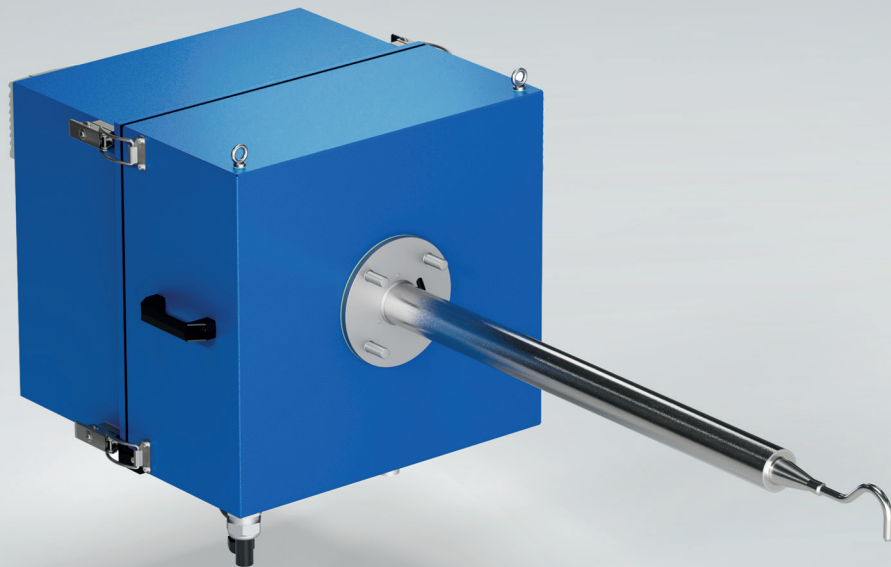


D-R 909

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/m³
- Single-sided installation
- Automatic control functions

TECHNICAL DATA

| | |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring principle | Forward scattering, extractive, continuous, single-sided installation |
| Measuring variable | Scattered light units, calibratable as dust concentration in mg/m ³ |
| Measuring range | <ul style="list-style-type: none"> • Minimum 0 ... 5 mg/m³ • Maximum 0 ... 200 mg/m³ |
| Certified measuring ranges | 0 ... 7.5 mg/m ³ ; 0 ... 15 mg/m ³ ; 0 ... 45 mg/m ³ ; 0 ... 100 mg/m ³ |
| Certificates | QAL1, MCERTS** |
| Standards | IED 2010/75/EU, EN 15267-1/-2/-3, EN 14181, 13th/17th/27th/30th/44th BImSchV, TA Luft |
| Interface* | <ul style="list-style-type: none"> • Analog input: 1x 4 ... 20 mA, maximum 250 Ω, potential-free • Analog output: 1x 4 ... 20 mA, maximum 500 Ω, potential-free • Digital output: 2x NC/NO, maximum 60 V_{AC}, 30 V_{DC}, 0.5 A • Modbus RS 485 RTU • USB |
| Nominal voltage | 230 V~, 47 ... 63 Hz, LNPE |
| Power consumption | Maximum 2,300 VA |
| Ambient conditions | <ul style="list-style-type: none"> • Installation location: Indoor or outdoor installation*** • Temperature: -40 ... +60 °C • Humidity: 0 ... 100% relative humidity |
| Operating conditions | In duct: <ul style="list-style-type: none"> • Temperature: 0 ... 160 °C (Higher temperature values on request) • Relative humidity: 0 ... 100%, maximum 70 g/m³ liquid water • Relative pressure: -50 ... +50 hPa (depending on flue gas velocity and operating mode) • Dust concentration: 0 ... 200 mg/m³ |

BENEFITS

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

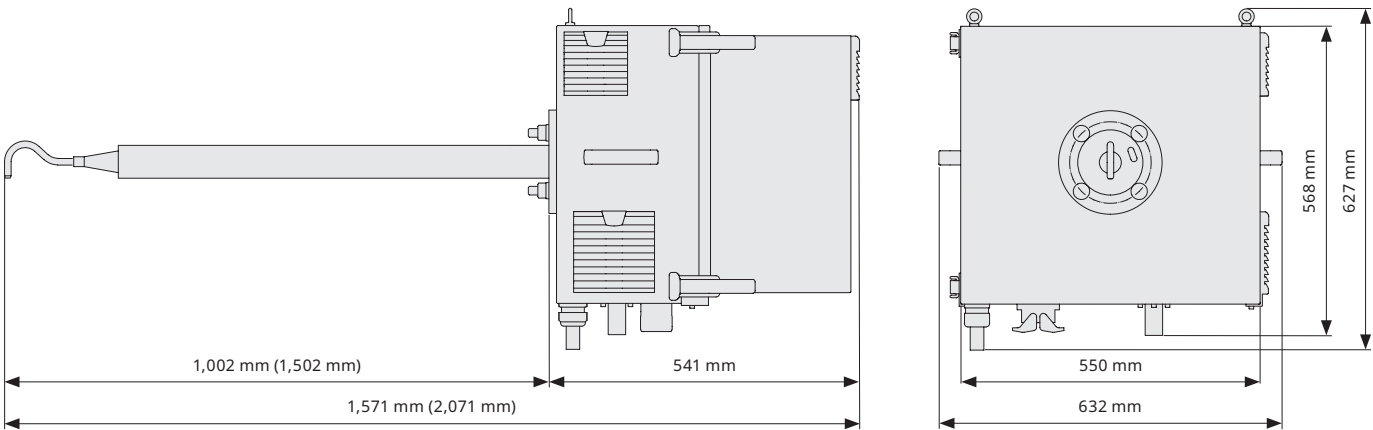
| | |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions | <ul style="list-style-type: none"> • Inner duct diameter: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



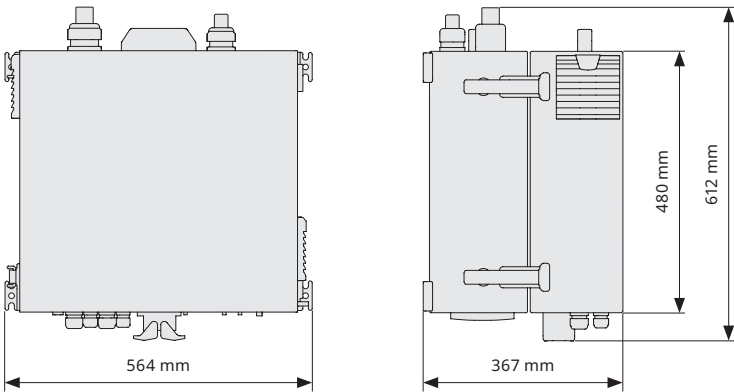
From left to right: D-R 909 supply unit, D-R 909 measuring unit, D-ISC 100 (optional) including cable set

* 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

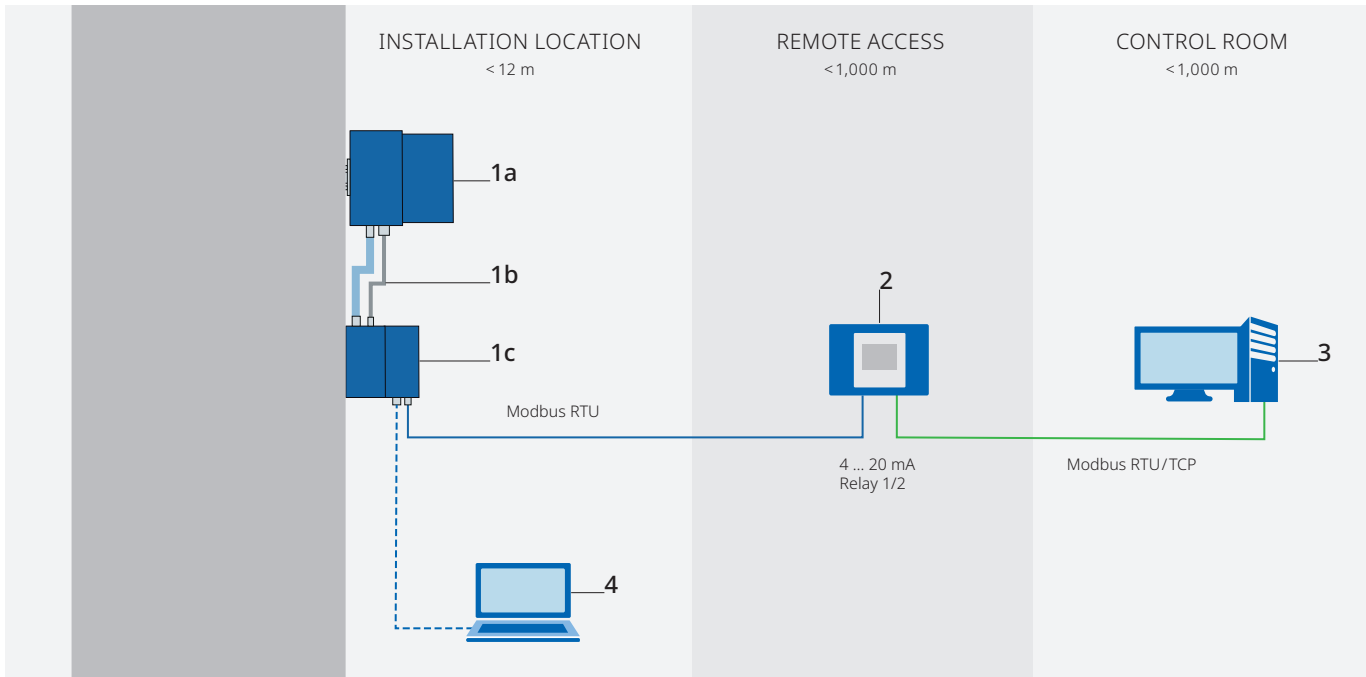


D-R 909 SU | DIMENSIONS AND WEIGHT OF SUPPLY UNIT



| 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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