1
UBA announcement dated 31 March 2020

Notifications
Statement issued by TÜV Rheinland Energy GmbH dated 20 August 2021
Publication: BAnz AT 11.04.2022 B10, chapter VI notification 42
UBA announcement dated 9 March 2022
(Soft- and hardware changes)

Renewal of certificates
Certificate No. 0000069259_01: 5 May 2025
Expiry date of the certificate: 6 May 2030

Umwelt Bundesamt

Certificate:
0000069259_01 / 5 May 2025

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Calculation of overall uncertainty according to EN 14181 and EN 15267-3

Measuring system					
Manufacturer			Siemens AG		
AMS designation			FP330		
Serial number of units under test			12048607 / 12048608		
Measuring principle			differential pressure measurement		
Test report			936/21246254/A		
Test laboratory			TÜV Rheinland		
Date of report			2019-09-23		
Measured component			Velocity		
Certification range			2 - 20 m/s		

Calculation of the combined standard uncertainty

Tested parameter				u²	
Standard deviation from paired measurements under field conditions *	u_D	0.280	m/s	0.078	(m/s)²
Lack of fit	u_{lof}	0.081	m/s	0.007	(m/s)²
Zero drift from field test	$u_{d,z}$	0.046	m/s	0.002	(m/s)²
Span drift from field test	$u_{d,s}$	0.127	m/s	0.016	(m/s)²
Influence of ambient temperature at span	u_t	0.115	m/s	0.013	(m/s)²
Influence of supply voltage	u_v	0.025	m/s	0.001	(m/s)²
Uncertainty of reference material at 70% of certification range	u_{rm}	0.162	m/s	0.026	(m/s)²

* The larger value is used :
"Repeatability standard deviation at set point" or
"Standard deviation from paired measurements under field conditions"

Combined standard uncertainty (u_C)	$u_c = \sqrt{\sum (u_{max\,j})^2}$	0.38	m/s
Total expanded uncertainty	$U = u_c * k = u_c * 1.96$	0.74	m/s

Relative total expanded uncertainty	**U in % of the range 20 m/s**	**3.7**
Requirement of 2010/75/EU	**U in % of the range 20 m/s**	**7.8 ****
Requirement of EN 15267-3	U in % of the range 20 m/s	5.9

** The EU-directive 2010/75/EC on industrial emissions does not define requirements for this component.
A value of 7.8 % was used instead.