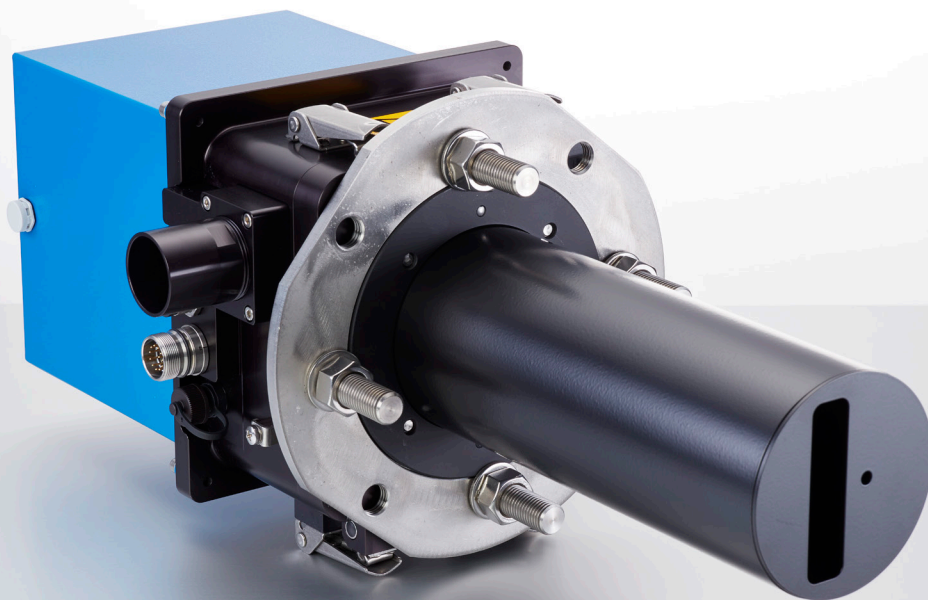


D-R 320 **Dust monitor**

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/m³
- Single-sided installation without optical alignment
- Automatic control functions
- Continuous integrated purge air monitoring and control
- Maintenance and linearity check without disassembly

Technical data

Measuring principle	Backward scattering, in-situ, continuous, single-sided installation, contactless measurement
Measuring variable	Scattered light units, calibratable as dust concentration in mg/m ³
Measuring range	Min. 0 ... 5 mg/m ³ Max. 0 ... 200 mg/m ³
Certified measuring range	0 ... 7.5 mg/m ³
Certificates	QAL1, MCERTS
Conformities	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
Interface*	<ul style="list-style-type: none"> ▪ Analog output: 1x 4 ... 20 mA, max. 400 Ω, potential-free (various parameters adjustable) ▪ Digital output: 2x NC/NO, max. 60 V_{DC}, 30 V_{AC}, 0.5 A (various parameters adjustable) ▪ RS 485 Modbus RTU, USB
Nominal voltage	24 V _{DC}
Ambient conditions	<ul style="list-style-type: none"> ▪ Installation location: Indoor or outdoor installation** ▪ Temperature: -40 ... +60 °C -30 ... +60 °C (ATEX) -20 ... +60 °C (IECEx)
Operating conditions in duct	<ul style="list-style-type: none"> ▪ Temperature: Max. 600 °C ▪ Relative humidity: 0 ... 95%, non-condensing ▪ Relative pressure: -50 ... +50 hPa -50 ... 0 hPa (ATEX/IECEx)

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

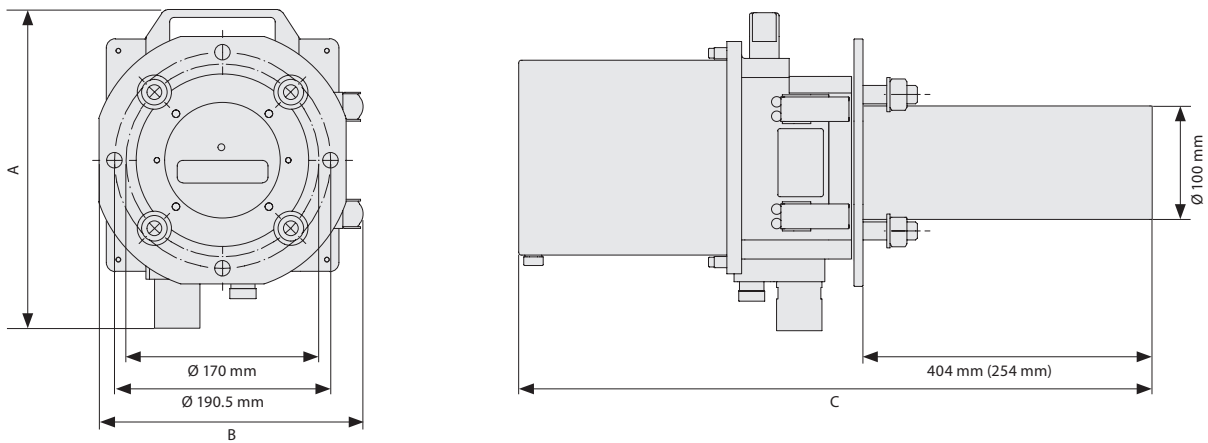
Duct dimensions	<ul style="list-style-type: none"> ▪ Inner diameter: >0.7 m ▪ Wall thickness: Max. 0.56 m
Control functions	Automatic zero point and reference point measurement, automatic contamination measurement and compensation, integrated purge air monitoring and control
Protective functions	Integrated fail-safe shutter (optional)
Degree of protection	IP65 in accordance with DIN EN 60 529
Light source	Laser, class 2 in accordance with DIN EN 60825-1, < 1 mW at 650 nm
Connections	<ul style="list-style-type: none"> ▪ Process: Flange, rotatable, DN100 PN6 / ANSI 4" 150 lbs RF ▪ Device: M23 DURAG Standard ▪ Purge air hose: Ø 40 mm ▪ Purge air sensor: M12 8-pin
Explosion protection	<ul style="list-style-type: none"> ▪ 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 ▪ IECEx (optional): Ex pzc IIC T4 Gc
Display and operation	<ul style="list-style-type: none"> ▪ Status display: LED ▪ D-ESI 100 software*** ▪ or D-ISC 100 operating unit
Material	<ul style="list-style-type: none"> ▪ Process aperture: 1.4301, AISI 304, coated ▪ Housing: 1.4571, AISI 316Ti, painted
System components	<ul style="list-style-type: none"> ▪ D-R 320 dust monitor ▪ D-ESI 100 software*** ▪ D-TB 200 Terminal Box ▪ or D-TB 100 Terminal Box (external purge air supply required) ▪ or D-ISC 100 P operating and purge air unit

* 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

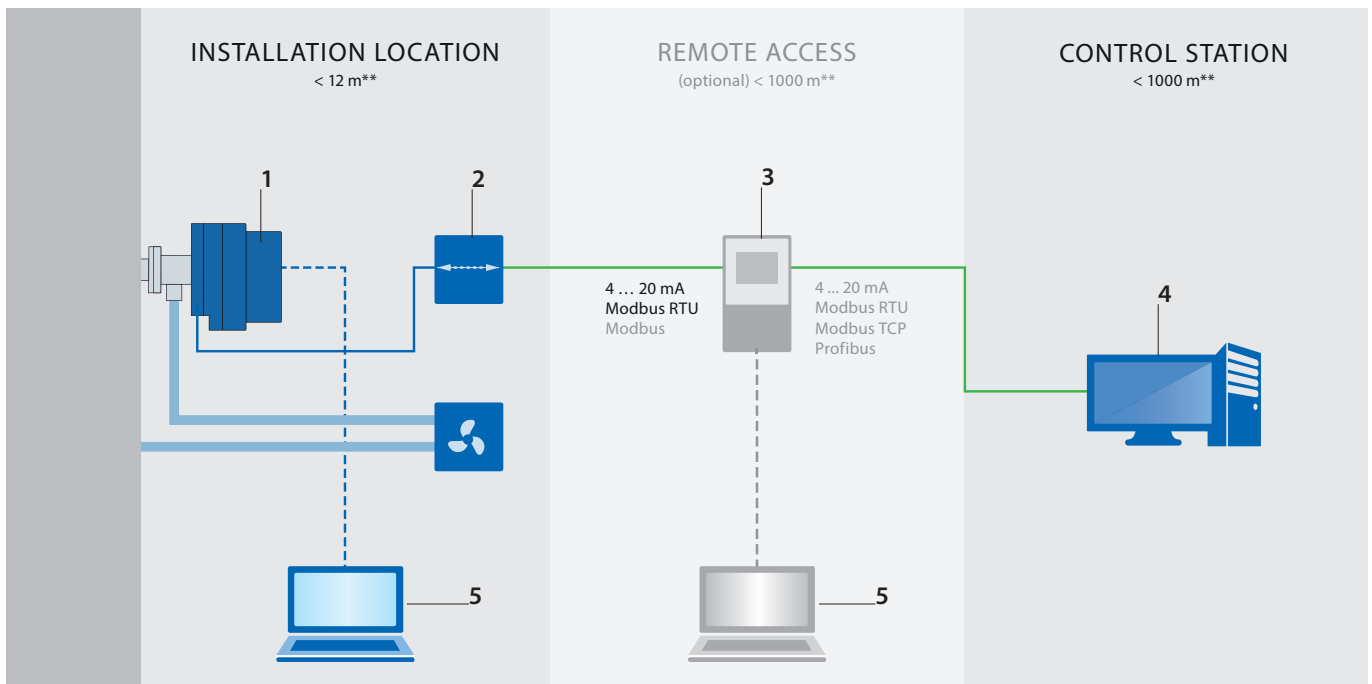
D-R 320 | DIMENSIONS AND WEIGHT OF DIFFERENT PRODUCT VARIANTS



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

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