DM 170

LIGHT SCATTER **PARTICULATE EMISSION MONITOR**

envea
Elevating standards. For life.

DM 170 is a ProScatter™ backscatter dust monitor compliant with EN 15267, enabling reliable continuous emission monitoring to meet regulatory limits

SPECIFIC **FEATURES**

- ProScatter™ Backscatter sensor technology with superior minimum detection level as low as 1 mg/m³ compared to conventional techniques
- Manual and remote Zero and Span (Reference) checks available to ensure optimal instrument performance
- Purge Flow Fail Sensor and Optical Shield options
- Non-intrusive system designed to operate in non-condensing stack environments and to reduce the risk of contamination
- Contamination risks are further reduced due to single-side stack installation where critical optical components remain outside the stack

Tested AMS Regular Surveillance
TÜV Rheinland ID 0000059874

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TECHNICAL **SPECIFICATIONS**

Air Purge Requirements	
Requires an external supply of 1000 l/min of dry, clean (oil-free) air.	
Type	Medium Purge Blower
Power supply voltages (options)	110V AC, 50/60Hz, 7A 230V AC, 50/60Hz, 2.3A
Blower tubing	3 m (10 ft) hose with fittings (supplied)
Air Filter	Standard (included)
Noise pressure level	<80 dBA
Cable entries	1x M20 cable gland

Measurement Information	
Measurement Type	Light Scattering
Resolution	316 Stainless Steel
Response Time	2 seconds
Dust Levels	<1 to 1000 mg/m^3

	ATEX	
Gas/Dust Zone	**ZONE 2/22**	
Certificate number:	PCME17ATEX0002X	
Certification codes:	**Outside stack (sensor enclosure)**[A] Ex nA nC op is IIC T4 Gc Ex tc IIIC T120°C Dc Ta = -20°C to +50°C	
	Inside stack (sensor body & probe)[B] Ex nA nC op is IIC T2 Gc Ex tc IIIC T250°C Dc Ta = -20°C to 250°C	**II 3GD**
	Ex nA nC op is IIC T1 Gc Ex tc IIIC T400°C Dc Ta = -20°C to 400°C	**II 3GD**

[A] See note d) of the ATEX certificate.

[B] The probe does not generate heat. Its surface temperature is dependent upon the stack temperature (max. 250 °C or 400 °C (480 °F or 750 °F), depending on the build.

Process/Application Conditions	
Application Suitability	Suitable for measurement in non-condensing flue gases
Location Suitability	Outdoor or sheltered use; safe for ambient temperature of -20 to 50°C (-4 to 122°F)
Flue Gas Temperature (at monitoring point)	-20°C to 250°C (-4°F to 482°F) option: up to 400°C (752°F)
Stack Pressure	± 20mbarg
Stack Diameter*	1.5 – 15 m (5 – 50 ft)
Flue Gas Composition	Non-condensing
Stack Connection	3" 150 lb ANSI flange DN80 PN10/PN16 flange JIS 100-5k, -10k flange

*application specific, please consult ENVEA

Sensor Options	
Sensor Versions	Standard Sensor: up to 250°C (482°F) High-temperature sensor: up to 400°C (752°F)*
Sensor Material	316 Stainless Steel
Sensor Dimensions	L 354 x H 216 x B 204 mm (14 x 8.5 x 8 in.), including flange and cable glands
Zero/Span Sensor Checks	Included
Protection Rating	IP65
Power Supply Voltage	100 – 240V AC 50/60, 1A 24V DC
I/O	Outputs : 1x 4-20mA 2x Alarm relays 1x RS-485 output Inputs : 1x Digital input
Manual Audit Capability	Single, compact unit (available in a selected range of dust concentrations)
Automatic Air Purge Failure Check	Option

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