

## Industrial Measurements: MICROPROCESSOR MODULES FOR MANAGING TRIBOELECTRIC PROBES



### GMPID002-TRB-UE

**MICROPROCESSOR MODULE**  
for **VISUALIZING** and **TRANSMITTING**  
the detected dust concentration  
and **custom management** of triboelectric probes  
Management of **one probe**<sup>[1]</sup> with values shown on the display



**Display:** backlit, 128 x 64 pixels

**Inputs:**

- analog current 4-20mA  
(only for probes GMTRB005-...and GMTRB006-...)
- RS485  
(for probes GMTRB003-..., GMTRB005-...and GMTRB006-...)

**Outputs:**

- analog 4-20mA
- analog 0-10V
- RS485 serial
- digital on two relays, fully customizable using internal device software

**Output 24Vdc - 200mA to power external devices.**

Output with MINI-USB on the front of the instrument [software to download data, free]

Output with RJ45 Ethernet socket on the side of the instrument [optional software for data recording]

2-MB memory in the instrument for data recording with date and time

**Power 1:** from 85 to 264Vac [from 47 to 440 Hz]  
or from 127 to 370Vdc.

**Power 2:** 24Vdc ± 10%

**Both power supplies are included standard.**

Working temperature: -20°C - +60°C

**Protection:** IP54

### GMPID002-TRB-003-UE

Microprocessor module for connecting one (1) triboelectric probe series: GMTRB003D-EX-xx-xx

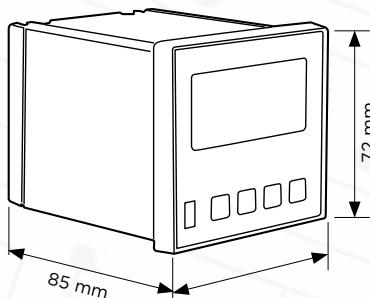
### GMPID002-TRB-005-UE

Microprocessor module for connecting one (1) triboelectric probe series: GMTRB005D-EX-xx-xx

### GMPID002-TRB6-UE

Microprocessor module for connecting one (1) triboelectric probe series: GMTRB006D-EX-xx-xx

#### DIMENSIONS:



#### ACCESSORIES:



##### GMTC2P72

Flange to attach the microprocessor module to the metal container GMCTxxMS



##### GM-CT2-PO1S-RJ

Polycarbonate container for microprocessor module equipped with RJ45 port for remote connection GMPID002-TRB-UE-xxx

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## TECHNICAL SPECIFICATIONS

### Technology.

Microprocessor electronics with flash memory.

### Input power:

#### Power 1

May be applied regardless of the voltage from 85 to 264Vac and frequency from 47 to 440Hz, or any continuous voltage from 127 to 370Vdc.

#### Power 2

Power 24Vdc  $\pm$  10%

### Protection against:

overheating, overloads, voltage surges and short circuits with automatic recovery.

### Absorbed power.

< 6W

### Inputs

(Activated using software).

- analog current 4-20mA (only for probes GMTRB005-...and GMTRB006-...)
- RS485 (for probes GMTRB003..., GMTRB005-... and GMTRB006-...)

### Analogue current output

(Activated using software).

4-20mA active (current generator).  
4-20mA passive (current load).

### Analogue voltage output

(Activated using software).

0-10V

### Resistance of 4-20mA current inputs

< 50  $\Omega$

### Resistance of 0-10V voltage inputs

> 5000  $\Omega$

### Resistance load on 4-20mA outputs.

< 750  $\Omega$

### Resistance load on 0-10V output.

> 10000  $\Omega$

### Input/output protection.

All analogue/digital inputs and outputs are protected with resettable fuses, Zener diodes and varistors.

### Type of digital output.

Two-wire RS485 protected with resettable fuses.

### Output to power external devices.

24Vdc maximum current for uses = 200mA.

### Number of thresholds.

2

### Threshold output.

Two relays with 250Vac/30Vdc 5A contacts.

### Threshold type.

Entirely software programmable.

### Visualization

Graphical display 128 x 64 pixels with LED backlighting.

Two green LEDs for the relay threshold status

### Precision.

$\pm$  0.1% F.S.

### Working temperature/humidity.

Temperature from -20°C to +60°C.

Humidity from 0% to 90%, non-condensing.

### Input buttons.

Four buttons for entering data.

### Electrical connection:

- One removable 6-pole terminal, 5.08 mm step (2 relay outputs with switch contacts).
- One removable 2-pole terminal, 7.62 mm step (Only Power 1)
- One removable 9-pole terminal, 5.08 mm step (Power 2, digital inputs, outputs, analog outputs, RS485).

### Interfaces

1 USB + 1 Ethernet

### Hour meter

One available starting with ver. 1.34.

Max. count 65,535 hours (7.5 years) of continuous operation.

Resolution 1 min.

Saved every 5 min.

### Protection rating

IP54 front

### Container

Recessed container 72 mm x 72 mm

Hole dimensions 68 mm x 68 mm. DIN 43700.

### Container material

Self-extinguishing UL 94 VO.

### Certifications

CE