

Dr. Marcel Langner Hans-Jörg Eisenberger Head of Section II 4.1 TUV SUD Industrie Service · GmbH · Abteilung Umweltservice · Westendstraße 199 · 80686 München · Germany Seite 1/6

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Industrie Service

Umwelt G Bundesamt



Certificate number: 2901676-ts

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| Test report | 2901676 from 30 September 2019 |
| Initial certification | 07 May 2020 |
| Certificate validity until | 06 May 2025 (5 years) |
| Publication | BAnz AT 07 May 2020 B8, chapter I, No. 2.2 |
| | |

Approved application

The tested AMS is suitable for use at plants requiring authorisation, plants according to the 27. BlmSchV and TA Luft. The suitability of the AMS for this application was assessed on the basis of a laboratory test and a field test of the McON Air Emission Serie DSP 208/00-EM system lasting over three months at a plant according to Directive 2010/75/EU chapter IV (17. BlmSchV).

The measuring system is approved for ambient temperatures between -20 °C to +50 °C.

The AMS publication, the suitability test and the performance of the uncertainty calculations were conducted based on the provisions valid at the time of testing. Due to possible amendments to legal foundations every user should ensure be one use of the AMS that it is suitable for monitoring the



Basis of the certification



- 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. 2.2, announcement by UBA from 31 March 2020)

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| AMS designation: | McON Air Emission Serie DSP 208/00-EM for flue gas- velocity |
|------------------|--|
| Manufacturer: | PROMECON process measurement control GmbH, Barleben/Germany |
| Suitability: | For plants requiring authorisation, plants in compliance with the 27. BlmSchV and TA Luft |

Measurement ranges in the suitability test:

| Component | Certification range | Supplementary measurement range | Unit |
|-------------------|------------------------|------------------------------------|------|
| Flue gas velocity | 3 - 30 | 3 - 50 | m/s |

| Software version: | |
|---|---|
| Firmware: 2.11.0.1 | |
| Reconsticuts: The lower line/for Notes: | eter lining the schartst gas velocity is 3 to/s. CCC |
| 1. The maintenand | ce interval is two months. |
| 2. The measuring less cycli . The measuring | system retermines the sue gas velocity ander operating conditions. |
| | for the nue gas duct cross-sectional area and corresponding adaptation of trout range, the volume flow can be output in m ³ /h in operating conditions. |
| | es < 3 m/s are displayed as 4 mA and must therefore be eliminated by adjust- ausibility limit in the evaluation system accordingly. |
| Test report: | TÜV SÜD Industrie Service GmbH, Munich Report-No.: 2901676 from 30 September 2019 |



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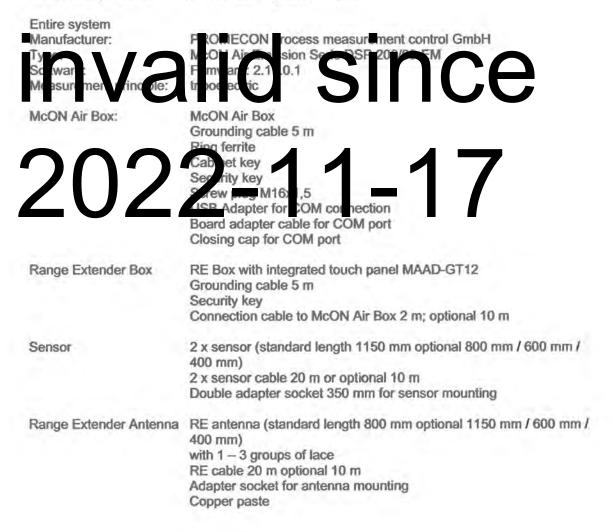
Certified product

The certificate applies to AMS that comply with the following description:

The entire McON Air Emission Series DSP 208/00-EM measuring system consists of the two sensors, the range extender antenna, the McON Air box with the evaluation and operating electronics with the analogue and status outputs and the range extender box for operating and controlling the range extender antenna.

The McON Air Emission Series DSP 208/00-EM measuring system is designed to measure the gas velocity in flue gases. To determine the gas velocity, the pattern of electronic fluctuations induced by changes in the magnetic field of the flue gas is detected according to the principle of triboelectric measurement. The time difference of the detection at two sensors installed one behind the other in the flue gas duct is a measure for the gas velocity, if the sensors are at a defined distance from each other.

The entire system consists of the following components:





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General notes

This certificate is based on the analyser tested. The manufacturer is responsible for the continuous compliance of the production to the DIN EN 15267 requirements. The manufacturer is required to maintain an approved quality management system to control the manufacture of the certified product. Regular monitoring must be conducted on both the product and the quality management systems.

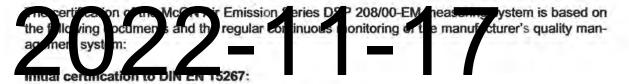
If the product from the current production series no longer comply with the certified product, the Environmental Service Department of TÜV SÜD Industrie Service GmbH must be informed (address see footnote).

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

This document and the certification mark shall remain the property of TÜV SÜD Industrie Service GmbH.

Should the publication be related, this c rtificate will become invalid. This document must be returned, the period of v. idia has depsed and a the relates of 20 v SUP industrie Service GribH and the vertification marking v no longer becard.

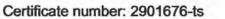
The current version of the certificate and its expiration is also accessible on the internet at qal1.de.



Certificate No. 2901676-ts Certificate validity until 07 May 2020 06 May 2025 (5 years)

Test report: 2901676 from 30 September 2019, TÜV SÜD Industrie Service GmbH Publication: BAnz AT 07 May 2020 B8, chapter I No. 2.2, UBA publication from 31 March 2020







Calculation of total uncertainty for the measuring system McON Air Emission Serie DSP 208/00-EM for QAL1 testing to DIN EN 14181 and DIN EN 15267-3

Total uncertainty for the measurement component in the measurement range 3-30 m/s

| Performance characteristic | Uncertainty | Value standard uncertainty m/s | Square of standard uncertainty m/s ² |
|--|---|-----------------------------------|--|
| Lack-of-fit | | | 1.111 |
| | U _{lof} | 0,09 | 0,0081 |
| Zero drift from field test | u _{d.z} | -0,023 | 0,00053 |
| Span drift from field test | U _{d,s} | 0,087 | 0,00757 |
| Influence of ambient temperature at | | 0.022 | 0,0005 |
| span | ut | 0,022 | 0,0005 |
| Influence of sample gas pressure | up | | |
| In a molecular and the molecular and the second | | Inc | Δ |
| In Jenci of surgy vol ge | | 0,000 | 0,0000 |
| Cross-sensitivity (interference) | u, | | |
| eatability standar in water a san | s = s, | 7 ,0 | ur < du |
| Structure deviation from sourced reasurements inder sold cond | u = s _d | 0,0 2 | 0,00384 |
| % by 70% of CR | um | 0,000 | 0,0000 |
| Excursion of measurement beam | u _{aib} | | |
| Converter efficiency for AMS measuring NOx | u _{ce} | | |
| Variation of response factors (TOC) | u _{rf} | | |
| | | total | 0,02052 |
| Combined standard uncertainty | $u_c = \sqrt{\sum (u_i)^2}$ | 0,14325 | m/s |
| Total expanded uncertainty | U _{0,95} = 1,96 x u _c | 0,28077 | m/s |
| Relativ expanded uncertainty | U | 0,94 | % CR |
| Permissible uncertainty of EN 15267-3 | (of CR 30 m/s) | 3 | % CR |
| Complied with requirements relating to the measurement uncertainty | | yes | regarding EN 15267-3 |
| Permissible uncertainty 13. / 17. BimSchV | (of CR 30 m/s) | 4 | % CR |
| Complied with requirements relating to the measurement uncertainty | | yes | regarding 13. / 17. BlmSchV |

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