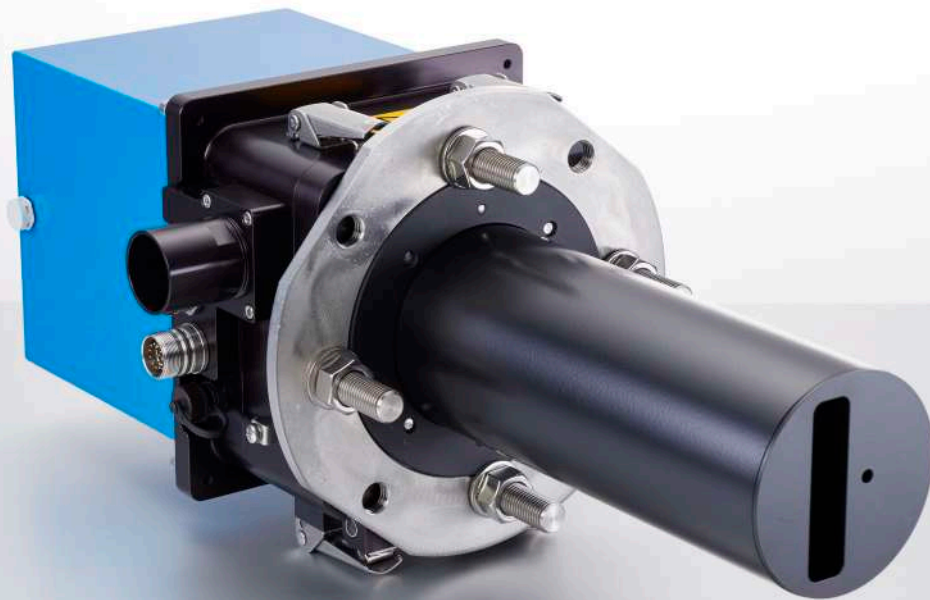


## D-R 320 Dust monitor

Continuous dust measurement for small  
to medium concentrations

- QAL1 certified in accordance with EN 15267
- Compliant with US EPA 40 CFR 60 PS 11
- Contactless measurement with single-sided installation



## Features

- Continuous dust measurement
- Smallest certified measuring range 0 ... 7.5 mg/m<sup>3</sup>
- Single-sided installation without optical alignment
- Automatic control functions
- Continuous integrated purge air monitoring and control
- Maintenance and linearity check without disassembly

## Technical data

<b>Measuring principle</b>	Backward scattering, in-situ, continuous, single-sided installation, contactless measurement
<b>Measuring variable</b>	Scattered light units, calibratable as dust concentration in mg/m <sup>3</sup>
<b>Measuring range</b>	Min. 0 ... 5 mg/m <sup>3</sup> Max. 0 ... 200 mg/m <sup>3</sup>
<b>Certified measuring range</b>	0 ... 7.5 mg/m <sup>3</sup>
<b>Certificates</b>	QAL1, MCERTS
<b>Conformities</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>▪ Analog output: 1x 4 ... 20 mA, max. 400 Ω, potential-free (various parameters adjustable)</li> <li>▪ Digital output: 2x NC/NO, max. 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 or outdoor installation**</li> <li>▪ Temperature: -40 ... +60 °C -30 ... +60 °C (ATEX) -20 ... +60 °C (IECEx)</li> </ul>
<b>Operating conditions in duct</b>	<ul style="list-style-type: none"> <li>▪ Temperature: Max. 600 °C</li> <li>▪ Relative humidity: 0 ... 95%, non-condensing</li> <li>▪ Relative pressure: -50 ... +50 hPa -50 ... 0 hPa (ATEX/IECEx)</li> </ul>

## Benefits

- Suitable for official emission monitoring
- Reliable measurement of small dust concentrations
- Space-saving and easy installation
- Long life time and high availability under extreme plant conditions
- Low maintenance

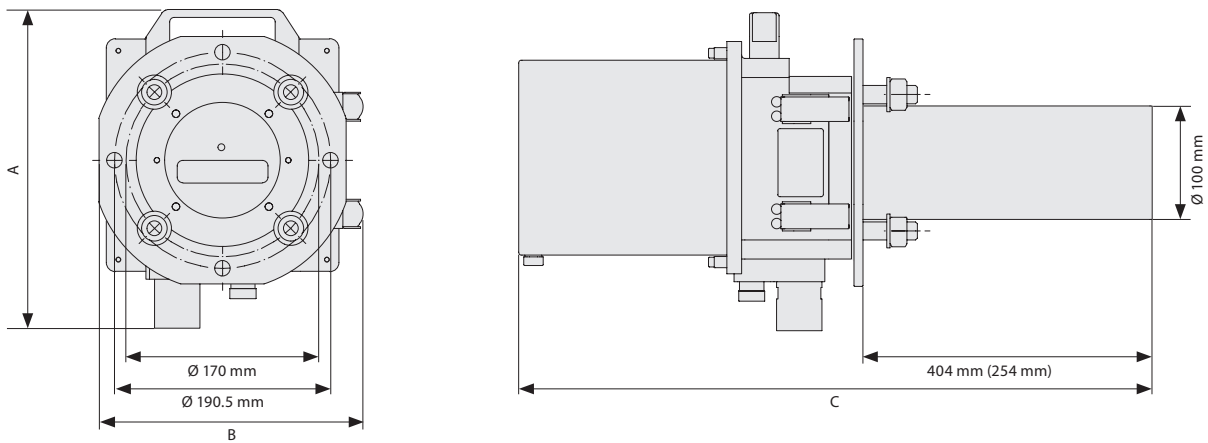
<b>Duct dimensions</b>	<ul style="list-style-type: none"> <li>▪ Inner diameter: &gt;0.7 m</li> <li>▪ Wall thickness: Max. 0.56 m</li> </ul>
<b>Control functions</b>	Automatic zero point and reference point measurement, automatic contamination measurement and compensation, integrated purge air monitoring and control
<b>Protective functions</b>	Integrated fail-safe shutter (optional)
<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, rotatable, DN100 PN6 / ANSI 4" 150 lbs RF</li> <li>▪ Device: M23 DURAG Standard</li> <li>▪ Purge air hose: Ø 40 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 2G Ex px op is IIC T4 Gb II 3G Ex pz op is IIC T4 Gc II 3D Ex pD III T70 °C Dc</li> <li>▪ IECEx (optional): Ex pzc IIC T4 Gc</li> </ul>
<b>Display and operation</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>▪ Process aperture: 1.4301, AISI 304, coated</li> <li>▪ Housing: 1.4571, AISI 316Ti, painted</li> </ul>
<b>System components</b>	<ul style="list-style-type: none"> <li>▪ D-R 320 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

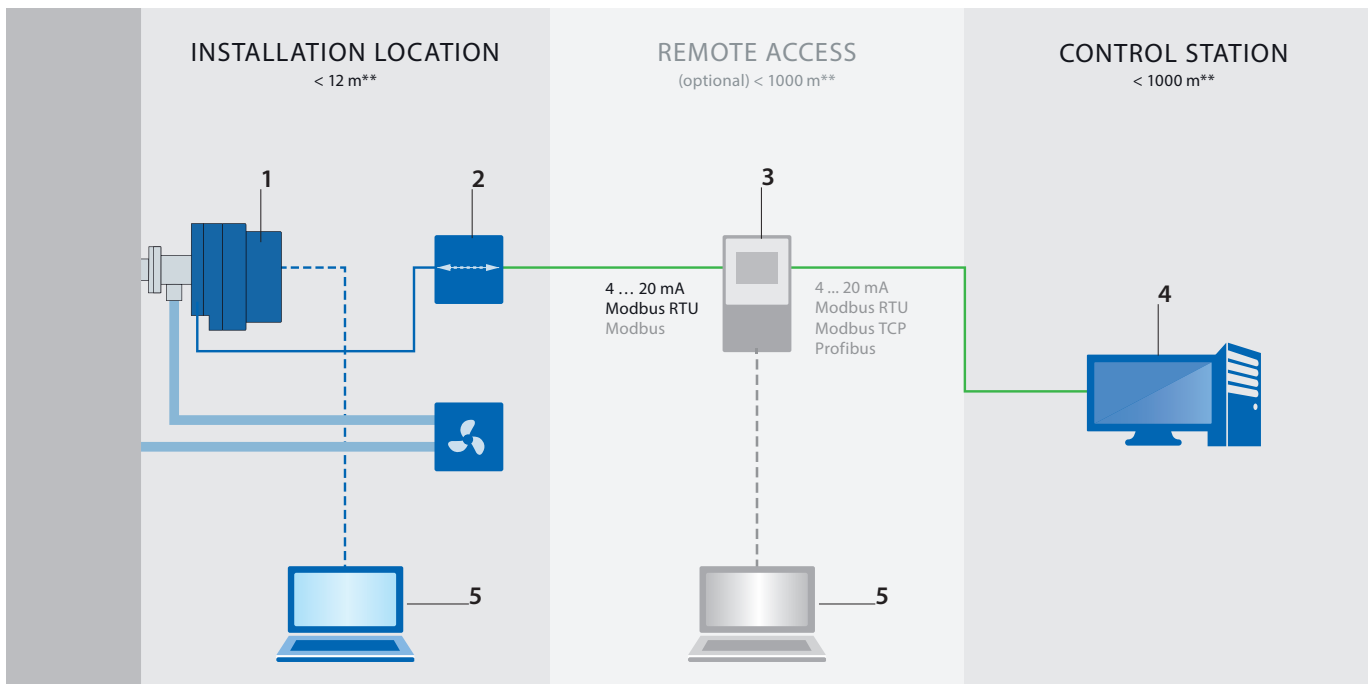
## D-R 320 | DIMENSIONS AND WEIGHT OF DIFFERENT PRODUCT VARIANTS



Product variant		A (mm)	B (mm)	C (mm)	Weight
Process aperture short	Standard	281	233	559	14.4 kg
	ATEX	443	233	654	17.9 kg
	IECEX	358	364	654	17.9 kg

Product variant		A (mm)	B (mm)	C (mm)	Weight
Process aperture long	Standard	281	233	709	15.3 kg
	ATEX	443	233	804	18.8 kg
	IECEX	358	364	804	18.8 kg

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



- |  |   |
|--|---|
| 1 Dust monitor                             | 3 Operating unit                                |
| 2 Terminal Box with/without purge air unit | 4 Emission evaluation system                    |
|  | 5 PC with Windows operating system and software |

\* All system components shown are available on request

\*\* Maximum permitted cable and hose length

## **UK & Ireland Distributor**

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