USER GUIDE FOR CDW-14A PASTE TYPE TEMPERATURE SENSNOR

CDW-14A-01-MN-10	SEP-2024

This document is applied for the following products

SKU	CDW	HW Ver.	1.0	FW Ver.	1.0
Item Code	CDW-14A	Paste Temperature Sensor, RS485 PT100 Output, ABS, -50-+100℃, -20-+50℃			

1. Introductions

CDW-14A Paste Type Temperature Sensor adopts high precision platinum resistance (PT100) as the sensing component. It is with high accuracy, good stability. The signal conversion module can convert temperature to corresponding voltage, current or RS485 optionally. CDW-14A Past type temperature sensor is compact, easy-to-install, with good linearity, strong load capacity, long transmission distance and good anti- interference ability.

2. Specification

Item	Specifications			
Range	-50-+100℃, -20-+50℃			
Supply Voltage	5VDC,12-24VDC			
Accuracy	±0.5℃			±0.3℃
Output	4-20mA	0-5V	RS485	PT100/PT1000 3-wires
Load Capacity	≤250Ω	≥1K		
Ingress Protection	IP65			
Operating Temperature	Probe: -50℃-+120℃ Conversion module:-40℃-+85℃			
Weight(unpacked)	Probe: 85g			
Transmitter module dimension	98*66*49mm or Φ28*121mm			
Storage Condition	10℃-60℃@20%-90%RH			
Surface mount adhesive	Attached			

3.Working Process

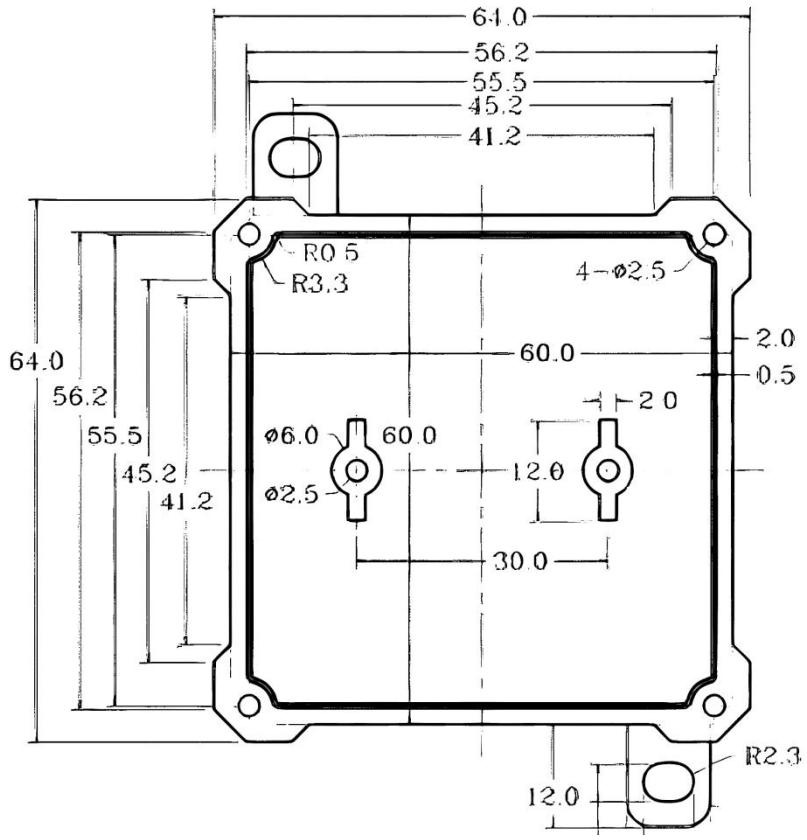
Sensing element: This is the core component of temperature measurement. Depending on the type of sensor, thermistors, thermocouples, integrated circuits, or other temperature-sensing elements may be used.

For example, a thermistor, its resistance value will change with temperature; The sensing element of a thermocouple is a thermocouple solder joint formed by welding two different metals together.

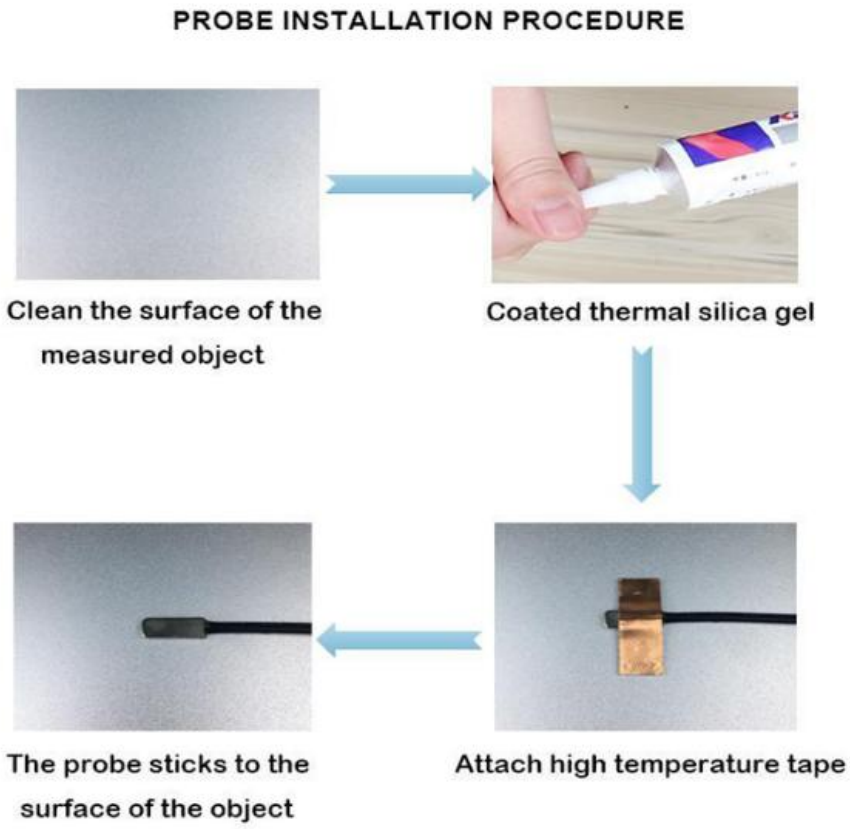
4. Electrical Connections

Connector（cable）	Voltage	Current	RS485
Red	V+	V+	V+
Black	V-	V-	V-
Yellow	Signal out	Signal out	RS485A
Green			RS485B

5. Dimensions



6. Installation



7.Communication Protocol（MODBUS）

Transmission mode: MODBUS-RTU,**Baud rate:** 9600bps,**Data bits:**8,**Stop bit:**1,**Check bit:**no

Slave address:the factory default is 01H (set according to the need,00H to FFH)

7.1 The 03H Function Code Example: Read Temperature

Host Scan Order(slave address:0x01)
01 03 00 00 00 01 840A

Slave Response
01 03 02 03 88 B8D2

Temperature:(0388)H=(904)D,904/10=90.4(℃)

7.2 The 06H Function Code Example: Modify the slave address

Host Scan Order (Changed to 02H,read and write address must be 01H):
01 06 00 01 00 02 59CB

Slave Response:
01 06 00 01 00 02 59CB

Note:
1. All underlined is fixed bit;

2. The last two bytes is CRC check command.

Note: This product has been tested and complies with European CE requirements for EMC directive.

8. Support contacts:

Complies with applicable CE directives.
Manual subject to change without notice. Version 1.0

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