

# National Wind Tunnel Facility Indian Institute of Technology, Kanpur

**Enquiry No.:** NWTF/ACM/2022-23/16

**Opening Date:** December 22, 2022

**Closing Date:** January 06, 2023

**Extended Closing Date:** January 16, 2023

**Subject:** Purchase of Digital Manometer Cum Calibrator (Quantity: 1 No.)

Quotation for the item mentioned above is requested in a sealed envelope. The quotation should reach on or before January 05, 2023 to the address given below.

## Specifications for Digital Manometer

| <b>Differential Pressure Measurement</b> |                          |   |
|--|--------------------------|---|
| 1  | Instrument               | Digital Manometer 2kPa  |
| 2  | Range                    | +/-2000 Pa  |
| 3  | Accuracy @ room Temp.    | <0.1%R+0.03Pa   |
| 4  | Control Stability        | <0.003% FS  |
| 5  | Resolution               | 1:200000 (auto range 5 digit display)   |
| <b>Measurement Inputs</b>                |                          |   |
| 6  | Ranges                   | 3 x current inputs: 4-20mA (0.001mA resolution)<br>1 x Voltage input: ± 20 VDC (0.1mV resolution)   |
| 7  | Accuracy @ room Temp.    | 4 to 20 mA input: <0.025% + 0.002 mA<br>±20 VDC Input: < 0.025% + 0.2 mV  |
| 8  | PT100 Input              | Measurement range: 0 to 50 °C (0.01 °C resolution)<br>Accuracy <0.025% + 0.004Ω or better   |
| 9  | Absolute Pressure        | Range: 600 to 1600 mbar absolute. (0.01 mbar resolution) Accuracy < 0.5 %FS   |
| <b>Electrical</b>                        |                          |   |
| 10                                       | Supply Voltage           | 12 VDC ±10% 2A (Universal mains power supply included)<br>2.1mm power socket<br>Test: 8-pin socket (voltage + current)  |
| 11                                       | Measurement Inputs       | External Pressure Sensor: 5-pin socket (4-20mA)<br>External Temperature Sensor: 5-pin socket (4-20mA)<br>External PT100 Sensor: 4-pin socket (2,3 or 4-wire connection) |
| 12                                       | Communication Interfaces | RS232: 9-pin D plug<br>USB: Type A connector for connection to EUT or memory stick<br>USB: Type B connector for connection to PC  |
| 13                                       | Interface                | Digital I/O: 4 inputs/outputs (5V logic)<br>Analogue output: 0 to 10VDC   |
| <b>General</b>                           |                          |   |
| 14                                       | Enclosure                | Aluminium or Al. alloy enclosure with tilt feet   |
| 15                                       | Display                  | Blue backlit graphic display.   |
| 16                                       | Data logger capacity     | Storage of approximately 35,000 single display readings or higher   |

|    |                        |  |
|----|------------------------|--|
| 17 | Dimensions             | W 300 mm x H 125mm x D 300 mm (without handle)<br>Or more compact  |
| 18 | Operating Temperature  | +5 °C to +45 °C  |
| 19 | Storage Temperature    | -10 °C to +70 °C   |
| 20 | Battery Life           | > 8 hours of normal use  |
| 21 | Weight                 | <5 kg  |
| 22 | Long Term Drift (span) | <0.25% reading per year  |
| 23 | Overload               | 20 times fsd without damage  |
| 24 | Media Compatibility    | Clean dry air or non-corrosive gas   |
| 25 | Static Pressure        | Without internal pump: -1 bar to +4 bar.<br>With internal pump: -500 mbar to +500 mbar   |
| 26 | Pneumatic Connections  | Test ports: push-on tube fittings for 6mm o/d, 4mm i/d flexible tube<br>Absolute sensor port: M5 female thread<br>Basic unit (Without pressure generator or battery)<br>Automatic pressure generator |
| 27 | Options:               | Internal Absolute pressure sensor<br>Internal battery pack<br>Soft carry case<br>Laminar flow elements and pitot static tubes for flow/velocity measurement  |

#### **TERMS & CONDITIONS:**

- **PRICES:** Ex-Works/ FCA/FOB/CIF New Delhi
- **NOTE:** In case of import, IIT Kanpur has own freight forwarder who can pick up the material from your works.
- **DELIVERY:** Maximum 2 months
- **VALIDITY:** Minimum 90 days.
- **WARRANTY:** At least One year or higher

#### **Address for correspondence:**

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