

# HT950N - HT4000 - HT2234N

## DIGITAL THERMOHYGROMETER, THERMOANEMOMETER AND TACHOMETER

HT950N controller is designed to monitor the temperature inside internal circuits of MV/LV oil or air transformers in order to prevent possible breakaging or excessive overheating. The model (96 x 96 mm), built in panel configuration, receives up to 4 input signals from Pt100 DIN 3-wire and performs temperature measurement up to 200°C.

HT4000 is a multifunction analyzer of environmental parameters as air temperature/humidity, air speed, air flow and pressure. It is particularly indicated for HVAC plants verifies.

HT2234N is a digital tachometer to perform RPM measurements of rotating parts (disks, motor trees, etc..) both on contact and without contact by using of a laser emission ray transmitted and received from the object under measurement.

### FUNCTIONS

HT950N

- Temperature range from 0°C to 200°C
- 4 x 3-wire DIN Pt100 DIN available inputs
- 3 x free contact 5A/250V output relays
- 4 temperature alarms setting thresholds
- MAX temperature recorded on each input signal
- Automatic adjustment of Pt100 cable resistance
- LED indications and red LED displays
- Dust protection keyboard
- AC/DC external power supply

### FUNCTIONS

HT4000

HT2234N

| FUNCTIONS  | HT4000 | HT2234N |
|--|--------|---------|
| Air temperature measurement in °C / °F                         | •      |         |
| Atmospheric pressure   | •      |         |
| Relative humidity measurement (%RH)                            | •      |         |
| Air speed measurement (m/s) and air flow measurement (CMM/CFM) | •      |         |
| RPM with and without contact measurement                       |        | •       |
| Counter of events  |        | •       |
| Laser pointer  |        | •       |
| MAX / MN / HOLD  |        | •       |
| AutoPowerOFF   | •      | •       |

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### GENERAL SPECIFICATIONS

HT4000

| Meas. unit   | Range      | Meas. unit  | Range     |
|--|------------|-------------|-----------|
| <b>Air speed measurement with external probe</b>             |            |             |           |
| m/s  | 0.4 ÷ 25   | Km/hr (kph) | 1.5 ÷ 90  |
| mph  | 0.9 ÷ 55   | Knots (kts) | 0.8 ÷ 48  |
| ft/min (fpm)   | 79 ÷ 4921  | Beaufort    | 1 ÷ 10    |
| <b>Airflow measurement with external probe</b>               |            |             |           |
| CMM  | 0 ÷ 9999   | CFM         | 0 ÷ 9999  |
| <b>Air humidity measurement with internal sensor</b>         |            |             |           |
| %RH  | 0 ÷ 100    |             |           |
| <b>Air temperature measurement with internal sensor</b>      |            |             |           |
| °C   | -20 ÷ 60   | °F          | -4 ÷ 140  |
| <b>Atmospheric pressure measurement with internal sensor</b> |            |             |           |
| hPa  | 350 ÷ 1100 | inHg        | 10.3 ÷ 32 |
| mmHg   | 263 ÷ 825  |             |           |

Power supply: 1x9V battery type IEC6F22

Dimensions (LxWxH): 130x56x38mm

Weight (included batteries): 160g

### Standard accessories

Carrying case

External probe

Battery + user manual

### GENERAL SPECIFICATIONS

HT2234N

Non-contact speed range: 10.00 ÷ 99999 RPM

Contact speed range: 20.00 ÷ 29999 RPM

Resolution: 0.01 ÷ 1RPM

Events counter range: 0 ÷ 99999

Response time: 0.7s (>60RPM)

Distance from object: 50 ÷ 300mm

Display: LCD, 5 dgt, 99999 points

AutoPowerOFF: after 30min

Data HOLD

MAX/MIN

Power supply: 4x1.5V batteries AA LR06

Dimensions (LxWxH): 172x63x36mm

Weight (included batteries): 190g

### Standard accessories

Mechanical adapter + fixing screw

Rubber part

Rubber terminals of various shape

Reflecting tape

Carrying bag

Batteries+user manual



HT950N  
HA000950



HT4000  
HN004000



HT2234N  
HA02234N



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## 1. TECHNICAL SPECIFICATIONS

### Speed Measurement (without contact)

|         | Range          | Resolution         | Accuracy            |
|---------|----------------|--------------------|---------------------|
| RPM     | 10.00 ÷ 99999  | 0.01 / 0.1 / 1     | ± (0.04%rdg + 2dgt) |
| RPS(Hz) | 0.200 ÷ 2000.0 | 0.001 / 0.01 / 0.1 |                     |

### Speed Measurement (with contact)

|          | Range          | Resolution         | Accuracy            |
|----------|----------------|--------------------|---------------------|
| m/min    | 2.000 ÷ 2999.9 | 0.001 / 0.01 / 0.1 | ± (0.04%rdg + 2dgt) |
| RPM      | 20.00 ÷ 29999  | 0.01 / 0.1 / 1     |                     |
| ft/min   | 6.00 ÷ 10000   |                    |                     |
| yard/min | 4.00 ÷ 3000    |                    |                     |

### Event Counter

| Range     | Max. Input Frequency     |
|-----------|--------------------------|
| 0 ÷ 99999 | 10kHz with 5% Duty Cycle |

## 2. GENERAL SPECIFICATIONS

### General

Measuring Distance: 50 to 300 mm  
Time base: 4.0 MHz Quartz Crystal  
Range selection: Autorange

### Display

Characteristics: 5 digit LCD 99999 counts  
Sampling rate: 0.7 sec (> 60 rpm)  
> 1 sec (10 to 60 rpm)

### Supply

Battery type: 4 x 1.5V battery type LR03 AA  
Low battery indication: "BT" is displayed when the batteries level is too low.  
AutoPowerOFF: 30 minutes

### Mechanical characteristics

Size: 162(L) x 63(W) x 36(H)mm  
Weight (including battery): about 190g (included batteries)

### Climatic conditions

Reference temperature: 25° ± 5°C  
Operating temperature: 0 ÷ 50 °C (32 ÷ 122°F)  
Operating humidity: <70% RH  
Storage temperature: -10 ÷ 60 °C  
Storage humidity: <70% RH  
Internal use: max. 2000m