Technical data

	TM-F	TM-F COM	TM-F Ex
Principle of operation	Scattered-light measurement		
Measuring range	0-2 mg/m³ or 0-20 mg/m³ (optional factory setting) (other measuring ranges on request)		
Measured particle range	Respirable dust according to EN 481		
Limit of detection	5 µg/m³ (DEHS-aerosol, d = 1 µm)		
Housing	Aluminium, powder-coated RAL 7001	Aluminium, powder-coated RAL 7001	Glas-fiber reinforced thermoset polyester graphite added RAL 9011
Signal output (analogue)	up to a max. of 20 mA (Load max. 100 Ω @ 20 mA)		
Signal output (digital)	---	Ethernet, UMTS modem (optional WLAN / BT modem)	---
Limit switch (Output electrically isolated max. 24V)	Setting of limit values via internal potentiometer (Output electrically isolated max. 230 V AC)	Setting of limit values via com. tom portal (Output electrically isolated max. 24 V DC)	---
Connector	7-pin	CA-16P1N1280DN, PHOENIX CONTACT, 16-pin	
Power supply	230 V AC	24 V DC	9 - 24 V DC
Purge-air connector	low gas velocities (0 - 15 m/s): ca. 10 – 20 l/min. high gas velocities (15 – 25 m/s): ca. 25 – 50 l/min.		
Purge-air filter (change)	open housing before replace	purge-air filter externally accessible	
Dimensions	120 x 320 x 80 WxHxD (mm)	160 x 360 x 91 WxHxD (mm)	
Temperature range in operation	5°C - + 70°C	0°C - + 60°C	- 20°C - + 60°C
Relative humidity	max. 80 % to 31 °C, linearly decreasing, max. 50 % to 40 °C, non-condensing		
degree of protection EN 60529	IP 56		
Intrinsical Safety / ignition protection	---	---	I M1 Ex ia I Ma, II 1G Ex ia IIB + T4 Ga, II 1D Ex ia IIIB t135 Da
Technical data are subject to change.			

V062018

Dust Monitor TM-F Ex • TM-F COM • TM-F

**Industrial dust monitoring for production processes,
ventilation systems, filter plants and mining**

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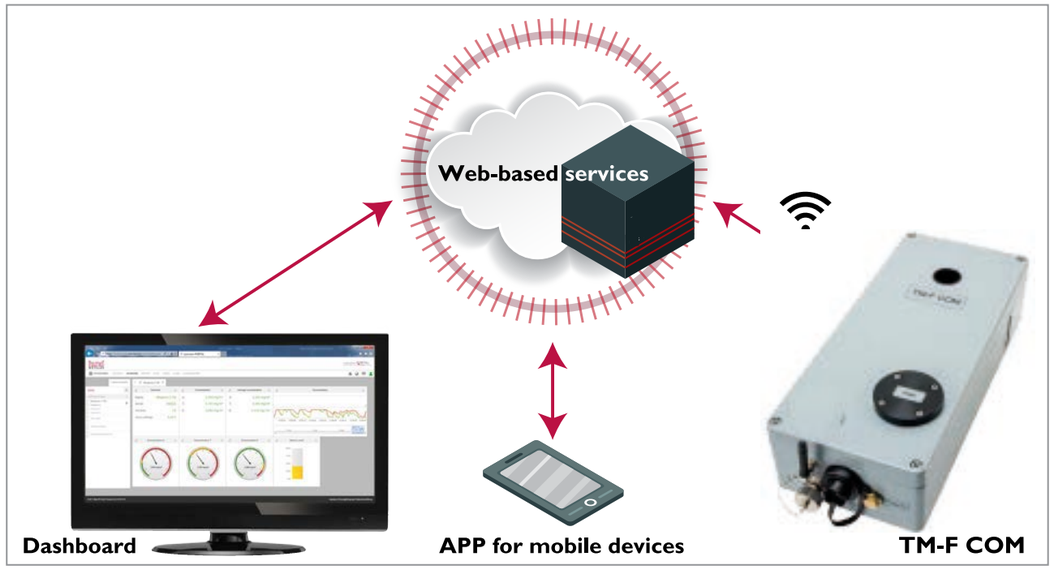
Industrial measuring and monitoring of dust emissions

The TM-F product family is designed for industrial dust monitoring of production processes, ventilation systems, filter plants and mining. The proven and reliable monitors are used for monitoring of respirable dust concentrations. The devices are compact and robust, easy to operate and its maintenance requirements are extremely low.

Product-Features

	TM-F	TM-F COM	TM-F Ex
Signal output (analog)	✓	✓	✓
9 - 24 V connection		✓	✓
Switching output (230 V AC)	✓		
Switching output (24 V DC)		✓	
Digital output (Ethernet)		✓	
GSM / WLAN / BT modem (optional)		✓	
External sensors (optional)		✓	
Intrinsical Safety			✓

Due to its high sensitivity the TM-F devices are well suited for the measurement of residual concentrations behind filter systems, as highly sensitive smoke sensor or to measure the concentration of dust in processed air. The signal outputs can be easily connected to its industrial environment. The TM-F Ex is the intrinsically safe version with analog outputs that can even be employed in mines and in hazardous environments. The TM-F COM is a version that comes with digital outputs that can be easily be connected through GSM or Ethernet to Hund web-based services. Its output data can be monitored and stored by every device connected to the internet.



Application and use of the TM-F product family

Dust Monitor TM-F

The TM-F is a proven and reliable monitor for respirable dust concentrations with easy connectivity to its industrial environment.

Dust Monitor TM-F COM

The TM-F COM is a version that comes with additional GSM or Ethernet connectivity to Hund web-based services so that its output data can be monitored and stored by every device connected to the internet.

Dust Monitor TM-F Ex

The TM-F Ex is the intrinsically safe version with analog outputs that can even be employed for monitoring of respirable dust concentrations in mines and in hazardous environments.

Dust monitoring in production environments

Continuous measuring and monitoring of respirable dust concentrations in

- ventilation systems
- filtration plants

for clean production environments, quality assurance and workplace safety such as

- construction sites
- pharmaceutical plants
- food production environments
- metal processing industries
- waste management
- recycling facilities
- automotive industries
- open-cast mining

Dust monitoring in mining and hazardous environments

Measurement of respirable dust concentrations at hazardous workplaces and production environments such as

- underground mining
- chemical industries
- petrochemical industries
- mills
- handling of bulk goods