

RM230

Dust Concentration Monitor with AutoRANGE



Equipped for versatile measuring functions

Based on the scattered light measuring principle, the RM 230 detects dust concentrations within a range of <math>< 0.5 \text{ to } 200 \text{ mg/m}^3</math>. Suitable device versions with different measuring penetration depths are available for outputting of representative measurement results:

- Version 1 for small gas ducts with $\varnothing 0.2 \dots 1.5 \text{ m}$ (0.7... 5 ft)
- Version 2 for ducts and small stacks with $\varnothing 1.5 \dots 3.5 \text{ m}$ (5 ... 11.5 ft)
- Version 3 for stacks with $\varnothing > 3.5 \text{ m}$ (11.5 ft)

The high flexibility and the robust design qualifies the RM230 as an ideal device for measurements in harsh industrial environments.

Applications

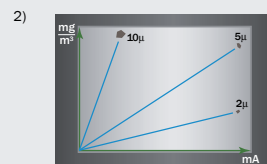
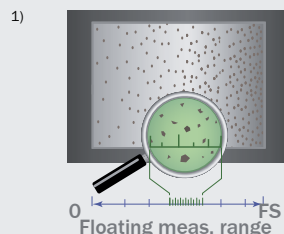
- In clean gas upstream of electrostatic precipitators or fabric filters
- Monitoring exhaust and fresh air system
- Protection of gas turbines

Key Features

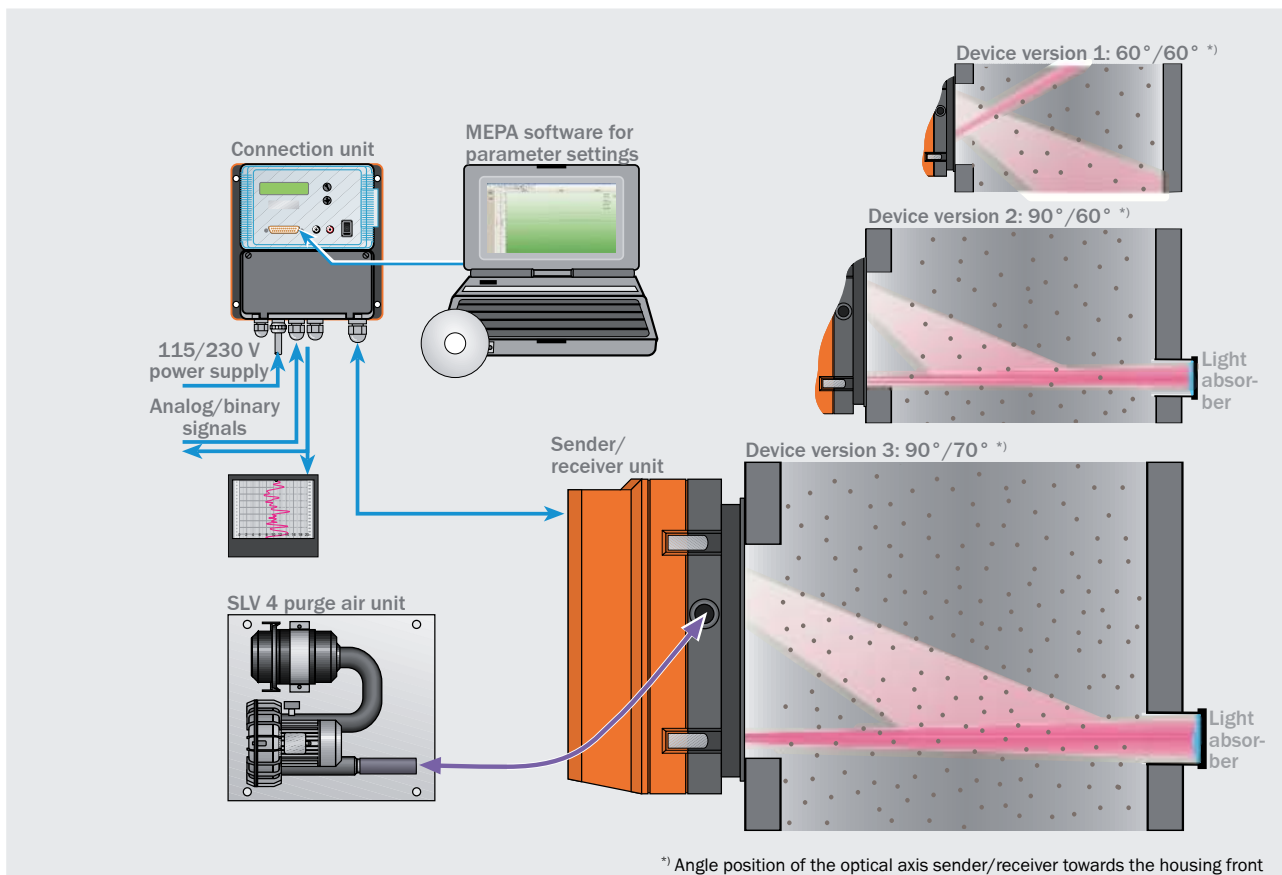
- Automatic setting of the measuring range¹⁾
 - Automatic setting of an optimal measurement range.
 - The RM230 reacts to changes in the concentration of dust by „floating“ to the appropriate measuring range
 - Easy commissioning
- Calibration function²⁾
 - Selection between 4 sets of

coefficients

- One set of coefficients are freely configurable after gravimetric comparison measurement
- Selection of 3 fixed sets of coefficients
- Automated linearity test³⁾
 - Automated operating sequence for integrated linearity test without any additional (external) control filters



RM230 Device Overview



Technical Data RM230			
Measuring data			
Measuring principle	Scattered light principle (scattered light intensity proportional to dust concentration)		
Measuring range	0 ... 0.5 mg/m ³ • Smallest range 0 ... 200 mg/m ³ • Largest range		
Accuracy	± 2% of full scale value		
Response time	1 ... 255 s		
Plant data			
Measuring gas temperature	Above dew point up to 500 °C (932 °F), higher temperatures on request		
Ambient temperature	-20 ... +55 °C (-4 ... 130 °F)		
Measuring gas pressure	Max. +60 hPa (24 in WC)		
Device data	Sender/receiver unit	Connection unit	
Purge air supply	Refer to SLV4 data sheet; order no. 8008080		
Power supply	90 ... 260 V AC; 47 ... 63 Hz; 20 VA power consumption		
Storage temperature	-20 ... +65 °C (-4 ... +150 °F); storage humidity 50 % r.h.		
Dimensions L x W x D in mm ³ (in ³)	210 x 495 x 276 (8 x 19.5 x 11)	196 x 203 x 162,5 (7.7 x 8 x 6.4)	
Weight	approx. 12 kg (26.5 lb)	approx. 3.5 kg (7.7 lb)	Flange: approx. 4.5 kg (10 lb)
Protection class	IP 65/NEMA 4x		
Interfaces and signals			
Interfaces to periphery	<ul style="list-style-type: none"> • RS232 service interface • RS422 interface to remote control unit (option) or host computer 		
Signals	2 analog outputs: 0 ... 20 mA, 100 Ω (electrically isolated) 4 status inputs: 10 ... 35 V DC/10 ... 25 V AC; selectable 4 relay outputs: 48 V DC/1 A; selectable		