



## GMTRB005D-EX-xx

**TRIBOELECTRIC PROBE 4-20 mA  
FOR MEASURING DUST CONCENTRATIONS  
- TEMPERATURE LESS THAN 140°C**

**Resolution 0.1 mg/m<sup>3</sup>**

2 alarm thresholds: • 5 mg/m<sup>3</sup>  
• 10 mg/m<sup>3</sup>

Minimum air flow speed: 4 m/s

Minimum particle size: 0.3 µm

**Ambient temperature for electronics: -20°C - +65°C**

3 opto-isolated outputs with solid state relays + RS485 serial output

**Analog output 4-20mA: 4mA @ 0 mg/m<sup>3</sup>, 20mA @ 10 mg/m<sup>3</sup>**

Power: 24Vdc

**Protection: IP65**

Die-cast aluminium enclosure painted RAL 3000 DIN A

**Measurement stylus in AISI 304 steel - Ø = 8 mm - L = 250 mm from point 'A' \***

**[the stylus can be lengthened with extensions]**

Attachment: 3/4" male gas stub pipe



### GMTRB005D-EX

Complies with **ATEX Directive 2014/34/EU - Category 3D**

**Maximum operating temperature: 140°C**



### GMTRB005D-EX-FM

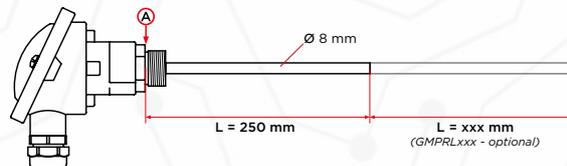
Complies with **ATEX Directive 2014/34/EU - Category 3D/3G**

**Maximum operating temperature: 140°C**

**FM APPROVED Certified**



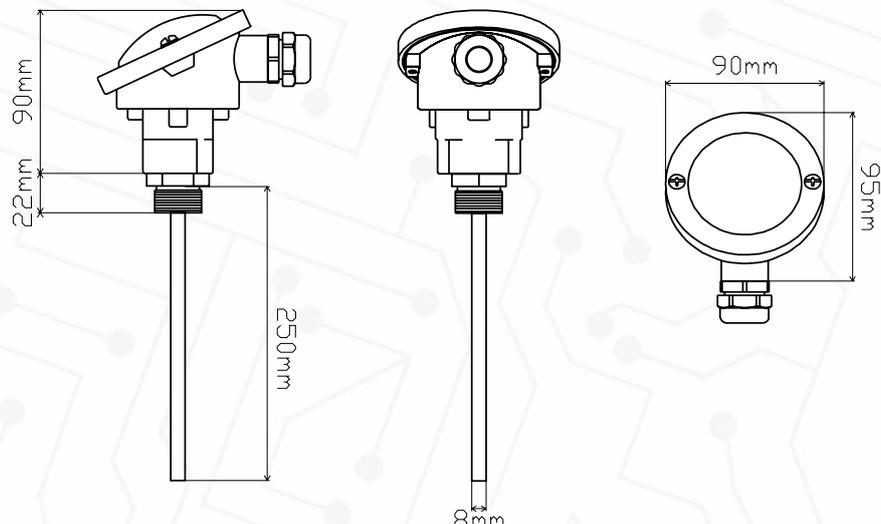
\* To calculate the correct stylus measurement (with possible extensions), start from point 'A'.



### Table

MODEL	RESOLUTION	THRESHOLD 1	THRESHOLD 2	OUTPUT 4-20mA	LOWER END OF SCALE@20mA	SELF-ACQUISITION	RS485
GMTRB005D	0.1 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	YES	10/50 mg/m <sup>3</sup>	NO	YES

### DIMENSIONS:



## TECHNICAL SPECIFICATIONS

Power supply	24Vdc $\pm$ 10%
Maximum absorbed power	1W
Resolution	0.1 mg/m <sup>3</sup> (See table)
Range setting	Automatic/manual
Dust particle size	> 0.3 $\mu$ m
Type of measurable products	Dust particles in gaseous fluid
Flow speed	> 4m/s
Measurement principle	Charge displacement
Alarm threshold 3 (Fault)	Automatically activated by the test function
Alarm outputs	2 opto-isolated outputs with solid state relay, protected with resettable fuses
Maximum output current	100mA
Maximum voltage applicable to the outputs	48V
Output functions	Set normally closed or normally open Common to negative or positive
Probe operating temperature	< 140°C
Probe operating pressure	< 2 bar
Electrode material	AISI 304 stainless steel
Stylus diameter	Standard 8 mm
Die-cast	Aluminium enclosure
Humidity	< 95% non-condensing.
Ambient temperature for electronics	-20°C - +65°C
Dimensions	DIN A
Measurable elements	All non-aggressive gases
Electrical connection	One 3-pole terminal block + one 6-pole terminal block
Mechanical connection	3/4" G
Protection rating	IP 65
Display	4 LED
Output 4-20 mA	Opto-isolated Max load 500 $\Omega$
Serial output	RS485 with two wires
Certifications	CE/ATEX ZONE 22 D

### ACCESSORIES:



#### GMTRB-F3-34

Joint to attach the triboelectric probe

#### EXTENSION FOR TRIBOELECTRIC PROBE STYLUS:

**GMPRL001-I** - Length: 100mm  $\varnothing$  = 8 mm

**GMPRL002-I** - Length: 200mm  $\varnothing$  = 8 mm

**GMPRL004-I** - Length: 400mm  $\varnothing$  = 8 mm



#### GMTRB-FX1-34

**MOUNTING KIT** for all versions of triboelectric probes. Suitable for installation in zones classified ATEX: **Category 2D/2G**

