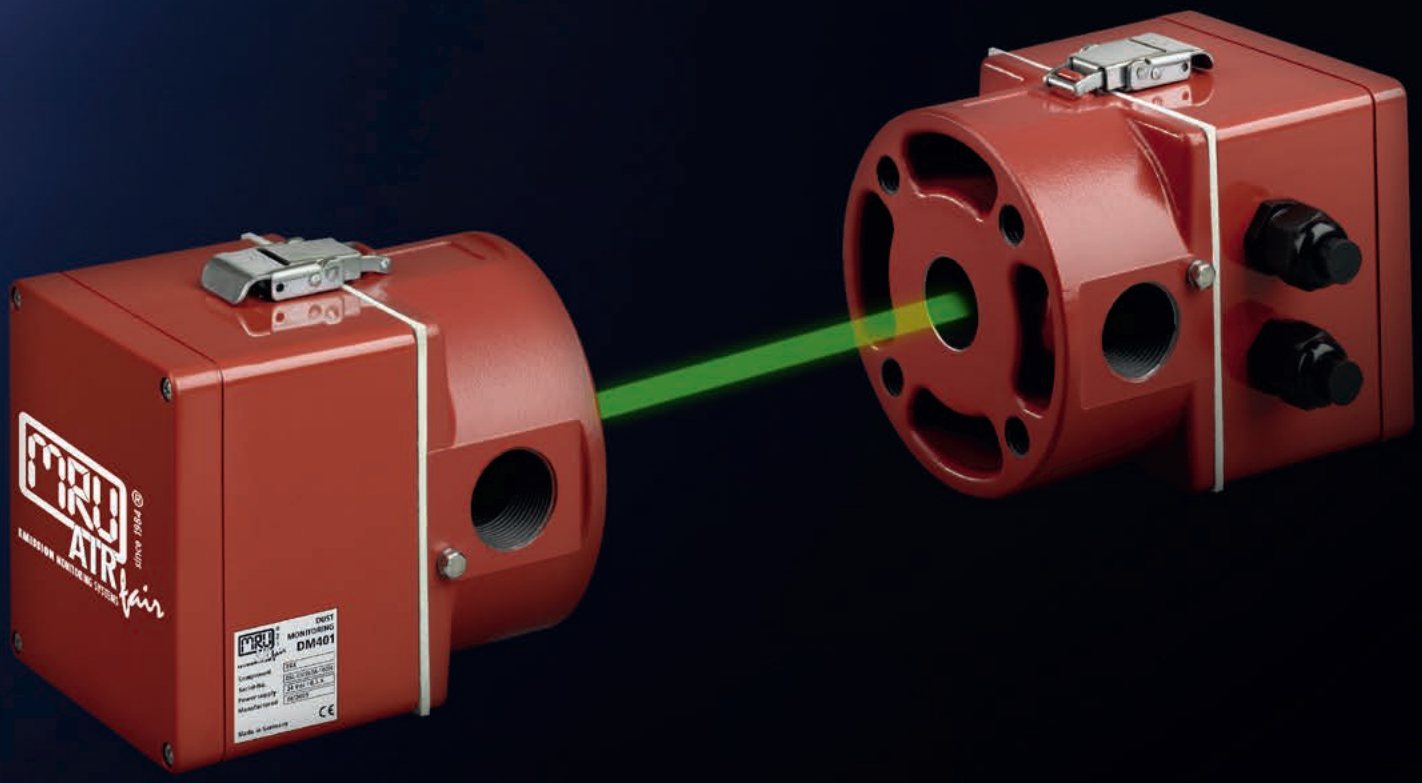
MRU – Competence in gas analysis. For over 35 years.

DM 401
DUST OPACITY MONITORING SYSTEM

Double pass transmission method for continuous particulates and opacity monitoring



DM 401

Dust Monitoring System
Double pass transmission measurement

Measures 0 ... 100 % opacity or 10 ... 1.000 mg/m³ dust (*)

(*) after on site calibration according to VDI 2066

Features

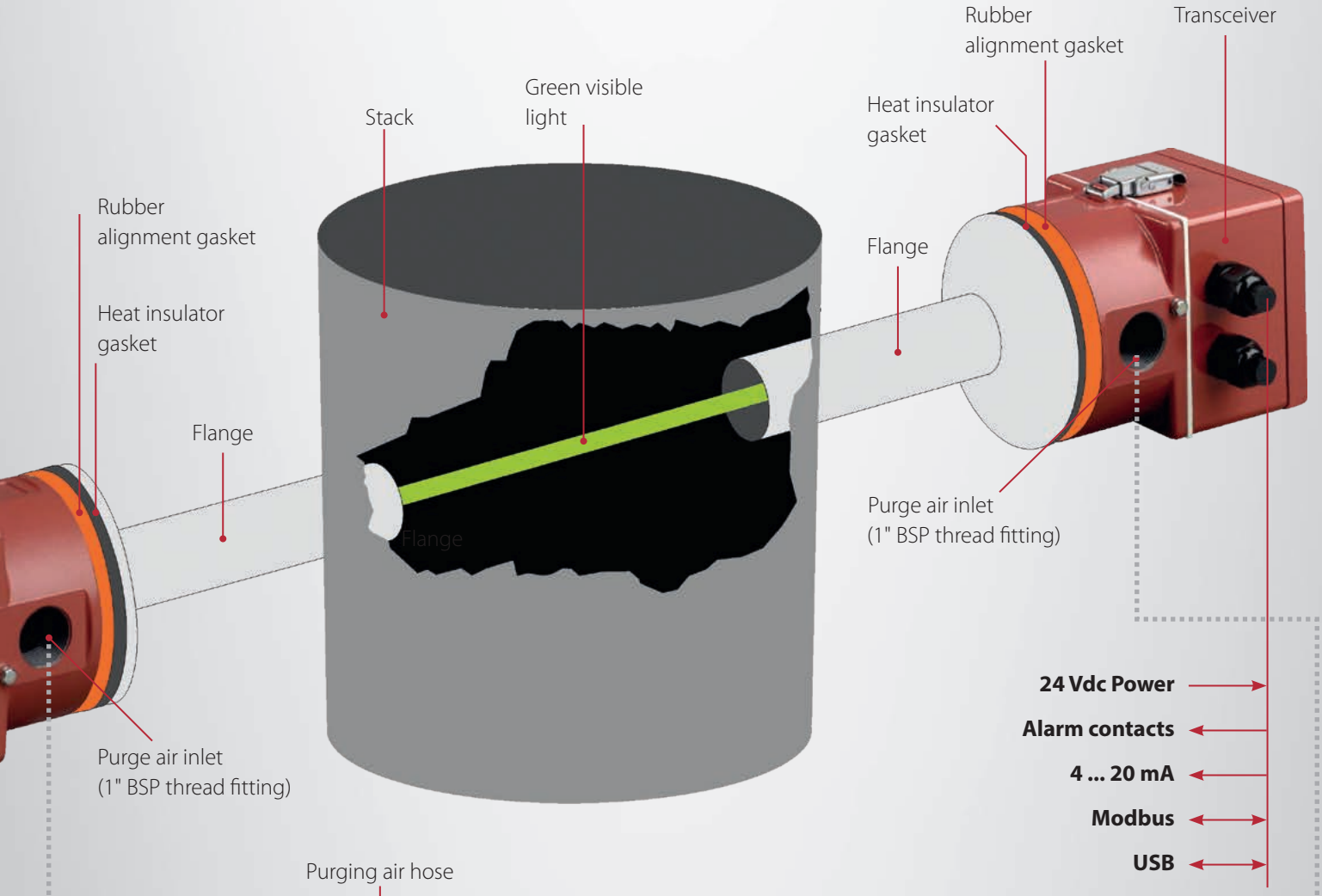
- In situ measurement directly in exhaust gas flow
- Measurement reading as particulate as mg/m³
- Modulated green LED source for long lifetime stability and immunity to ambient light
- Rugged 316 stainless steel construction
- In-situ zero and calibration check facility
- Choice of interface options enabling easy integration
- Free utility software for PC based set-up, control and data logging
- Optional Operator Interface with different mounting configurations

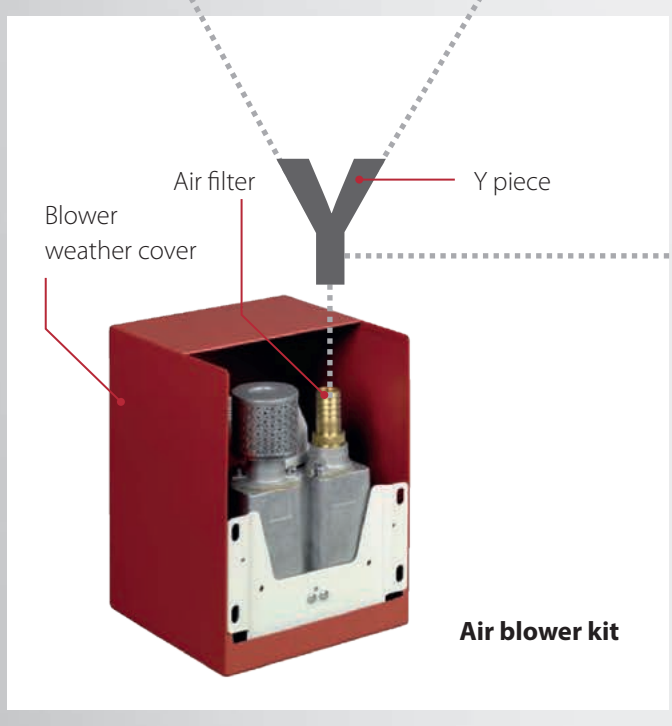
Benefits

- Simpler installation than single pass opacity monitors
- Better accuracy over shorter path lengths than single pass opacity monitors
- Rugged design with no moving parts so low maintenance
- Latched head and lid design to enable ease of access for installation and maintenance

Applications

- Industrial combustion processes such as boilers and furnaces
- Air filtration processes such as filter bag houses, electrostatic precipitators or cyclones
- Industrial process control applications
- Other non-compliant processes





Air blower kit

Compressed Air Kit

Both the transceiver and reflector are supplied with an air purging (blower unit) or compressed air kit. This will prevent dust particle deposition on the optical lenses by continuous purge with clean ambient air and extend substantially the maintenance free operation.

DM 401

Technical data

Parameter		Units	Min	Max	Comment
Measurement performance					
Path. length (flange to flange)		m	0,5	10	flange-to-flange distance
Measuring range	particulate	mg/m³	10,0	1000	after on site calibration
	opacity	%	0,0	100,0	user selectable
Accuracy		%	–2	+2	
Resolution		mg/m³		0,1	display resolution
Damping		s	1	60	selectable
Drift with temperature		%	–2	+2	for any 20 °C change
Operating wave length		nm	510	540	green LED
Power and air requirements					
Voltage		Vdc		+24	optional 90 ... 240 Vac PSU available
Air supply volume		l /min	50	200	to each air purge inlet
Air supply fitting					1" BSP threaded aperature
Interface options					
RS 485					ModBus RTU
Analog outputs		mA	4,0	20,0	isolated and scalable
Relay contact		3 A @ 30 Vdc			level alarm and service alarm
Physical					
Protection class			IP 65		for outdoor use
Operating temperature		°C	–20	+55	air temperature around the equipment
Gas temperature		°C	+100	+600	heat insulated gaskets included
Dimensions					
Transceiver					153 x 122 x 120 mm
Reflector					153 x 122 x 120 mm
Purging air blower unit					310 x 220 x 230 mm
Enclosure					stainless steel, powder coated
Weight					transceiver: 2,5 kg, reflector: 2,5 kg purging air blower unit: 11 kg

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