PALM-SIZED TEMPERATURE/HUMIDITY METER
HN-CH SERIES

PS
PERFORMANCE SPECIFICATION
CHINO

The HN-CH series is accurate palm-sized temperature/humidity meter with the measuring range of 0 to 100%RH by using a high performance and reliable humidity sensor.
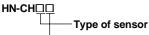
Three types of sensors, sensor built-in type, probe type and separated type can be selected to meet various applications requirement.

It also has the data logging function capable to store up to 8000 readings each of temperature and humidity into memory, and communications function (RS232C or RS485) for various use such as mobile measurement, desk-top and wall-mount.

■ FEATURES

・Measurement of relative humidity 0 to 100%RH by polymer capacitance type humidity sensor
・High accurate measrement in low humidity range less than 20%RH
・Improved repeatability and reliability by a new developed humidity sensor
・Design fitted into mobile measurement, desk-top and wall-mount
・Logging function of up to 8000 readings each of temperature and humidity
・Easy maintenance with complete interchangeable sensors
・Three types of sensors, sensor built-in type, probe type and separaed type meet various applications requirement

Separated type

Probe type

■ MODELS

HN-CH☐☐

Type of sensor
- N: Sensor built-in type
- P: Probe type (with 1.5m cable)
- T: Separated type (with 1.5m cable)

Communications interface
- R: RS232C
- S: RS485

■ GENERAL SPECIFICATIONS

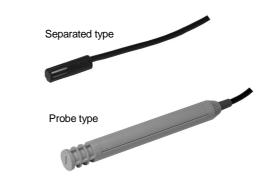|	
Sensor:	Humidity --- High-polymer capacitance type humidity sensor
	Temperature --- Semiconductor temperature sensor
Measuring range:	Humidity --- 0 to 100%RH (No dew condensation)
	Temperature --- -10 to 50ºC (Built-in type)
	-40 to 80ºC (Probe type, Separated type)
Accuracy rating:	Humidity --- ±2%RH (0 to 90%RH at 25ºC)
	±3%RH (90 to 95%RH at 25ºC)
	Temperature --- ±0.5ºC (0 to 50ºC)
	±1ºC (except other than the above shown)
Temperature coefficient:	±0.1%RH/ºC (5 to 80ºC) (Humidity sensor)
Response time:	Within 15 seconds (Humidity sensor) (90% response, 25ºC constant, under 0.1m/s ventilation)
Working temperature:	Main unit: -10 to 50ºC
	Sensor: Same as measuring range
Sensor interchangeability:	Interchangeable by plug-in (For probe type and separated type, interchangeable including cable)
Number of logging data:	Temperature/humidity; Up to 8000 data each (EEPROM)
Display:	Reflecting type LCD display
Battery life:	Approximately a half year (when using AA batteries in constant temperature and humidity, and using data logging as data logger while auto power-off function is on.)

DISPLAY/SETTING CONTENTS
・Current data: Month, day, hour, minute
      Temperature reading (ºC or ºF)
      Relative humidity or dew-point temperature reading (ºC or ºF)
・Replaying data: Programmed parameters
      Logged data at each year, month, day, hour or minute
      Maximum temperature/humidity, minimum temperature/humidity, average temperature/humidity, totalizing temperature
・Setting items: Clock --- Year, month, day, hour, minute
      Temperature --- ºC, ºF display setting
      Relative humidity, dew-point temperature (ºC or ºF) display setting
      Logging type --- Manual or interval
      Logging start time --- Year, month, day, hour, minute or key operation
      Logging end time --- Year, month, day, hour, minute or key operation
      Logging repetition --- No repetition, every day, every week
      Measuring interval --- Continuous, 1 to 60 minutes
      High alarm, low alarm, reference temperature for totalizing, totalizing direction, auto power-off, key lock
・Display contents: Clock constantly, measured value by key-touch at OFF
   Communications function: RS232C or RS485
   Power supply: 2 AA batteries or 100-240V AC (with AC adapter ; sold separately)
   External dimensions: W64 X H113 X D32mm (For built-in type)
   Weight: Approximately 150g (including batteries)

CE marking
Conformity directive (89/336/EEC, 92/31/EEC amendment, 93/68/EEC amendment)
Conformity standards IEC61326+A1: Emission class B,
      immunity Table1 (Minimum requirement)
Conformity condition HN-CHNS: Connection cable must be within 30m indoors
      HN-CHTS, HN-CHPS: Connection cable must be within 3m
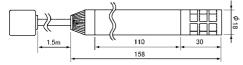Stability under EMC test environment
   HN-CHNR, HN-CHTR, HN-CHPR: Temperature ±0.5ºC, relative humidity ±2%RH
   HN-CHNS, HN-CHTS, HN-CHPS: Temperature ±0.5ºC, relative humidity ±3%RH

PSE-418B

■ DIMENSIONS

●Main body

Unit: mm
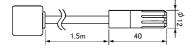

●Probe type sensor

●Separated type sensor

■ STANDARD ACCESSORIES

1 copy of instruction manual (2 types), 1 desk-top prop , 2 AA batteries

■ OPTIONAL ACCESSORIES

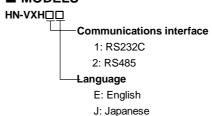| Description		Models	Note
Temperature /humidity sensor (for replacement)	Built-in type	HN-CSHN	
	Probe type	HN-CSHP	1.5m Cable
	Separated type	HN-CSHT	1.5m Cable
AC adapter		HN-CYHRA	Input 100-240V AC, Output 4.8V DC ■CE marking EMI standard Meets the conduction limit of : FCC Class B EN61000-3-2 VCC I II EMS EN50082-1 IEC801-Level3 IEC801-3 IEC801-4
RS232C Communications cable		HN-CYHC	Length 2m
RS485 Communications cable		HN-CYHD	Length 2m
Protocol converter		SC8-10	RS232C ←→ RS485

DATA LOGGING SOFTWARE (option)

The software package records and analyzes the measured data in a palm-sized temperature/humidity meter HN-CH series with the personal computer.

It can read the recorded data easily with the spreadsheet software on the market. RS232C communication type indicates the data list or historical trend up to 10 units in the same axis graph easily by connecting RS232C cable with HN-CH one by one.
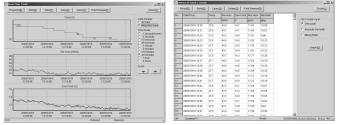
And, it has the mode that one measurement data is monitored in real time.

RS485 communication type connects HN-CH onto the multi-drop-line, and it can monitor the measured data up to 30 units in real time.

■ MODELS

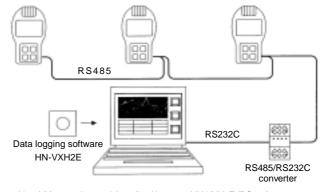HN-VXH□□

└── Communications interface
    1: RS232C
    2: RS485
└── Language
    E: English
    J: Japanese

* OS environment: Windows95,98, Me, NT4.0, 2000, XP

Trend screen   Data list screen

■ MULTI-POINT MEASUREMENT BY PC

RS485

Data logging software HN-VXH2E

RS232C

RS485/RS232C converter

Note:) Memory data can't be utlized because HN-VXH2E (RS485) is limited to the real-time measurement.

ENVIRONMENT FOR HN-CH

・Humidity element is compound from absorbent polymer film and thin element that can transmit vapor.
  So under the environment that has the substance mentioned below, the element deteriorates in a short while and measuring fails.
  Containing much ketone organic solvent, ester organic solvent, halogen, strong acid substances, corrosive substances, dusts, oil mists, salty mists
・Please do not use HN-CH in where there are explosive gas, corrosive gas and flammable gas or where steam, drug liquid and seawater affect.
  It is dangerous to use HN-CH in such environment.
・Measuring is not possible under dew-condensed state, but becomes measurable when returns to a normal state.

Specifications subject to change without notice. Printed in Japan (I) 2005. 11- Recycled Paper