

HN-EK SERIES

WALL MOUNTING TYPE TEMPERATURE / HUMIDITY METER



“Proper Measurement” for air condition management

HN-EK series is thin designed wall-mounting type to eliminate the exterior disturbance to the utmost. Recommended for pharmaceutical storage / warehouse, incubation room, etc., which requires high accuracy temperature and humidity measurement.

■ FEATURES

- Regress the heat conduction effect from the installment surface and realize high accuracy measurement.
- Easy maintenance by exchanging sensor unit.
- Thin design, installable to anyplace.



■ MODELS

HN-EK□□N

Output signal

A : Temperature : 4 to 20mADC (2-wire transmission)

Humidity : 4 to 20mADC (2-wire transmission)

B : Temperature: Pt100, 3-wire

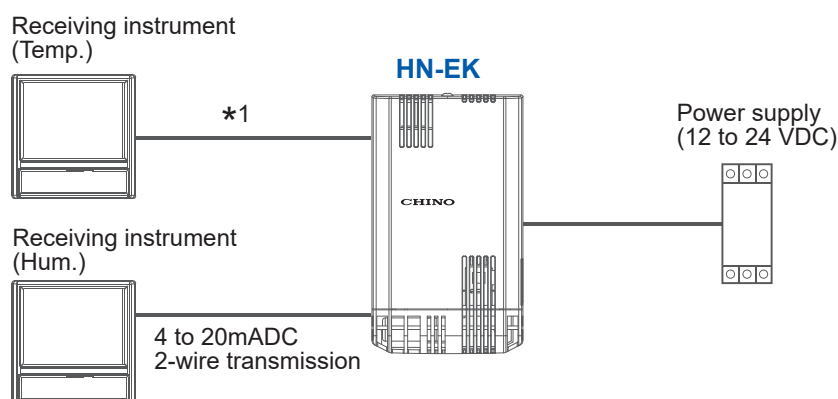
Humidity : 4 to 20mADC (2-wire transmission)

1 : Temperature range -10 to 55 °C

2 : Temperature range 0 to 50 °C

*Temperature 4 to 20 mADC only HN-EKB2N is not set

■ CONFIGURATION



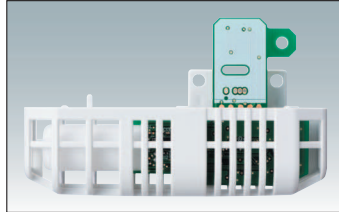
*1 HN-EKA□N : 4 to 20mADC (2-wire transmission)
HN-EKB1N : Pt100, 3-wire

High accuracy sensor equipped

Realize $\pm 2\%$ RH measurement at vast range.
Adopt platinum resistance thermometer (accuracy: $\pm 3^\circ\text{C}$)
(Select output from either 4 to 20mADC 2-wire transmission or Pt100 Ω 3-wire).

Sensor unit exchangeable

Traceability certificate
issuable just for the
exchanging sensor unit.
Model name: HN-ESKA9N
for HN-EKA□N, HN-ESK9BN
for HN-EKB1N.
Annual exchanging is
recommended.



Easy installment

Installable to general purpose embedded box.
(Installation pitch 83.5mm (JIS C8435))

Regress the heat conduction effect from the installment surface

Thermo-plate to cut the heat from large heat capacity wall or pillar is standard attached.

Before attachment



Embedded box

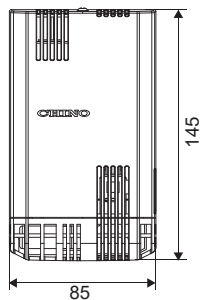
After attachment



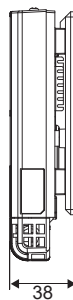
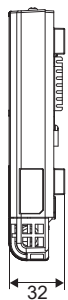
Thermoplate

External dimensions

Front



Side



When thermo-plate
attached

Unit: mm

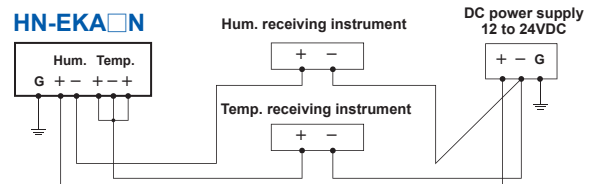
Specifications

Model	HN-EKA1N	HN-EKA2N	HN-EKB1N
Humidity sensor	High-polymer capacitance type		
Measuring range	0 to 95%RH		
Accuracy rating	$\pm 2\%$ RH (at 5 to 90%RH, 25°C)		
Response time	Within 15 seconds *1		
Output signal	4 to 20mADC 2-wire transmission (for 0 to 100%RH)		
Resistance load	500 Ω or less (at 24VDC power supply)		
Temperature sensor	Platinum resistance thermometer, Pt100 equivalent		
Measuring range	-10 to 55°C	0 to 50°C	-10 to 55°C
Accuracy rating	$\pm 0.3^\circ\text{C}$		
Response time	Within 10 minutes (at 0.15m/s ventilation)		
Output signal	4 to 20mADC 2-wire transmission (for -10 to 55°C) (for 0 to 50°C)		Pt100 (100 Ω at 0°C) 3-wire
Resistance load	500 Ω or less (at 24VDC power supply)		
Sensor compatibility	Compatible by sensor unit		
Power supply	12 to 24VDC		
Connection	Spring type terminal board (AWG 14 to 28)		
Installation	Screw terminal (M4 screw x 2 each)		
Working temp./hum. range	-10 to 55°C, 0 to 95%RH (no dew condensation)		
CE Marking	EMC: F2014/30/EU EN61326-1: F2013 Class A Stability/ Hum. $\pm 3\%$ RH, (Temp. $\pm 1.5^\circ\text{C}$ only for HN-EKA) *Under the test environment by EMC directives. RoHS: 2011/65/EC, EN50581: 2012		

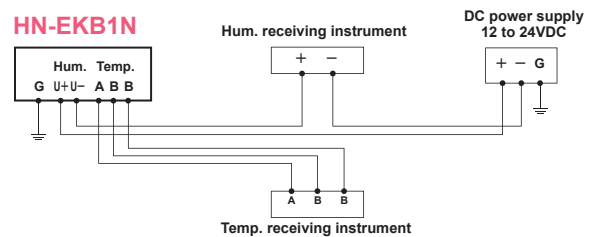
*1 : Response condition: Step response to humidification

Connection

HN-EKA□N



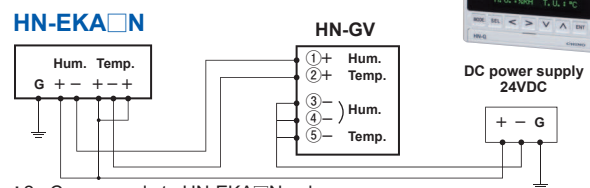
HN-EKB1N



Humidity converter HN-GV *2

Converts and output to absolute humidity, relative humidity, mixing ratio, vapor pressure and dew point.

HN-EKA□N



*2 : Corresponds to HN-EKA□N only



Specifications subject to change without notice. Printed in Japan (I) 2025. 11

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