CODA

CDW-14A Paste Type Temperature
For weather automation applications

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.

Typical installation locations

• Solar and wind power generation
• Mobile weather monitoring vehicles
• Contact temperature measurement
• Weather monitoring stations

Design structure

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.

Easy installation

Ensure that the surface of the object on which the sensor is to be installed is clean and flat to ensure good contact and measurement accuracy.

Use a cleaner to remove dirt, grease, or impurities from the surface.Attach the patch sensor to the surface of the measuring object. Make sure the sensor is in full contact with the surface to avoid bubbles or gaps.
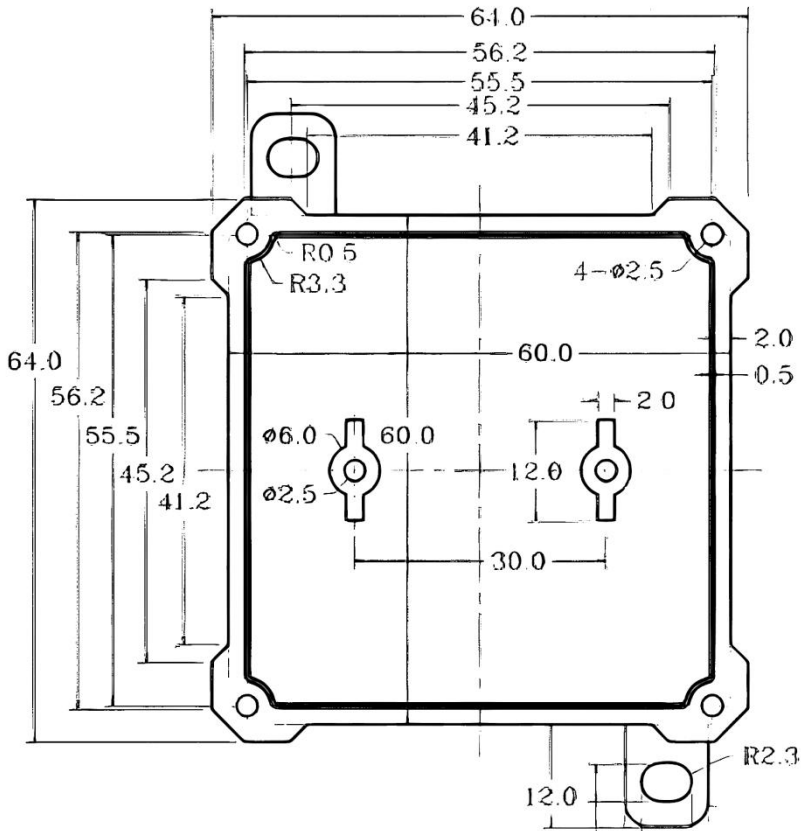
For some applications, the patch may need to be further secured to the surface of the object using a copper foil tape or other fastening method to prevent the sensor from moving or falling off during use.

Reliable operation

Patch sensors are typically manufactured with high-quality materials to ensure their stability and durability in a variety of environments. For example, the chip of the sensor may be made of advanced semiconductor materials with good temperature stability and anti-interference capability. The housing material is usually chosen to be robust, with good insulation and protective properties, such as engineering plastics or metal alloys, to protect the internal chip from mechanical damage, moisture, dust and other environmental factors.

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Dimensions & installing

CDW-14A connector dimension

Installing step

PROBE INSTALLATION PROCEDURE

Clean the surface of the measured object

Coated thermal silica gel

The probe sticks to the surface of the object

Attach high temperature tape

Technical data

Measurement performance, models CDW-14A

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			

Model number	Type	Output	Special features
CDF-10A	Wind speed	Pulses(PNP) RS485 4-20MA 0-5V	Three cup plastic wind speed
CDF-11A	Wind direction	RS485 4-20MA 0-5V	Plastic wind direction sensor
CDG-10B	Solar radiation	0-5V,4-20mA,RS485	Spectral range:300～1100nm
CDG-14A	Illuminance sensor	0-5V 0-10V 4-20mA RS485	Spectral range:380～780nm
CDY-12A	Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF),RS485	Diameter :φ200mm, height: 271mm
CDW-10A	Wall-mounted Barometric Pressure	RS485,4-20mA,0-5V, 0-10V	Barometric range 600-1100hPa(mbar)
CDW-12A	CO2 sensor	4-20mA,0-5V,RS485	Range 0-2000ppm ,0-5000ppm,0-10000ppm
CDW-13B	Noise sensor	RS485	Range 30-130dB
CDW-14A	Paste Type Temperature	PT100 PT1000 RS485	Range -50-+100℃, -20-+50℃
CDW-21A	Dust sensor	RS485 4-20mA,0-5V,0-10V	PM1.0,PM2.5,PM10
CDW-22A	Leaf Wetness	4-20mA,0-5V,0-2V,RS485	Wetness: 0-100% Temperature: -40-+80℃
CDW-33A	Atmospheric Temperature,Humidity & Pressure	RS485	Shelter installation
CDW-15A	O2 Concentration	4-20mA,0-5V,0-10V,RS485	Range 0-30%
CDW-16A	SO2 Concentration	4-20mA,0-5V,0-10V,RS485	Range 0-20PPM 0-2000PPM
CDW-17A	NH3 Concentration	4-20mA,0-5V,0-10V,RS485	Range 0-100PPM 0-1000PPM 0-5000PPM
CDW-18A	H2S Concentration	4-20mA,0-5V,0-10V,RS485	Range 0-100PPM 0-1000PPM
CDW-19A	CO Concentration	4-20mA,0-5V,0-10V,RS485	Range 0-1000PPM 0-2000PPM
CDW-1T0	Visibility sensor	RS485	Range 0-10Km/0-20Km/0-30Km
CDW-1TX	Multi-in-one gas Sensor	RS485	Multi-parameter integration

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