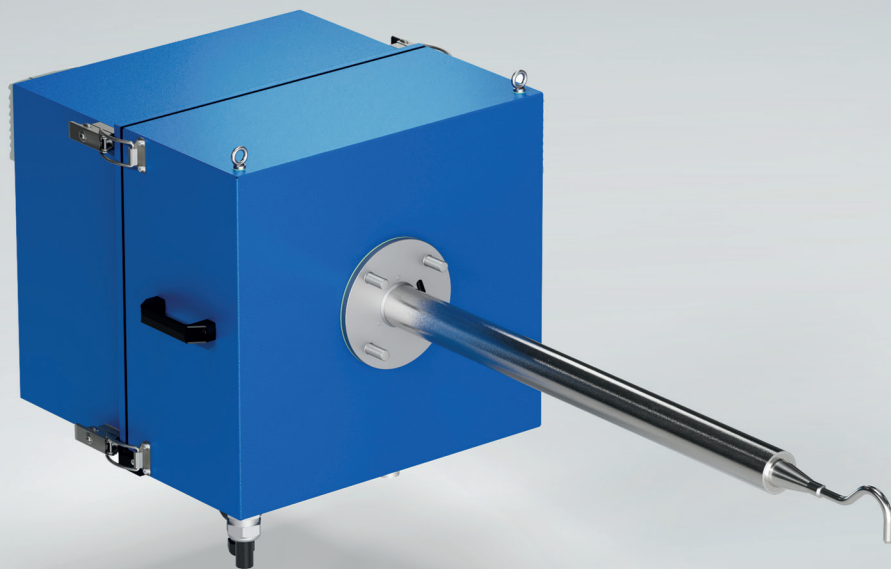


## D-R 909

### Extractive dust measuring system

Continuous dust measurement for small to medium concentrations

- QAL1 certified in accordance with EN 15267
- Measurement in moist and wet flue gases
- Automatic control functions
- High availability and low service and operating costs



## FEATURES

- Continuous dust measurement in wet gases
- Smallest certified measuring range 0 ... 7.5 mg/m<sup>3</sup>
- Single-sided installation
- Automatic control functions

## TECHNICAL DATA

<b>Measuring principle</b>	Forward scattering, extractive, 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>	<ul style="list-style-type: none"> <li>• Minimum 0 ... 5 mg/m<sup>3</sup></li> <li>• Maximum 0 ... 200 mg/m<sup>3</sup></li> </ul>
<b>Certified measuring ranges</b>	0 ... 7.5 mg/m <sup>3</sup> ; 0 ... 15 mg/m <sup>3</sup> ; 0 ... 45 mg/m <sup>3</sup> ; 0 ... 100 mg/m <sup>3</sup>
<b>Certificates</b>	QAL1, MCERTS**
<b>Standards</b>	IED 2010/75/EU, EN 15267-1/-2/-3, EN 14181, 13th/17th/27th/30th/44th BImSchV, TA Luft
<b>Interface*</b>	<ul style="list-style-type: none"> <li>• Analog input: 1x 4 ... 20 mA, maximum 250 Ω, potential-free</li> <li>• Analog output: 1x 4 ... 20 mA, maximum 500 Ω, potential-free</li> <li>• Digital output: 2x NC/NO, maximum 60 V<sub>~</sub>, 30 V<sub>~</sub>, 0.5 A</li> <li>• Modbus RS 485 RTU</li> <li>• USB</li> </ul>
<b>Nominal voltage</b>	230 V <sub>~</sub> , 47 ... 63 Hz, LNPE
<b>Power consumption</b>	Maximum 2,300 VA
<b>Ambient conditions</b>	<ul style="list-style-type: none"> <li>• Installation location: Indoor or outdoor installation***</li> <li>• Temperature: -40 ... +60 °C</li> <li>• Humidity: 0 ... 100% relative humidity</li> </ul>
<b>Operating conditions</b>	In duct: <ul style="list-style-type: none"> <li>• Temperature: 0 ... 160 °C</li> <li>• Relative humidity: 0 ... 100%, maximum 70 g/m<sup>3</sup> liquid water</li> <li>• Relative pressure: -50 ... +50 hPa (depending on flue gas velocity and operating mode)</li> <li>• Dust concentration: 0 ... 200 mg/m<sup>3</sup></li> </ul>

## BENEFITS

- Suitable for official emission monitoring
- Reliable measurement of small dust concentrations
- Simple and flexible installation
- Low service and operating costs

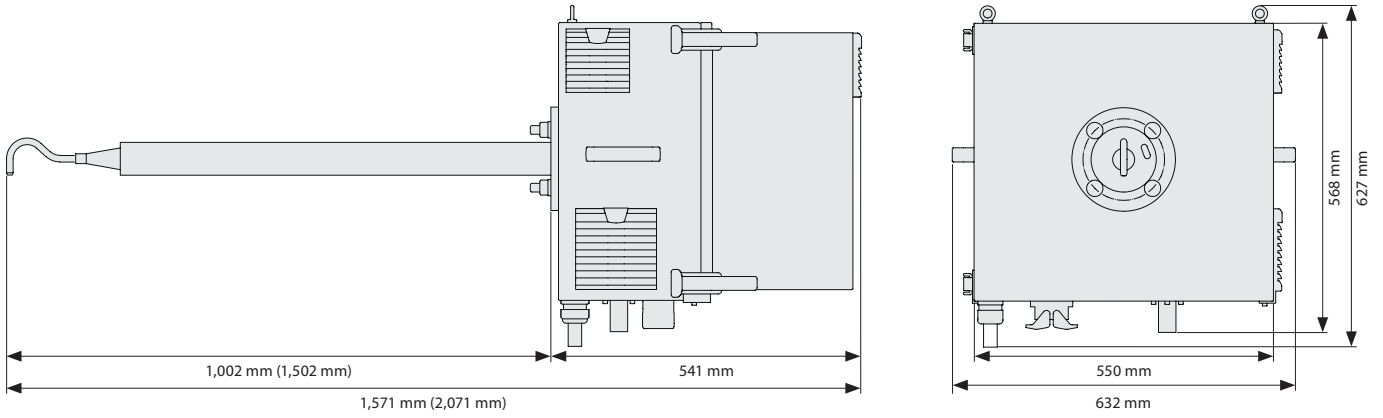
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• Inner duct diameter: &gt; 0.2 m</li> <li>• Wall thickness: Maximum 1.2 m</li> </ul>
<b>Degree of protection</b>	IP54 in accordance with EN 60529
<b>Light source</b>	Laser, class 2 in accordance with EN 60825-1, <1 mW at 650 nm
<b>Connections</b>	• Process: Flange, DN80 PN6
<b>Explosion protection</b>	N/A
<b>Operation and display</b>	<ul style="list-style-type: none"> <li>• Status 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>• Housing: Stainless steel A2, powder-coated</li> <li>• Sampling probe: Stainless steel 1.4404, others available on request</li> </ul>
<b>System components</b>	<ul style="list-style-type: none"> <li>• Measuring unit</li> <li>• Supply unit</li> <li>• Cable set</li> <li>• D-ISC 100 operating unit (optional)</li> <li>• D-ESI 100 software****</li> </ul>
<b>Variants</b>	<ul style="list-style-type: none"> <li>• Length of sampling probe: 1,000 mm / 1,500 mm</li> <li>• Alignment of probe tip: Flow up/right/left</li> <li>• Cable set: 3 m / 6 m / 9 m</li> </ul>
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Weld-in pipe: 200 mm / 500 mm / 700 mm</li> <li>• Rack for supply unit</li> <li>• Adapter flange</li> </ul>



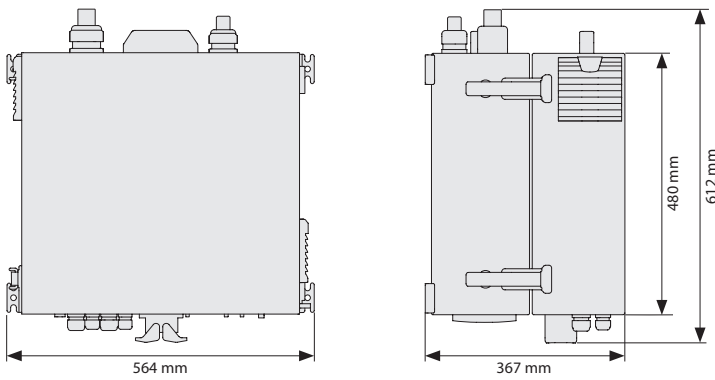
From left to right: D-R 909 supply unit, D-R 909 measuring unit, D-ISC 100 (optional) including cable set

\* Additional interfaces with D-ISC 100 operating unit  
 \*\* In preparation  
 \*\*\* Weather protection is required for outdoor installation  
 \*\*\*\* Enables remote access via web interface, requires PC with Windows operating system

D-R 909 M | DIMENSIONS AND WEIGHT OF MEASURING UNIT

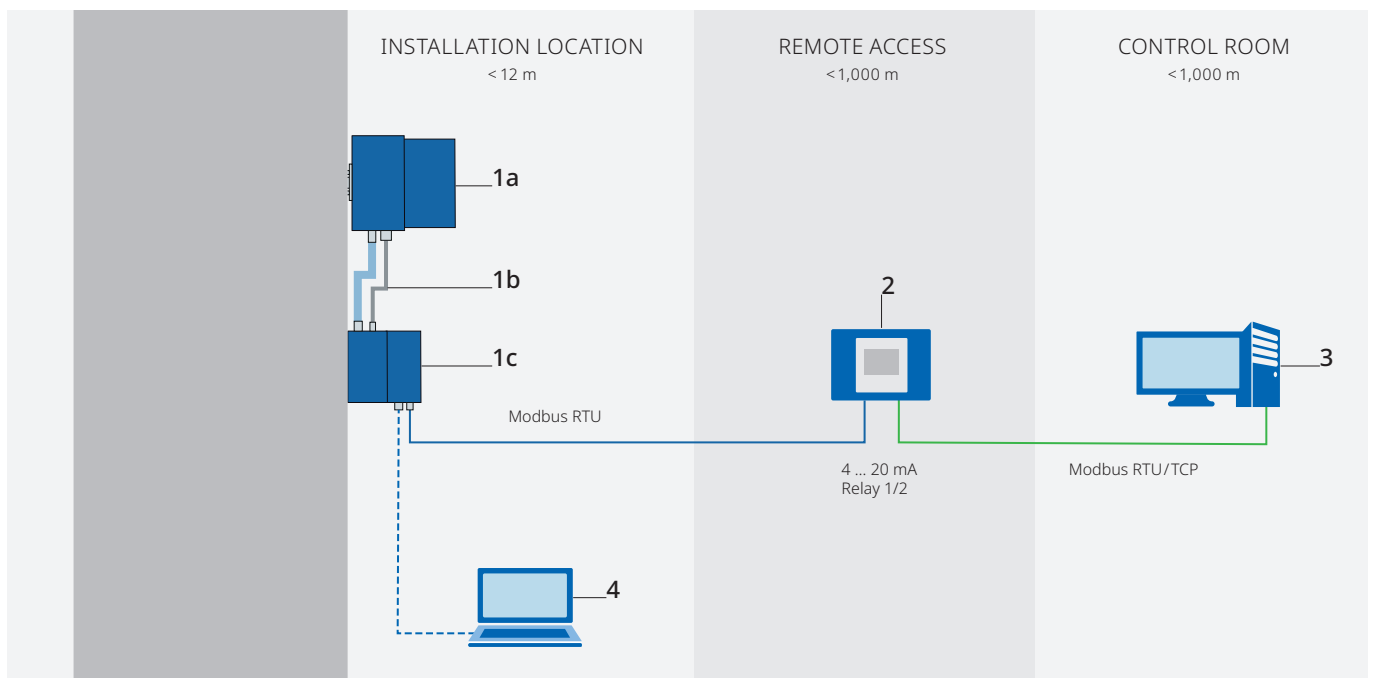


D-R 909 SU | DIMENSIONS AND WEIGHT OF SUPPLY UNIT



D-R 909		
M (1,000 mm)	M (1,500 mm)	SU
Approx. 45 kg	Approx. 47 kg	Approx. 45 kg
Weld-in pipe		
200 mm	500 mm	700 mm
5 kg	9 kg	12 kg

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



Dust measuring system

- 1a Measuring unit
- 1b Cable set
- 1c Supply unit

- 2 Operating unit
- 3 Emission evaluation system

- 4 PC with Windows operating system and software

\* Maximum permitted cable lengths; distance between measuring unit and supply unit limited by cable set

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