

CC-E01 Atmospheric Temperature, Humidity Sensor



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Atmospheric Temperature, Humidity sensor is a professional measurement of air temperature, relative humidity, are built-in the water-proof and anti-UV shelter. It is widely used in agriculture, forestry, meteorology as well as a climate chamber, warehousing and other places.

FEATURES

- High Sensitivity
- Fast response time
- Long service life
- Low consumption
- Good stability of output

Parts:

1. Sensor:1
2. Radiation shield and bracket(optional):1
3. Clamp(optional):1

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SPECIFICATIONS

Item	Technical Specification	
	Temperature	Humidity
Range	-40 to +60°C	0 to 100% RH
Resolution	0.01°C	0.1%RH
Accuracy	$\leq \pm 0.2^{\circ}\text{C}$ (25°C) $\leq \pm 0.4^{\circ}\text{C}$ (-25 to +60°C)	$\leq \pm 2\%\text{RH}$ (20 to 60%) $\leq \pm 3\%\text{RH}$ (< 20%) $\leq \pm 4\%\text{RH}$ (> 60%)
Supply	DC12V	
Output Signal	SDI-12	
Current Consumption	< 2mA	
Operating Temperature	-40°C to +60°C	
Ingress Protection	IP65, Pagoda sun protection included	
Storage	10-60°C@20%-90%RH	
Shelter material	Anti-UV engineering plastics	
Support	Fixing for installation on mast or horizontal arm (1, 1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3, 3¼ or 3 inches in diameter)."	
Cable connection	Cable length 8 meters with differentiated conductors: Colors	

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OUTPUT CHARACTERISTICS

● Current

$T = (I - 4) / 16 * 100 - 40$, (where T = temperature(°C), I = output current(mA))

$H = (I - 4) / 16 * 100\%$, ((where H = humidity(RH), I = output current(mA)))

● Voltage

$T = V / V_{\text{full scale}} * 100 - 40$, (where T = temperature(°C), V= output voltage(V), $V_{\text{full scale}}$ = 5V or 10V)

$H = V / V_{\text{full scale}} * 100\%$, (where H = humidity(RH), V= output voltage(V), $V_{\text{full scale}}$ = 5V or 10V)

● RS485

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. Attach communication protocol.

MOUNTING

- Install the product in stable environment area, avoid direct sunlight, away from windows air-conditioning, heating and other equipment. Otherwise it will cause measurement inaccuracies.
- Fixing rail is optional.

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ELECTRICAL CONNECTIONS

Cable	SDI-12
Red	V+
Yellow	Data
Green	V-

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



Environment / Meteorology / Hydrology monitoring sensors manufacturer

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Communication Protocol(SDI-12)

- 'a' , 'b' is the sensor address.
- Band rate: 1200, Start bit: 1, Data bits: 8, Check bit: NONE, Stop bit: 1, sensor address: factory default 0.

No.	Command	Sensor return	Command name
1	?!	0	Read sensor address
2	al!	013DLQIFENGATHP-1170SN000	Distinguish sensor
3	aAb!	b	Change the address, Change address a to b
4	aM!	00014 0	Start measuring
5	aD0!	0+49.3+27.10+15.6+990.76	a+ humidity+ temperature+ Dew point temperature+ Pressure
6	aXCH±Calibration value!	aOK	Humidity value calibration
7	aXCT±Calibration value!	aOK	Temperature value calibration
8	aXCR!	a±Temperature,.humidity and pressure calibration value	Read calibration value