

## D-R 808 In situ dust monitor

Certified and approved PM CEMS providing very high quality monitoring of very low to medium particulate concentrations in dry flue gas flows.

- QAL1 certified in accordance with EN 15267 and EN 14181
- Compliant with US EPA 40 CFR 60 PS 11
- Automatic control functions
- **NEW:** ATEX and IECEx certified



## ONE COMPANY | COMPREHENSIVE SOLUTIONS

- **Local support, global reach:** benefit from local commissioning and services through our extensive network of partners and corporate organizations, ensuring prompt assistance and expertise wherever you are. There's no need to send the device back to factory.
- **One company, comprehensive solutions:** DURAG GROUP offers a comprehensive solution for your plant, from combustion optimization and safety to the environmental compliance and atmospheric impact.

### D-R 808 | FEATURES

- Certified for the range of 0 to 7.5 mg/m<sup>3</sup>, the lowest range achievable for a dust CEMS (continuous emissions monitoring system)
- Certified and approved PM-CEMS for ensuring plant compliance with international standards for atmospheric emissions
- Advanced measurement accuracy: utilizes forward scattering technology, insensitive to particle type and size
- Suitable for high-Temperature stacks and hazardous Ex zones

### D-R 808 | BENEFITS

- Single-sided Installation: eliminates the need for optical alignment
- Simplified audit process: easy verification with manual filters without removing the device from the stack
- Pressure-controlled purge air system: particulate analyzer safeguarded in the event of a blower or plant instrument air system failure
- User-friendly flange: easy installation and maintenance – unscrew, turn slightly and remove device from the stack/duct
- Status-dependent indicator light: provides clear and immediate visual feedback
- Reduced maintenance: significantly lowers the overall cost of ownership and operation

### D-R 808 | TECHNICAL DATA

<b>Measuring principle</b>	Forward scattering, in situ, continuous, single-sided installation
<b>Measuring variable</b>	Scattered light units, calibratable as dust concentration in mg/m <sup>3</sup>
<b>Measuring range</b>	0 ... 300 mg/m <sup>3</sup>
<b>Certified measuring range</b>	0 ... 7.5 mg/m <sup>3</sup>
<b>Certificates</b>	QAL1 (TÜV and MCERTS)
<b>Standards</b>	IED 2010/75/EU, EN 15267-1, EN 15267-2, EN 15267-3, EN 14181, US EPA 40 CRF 60 PS 11, 13th / 17th / 27th / 30th BImSchV, TA Luft
<b>Interface*</b>	<ul style="list-style-type: none"> <li>• Analogue output: 1x 4 ... 20 mA, maximum 400 Ω, potential-free (various parameters adjustable)</li> <li>• Digital output: 2x NC/NO, maximum 60 V<sub>DC</sub>, 30 V<sub>AC</sub>, 0.5 A (various parameters adjustable)</li> <li>• RS 485 Modbus RTU, USB</li> </ul>
<b>Nominal voltage</b>	24 V <sub>DC</sub>
<b>Ambient conditions</b>	<ul style="list-style-type: none"> <li>• Installation location: Indoor and outdoor installation**</li> <li>• Temperature: -40 ... +60 °C</li> </ul>
<b>Operating conditions</b>	In duct: <ul style="list-style-type: none"> <li>• Temperature: Maximum 350 °C, optional: 500 °C</li> <li>• Relative humidity: 0 ... 95%, non-condensing</li> <li>• Relative pressure: -50 ... +50 hPa</li> </ul>

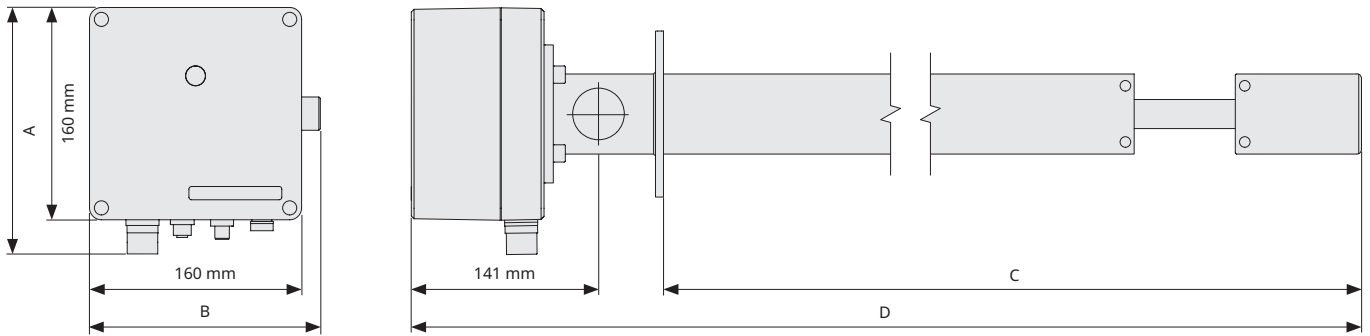
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• Inner duct diameter: &gt;0.3 m (a representative measurement must be ensured)</li> <li>• Wall thickness: Maximum 0.47 m</li> </ul>
<b>Check functions</b>	Automatic zero and reference point measurement, automatic contamination measurement and compensation, integrated purge air monitoring
<b>Degree of protection</b>	IP65 in accordance with DIN EN 60 529
<b>Light source</b>	Laser, class 2 in accordance with DIN EN 60825-1, < 1 mW at 650 nm
<b>Connections</b>	<ul style="list-style-type: none"> <li>• Process: Flange, DN 40 PN6 including stud bolts, bolt circle 100 mm</li> <li>• Device: M23 DURAG Standard</li> <li>• Purge air hose: Ø 25 mm</li> <li>• Purge air sensor: M12 8-pin</li> </ul>
<b>Explosion protection</b>	<ul style="list-style-type: none"> <li>• ATEX (optional): II 3G Ex ec nC op is IIC T4 Gc II 3D Ex op is tc IIIC T100 °C Dc</li> <li>• IECEX (optional): Ex ec nC op is IIC T4 Gc Ex op is tc IIIC T100 °C Dc</li> </ul>
<b>Operation and display</b>	<ul style="list-style-type: none"> <li>• Status display: LED</li> <li>• D-ESI 100 software***</li> <li>• or D-ISC 100 operating unit</li> </ul>
<b>Material</b>	<ul style="list-style-type: none"> <li>• Probe: 1.4404, AISI 316L, polished</li> <li>• Housing: Painted aluminum</li> </ul>
<b>System components</b>	<ul style="list-style-type: none"> <li>• D-R 808 dust monitor</li> <li>• D-ESI 100 software***</li> <li>• D-TB 200 terminal box</li> <li>• or D-TB 100 terminal box (external purge air supply required)</li> <li>• or D-ISC 100 P operating and purge air unit</li> </ul>

\* Additional interfaces with D-ISC 100 operating unit

\*\* A weather protection cover is required for outdoor installation

\*\*\* Enables remote access via web interface, requires PC with Windows operating system

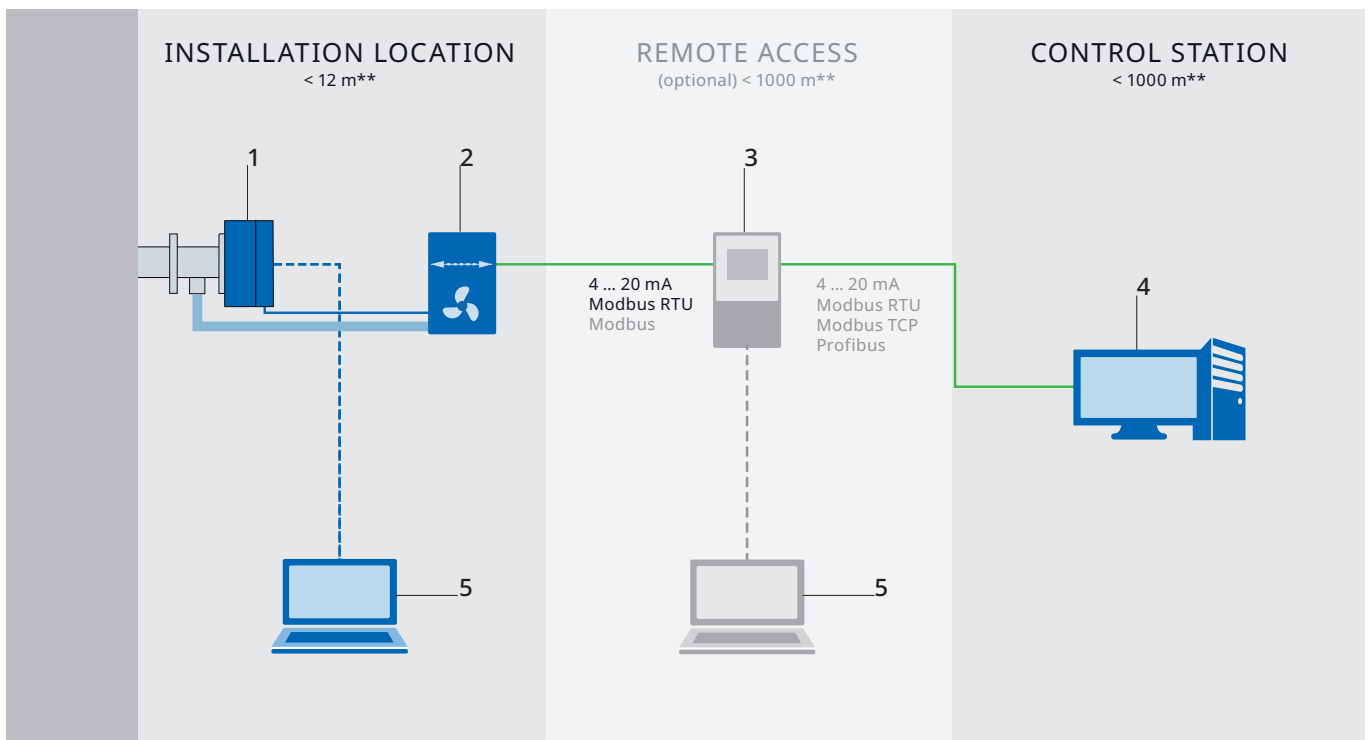
D-R 808 | DIMENSIONS AND WEIGHT OF DIFFERENT PRODUCT VARIANTS



Product variant, probe length 400 mm	A (mm)	B (mm)	C	D	Weight (kg)
Standard	186	174	387	577	3
ATEX/IECEX	200	213	387	577	4.2

Product variant, probe length 800 mm	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)
Standard	186	174	787	977	7
ATEX/IECEX	200	213	787	977	8.5

EXAMPLES OF SYSTEM CONFIGURATIONS\* | STANDARD + OPTIONAL WITH REMOTE ACCESS



- 1 Dust monitor
- 2 Terminal box with/without purge air unit
- 3 Operating unit
- 4 Data acquisition, processing + reporting (D-EMS 2020)
- 5 PC with Windows operating system and software (D-ESI 100)

- Easy to use, easy to report emissions – in combination with DURAG Emission DAHS, the D-EMS 2020, and the LaserCEM for multi-gas monitoring, tracking ELVs and sharing emissions reports with your local authority is amazingly simple.

\* All system components shown are available on request  
 \*\* Maximum permitted cable and hose length

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