

THERMO-HYGROMETER HN-C series



HN-C series using newly developed humidity element are high performance and highly reliable 2-wire transmission type thermo-hygrometers for the wide measuring range of 0 to 100%.

Models with temperature output of 3-wire type PT100 is available.

Wall-mount type, separated type and inserting type are available for various applications.

Heat-resistive separated type, which can be used in the operating temperature of -40 to 180°C, is available, too.

FEATURES

- 1 Newly developed humidity element is built-in for improving reproducibility reliability.
- 1 Measurable relative humidity is 0 to 100%RH by the capacitance type element.
- 1 Five types of wall-mount type, separated type, heat-resistive separated type, and inserting type (soft type and hard type) are available for various applications.
- 1 The sensing part of the heat-resistive separated type can be used in the operating temperature of -40 to 180°C.
- 1 Interchangeable sensing part for easy maintenance
- 1 Mounting on DIN rail is possible. (except inserting type)
- 1 Confirms to CE-marking.

MAJOR APPLICATIONS

- 1 Measurement and control of temperature/humidity in environment testing machines, chambers and clean benches
- 1 Measurement and control of temperature/humidity of food storage houses, grain storage houses and green houses
- 1 Measurement and monitoring of temperature/humidity of exhausting ducts
- 1 Measurement and monitoring of temperature/humidity of baking chambers



MODEL

HN-C

Type

- Q: Wall-mounting type
- F: Separated type
- G: Heat-resistive separated type
- V: Inserting type (Soft type)
- P: Inserting type (Hard type)

Output signal*1

- A: Temperature: 4 to 20mADC (2-wire transmission)
Humidity: 4 to 20mA DC (2-wire transmission)
- B: Temperature: Pt100 3-wire type
Humidity: 4 to 20mA DC (2-wire transmission)

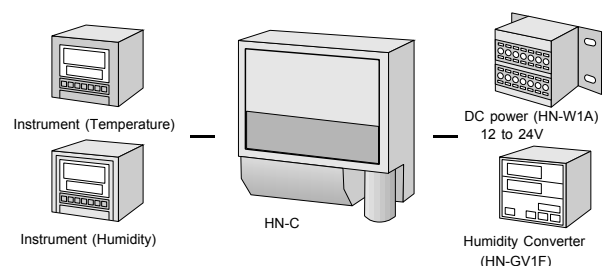
Length of cable*2

- 1: 1m
- 2: 2m
- 3: 3m

*1 In the case of separated type and heat-resistive separated type, the output signal is only A.

*2 Only for separated type and heat-resistive separated type. Others are blanks

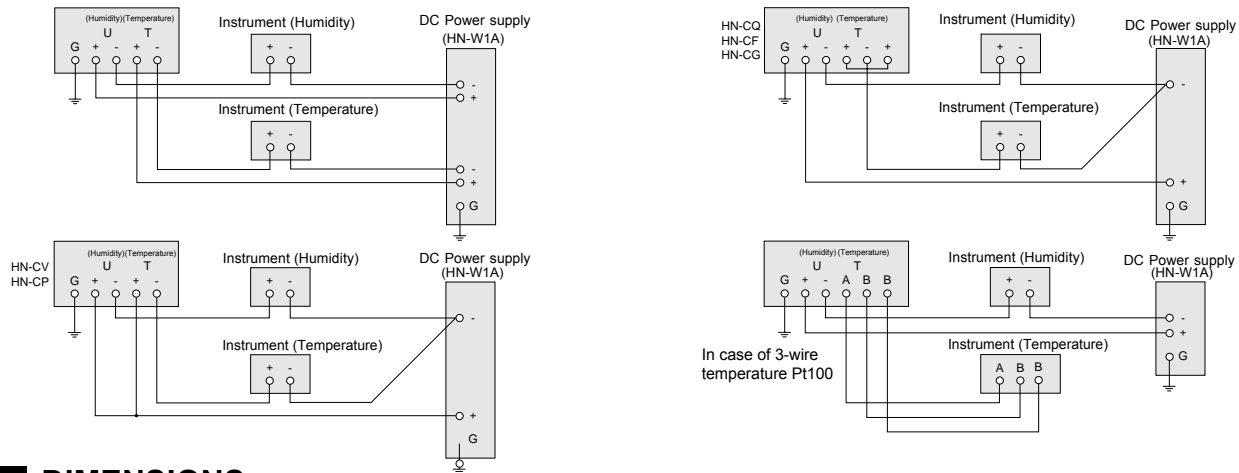
CONFIGURATION



GENERAL SPECIFICATIONS

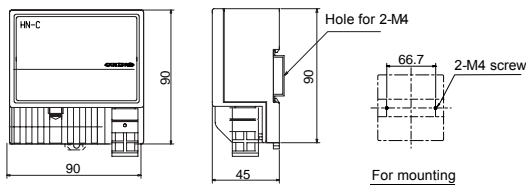
Item	Wall-mounting type	Separated type	Heat-resistive separated type	Inserting type (Soft type)	Inserting type (Hard type)	
Model	HN-CQ	HN-CFA	HN-CGA	HN-CV	HN-CP	
Humidity	Element: High polymer capacitance type					
	Measuring range: 0 to 100% (No dew condensation)					
	Accuracy ratings: $\pm 2\%RH$ (at 0 to 90%RH and 25 °C); $\pm 3\%RH$ (at 90 to 95%RH and 25 °C)					
	Coefficient of relative humidity/temperature: $\pm 0.1\%RH / ^\circ C$ (at 5 to 80°C)					
	Response time (90% response): Within 15 sec. (at 25 °C and wind speed of 0.1 m/s)				Shorter than 1 min (same conditions as left)	
	Output signal: HN-C A: 4 to 20mA DC; 2-wire transmission (For 0 to 100%RH); HN-C B: Pt100, 3-wire type					
	Resistance load: Lower than 500 Ω (at 24VDC power voltage); Lower than 250 Ω (at 15VDC); Lower than 100 Ω (at 12VDC)					
Temperature	Element: Platinum resistance thermometer; Pt100 JIS, Class A					
	Measuring range: 0 to 50 °C		-40 to 80 °C	-40 to 180 °C	0 to 50 °C	0 to 80 °C
	Accuracy ratings: $\pm 0.3^\circ C$		$\pm 0.5^\circ C$		$\pm 0.3^\circ C$	
	Output signal: 4 to 20mA DC; 2-wire transmission (For measuring range)					
	Resistive load: Lower than 500 Ω (at 24VDC power voltage)					
Interchangeability (sensing part)		Plug-in	Plug-in including cable		Plug-in	
Working temperature	Unit	0 to 50 °C				
	Sensor	0 to 50 °C	-40 to 80 °C	-40 to 180 °C	0 to 50 °C	0 to 80 °C
Power voltage		12 to 24VDC $\pm 1V$				
Connecting		Cramp type no screw terminals		Terminals (M4 x 5)		
Material	Unit	Resin			Die cast aluminum	
	Protection Tube	---			Resin	Stainless steel
Mounting		By screws (M4x2) or mounting on DIN rail		By screws (M4 x 4)	By flange (JIS 5K 25A)	
Weight (unit only)		About 160g	About 220g	About 240g	About 1.6 kg	
Accessories		Fixtures for wall-mounting				
Other		---		Cable length: 1m, 2m or 3m (to be specified)		

CONNECTIONS

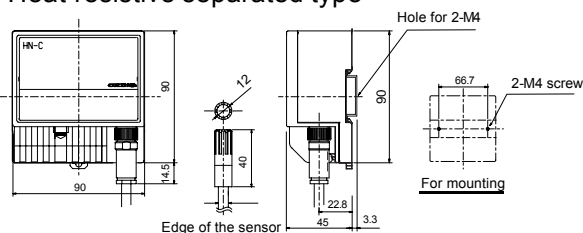


DIMENSIONS

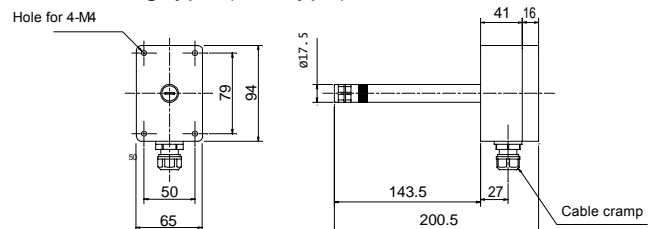
1 Wall-mount type



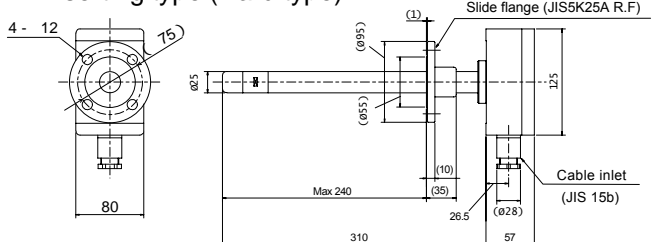
1 Separated type Heat-resistive separated type



1 Inserting type (Soft type)



1 Inserting type (Hard type)



HUMIDITY CONVERTER

HN-G

■ GENERAL SPECIFICATIONS

● Assembly with HN-C series (HN-GV1)

Input signal : Humidity : 4 to 20mA DC
 Temperature: 4 to 20mA DC

Input range : Humidity : 0 to 100% RH
 Temperature: 0 to 50°C; 0 to 80°C;
 -10 to 80°C or -40 to 180°C

● Assembly with HN-Z series (HN-GZ8)

Input signal : Humidity : 4 to 20mA DC
 Temperature : Pt100 JPt100 3-wire type

Input range : Humidity : 0 to 20kPa or 0 to 50kPa
 Temperature : 0 to 300°C

● Common specification of HN-GV1, HN-GZ8

Output signal : humidity/temperature: 4 to 20mA DC
 (Load resistance less than 600Ω; output signal of humidity and temperature insulate; but output signal with commutation output does not insulate.

* Output value will be changed when make switch of humidity unit.

Humidity computation : absolute humidity(g/m³);
 relative humidity (%RH);
 mixture rade (°C); steam pressure (kPa);
 dew point temperature (°C)

Hold : Holding humidity / temperature reading and output by outside contact signal.

Alarm Output :

Contact output 2 points common.
 Each one point of humidity and temperature or one of their upper limit and lower limit.
 Contact capacity Load resistance 100VAC 0.5A,
 200VAC 0.2A

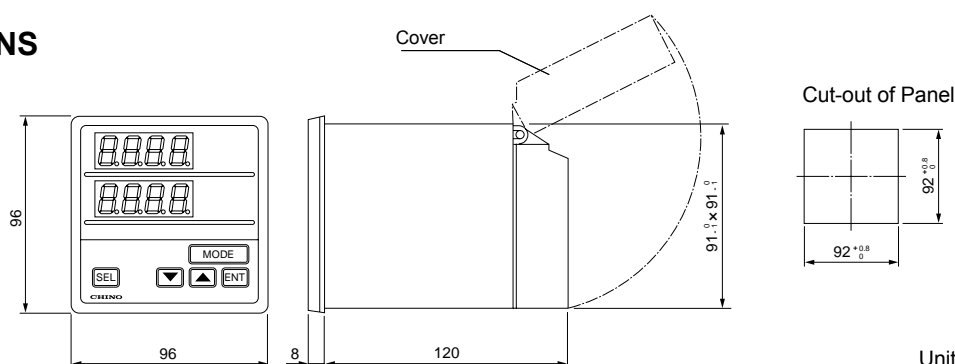
Communication interface: Selectable from RS-232C or RS-422A (Option)

Power supply: 85 to 264VAC, 50Hz/60Hz

Working environment: Temperature 0 to 50 °C
 Humidity 20 to 90%RH (No condensation)

Weight: About 0.6kg

■ DIMENSIONS



■ MODEL

HN-GV1 Humidity Converter for HN-C series

HN-GV1

Assembly enable meters
 Input signal: Humidity: 4 to 20mADC
 Temperature: 4 to 20mADC

Type
 F: Panel mount

Output / Communication interface
 1N: 4 to 20mADC (insulate / non)
 1A: 4 to 20mADC (non-insulate / RS-422A)
 1R: 4 to 20mADC (non-insulate / RS232C)

DV POWER SUPPLY

HN-W1A

■ GENERAL SPECIFICATIONS

Output voltage : 24V±1V DC

Output current : 0.3A

Power supply : 90-100/180-220V AC, 50/60Hz

Working voltage : ±10% of rated value

Working environment temperature: -10 to +50°C

Working environment humidity: 10 to 90%RH
(non condensation)

Insulation resistance :

Between output terminal and ground over 100MΩ at 500VDC

Between power terminal and ground over 100MΩ at 500VDC

Resisting voltage :

Between power terminal and ground terminal 1 minute at 1500VDC

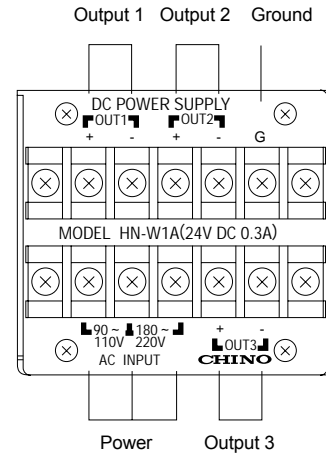
Between output terminal and ground terminal 1 minute at 500VDC

Case : Steel load

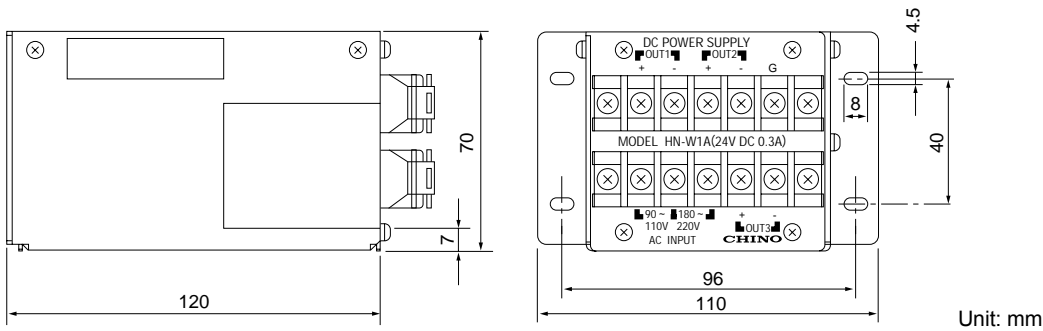
Mounting : Wall-mount type

Weight: Approx. 1.0 kg

■ CONNECTIONS



■ DIMENSIONS



Specifications subject to change without notice. Original 2002.12, Print 2003.11

CHINO CORPORATION

32-8, KUMANO-CHO, ITABASHI-KU, TOKYO 173-8632

PHONE: +81-3-3956-2171

FAX: +81-3-3956-0915

E-mail: inter@chino.co.jp

Website: <http://www.chino.co.jp>