

CK03 Temperature and Humidity Probe can be used for temperature and humidity detection in glove box, greenhouse, fermentation and stabilization chamber, data recorder and incubator, storage, cold chain, breeding and other industries; it is equipped with the company's special supporting adapter cable, which can facilitate multi-point layout and installation.

Product features

- High precision: temperature error: -40 ~ 80 °C; error: less than ± 0.3 °C; humidity error: 0 ~ 80%; error: less than $\pm 2\%$.
- Digital signal output, CK3 output is I2C interface.
- Small size and low power consumption.
- Meet IP65 protection.



Electrical performance parameters

Rated operating voltage: 3.3 V; Limiting operating voltage: minimum 2.1V, maximum 5.4 V; Power consumption current: maximum $\leq 1.5\text{mA}$

Temperature and humidity detection performance index

Parameter	Condition	Value	Units
CK03	Typ.	± 1.5	%RH
	Max.	Figure 1	-
Repeatability	Low, typ.	0.21	%RH
	Medium, typ.	0.15	%RH
	High, typ.	0.08	%RH
Resolution	Typ.	0.01	%RH
Hysteresis	at 25°C	± 8	%RH
Specified range	extended	0 to 100	%RH
Response time	τ 63%	8	s
Long-term drift	Typ.	< 0.25	%RH/yr

Parameter	Condition	Value	Units
CK03	typ., -40°C to 90°C	± 2	°C
	max.	Figure 2	-
Repeatability	Low, typ.	0.15	°C
	Medium, typ.	0.08	°C
	High, typ.	0.04	°C
Resolution	Typ.	0.01	°C
Specified range	-	-40 to 125	°C
Response time	τ 63%	> 2	°C
Long-term drift	max	< 0.03	°C/yr

SHT35A

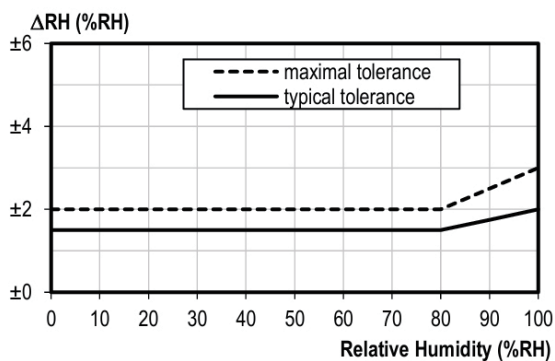


Figure 1

SHT35A

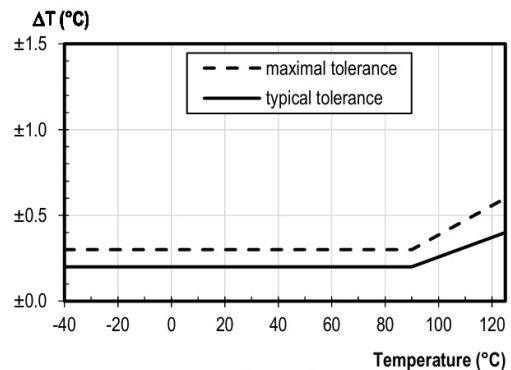


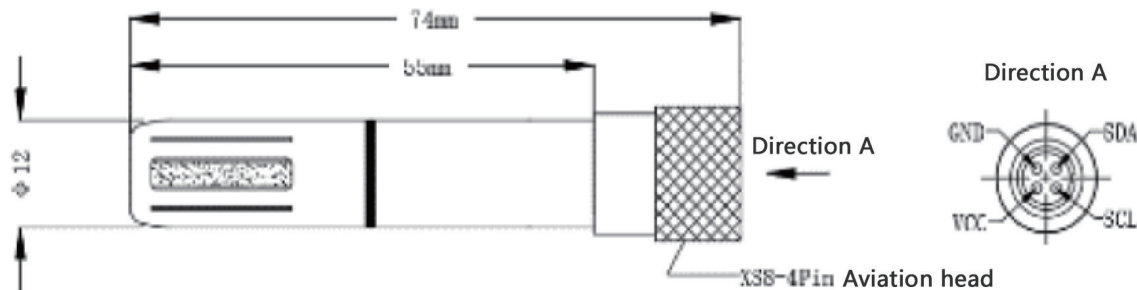
Figure 2

Electrical performance parameters

The operating temperature range of this product is $-40 \sim 80^{\circ}\text{C}$.

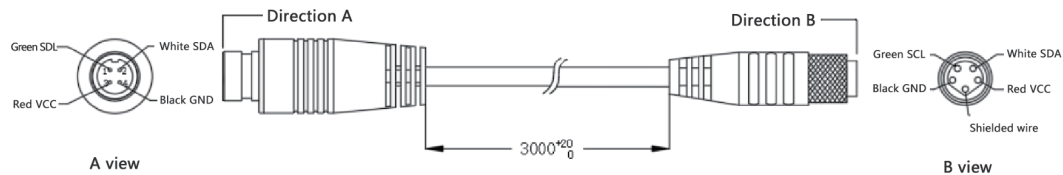
Product appearance structure & interface

The outline structure and interface of CK series calibratable temperature and humidity probe are defined as follows:



- A special protective filter is arranged in that window open part of the shell, which has better waterproof and dustproof effects, and the filter can be clean or replaced;
- Customized XS8-4PIN navigation head with lock nut is adopted to realize waterproof and moisture-proof.

The matching adapter cable and interface are defined as follows:



- One end of the patch cord connected to the calibratable probe is the male connector of XS8-4PIN, and the other end connected to the user equipment is the female connector of RHT634-1248 M8 5PIN;
- The adapter cable is optional. The standard length is 3 meters. Other lengths can be customized according to the order requirements.

Communication Interface & Operating Instructions

CK3 products are digital signal output, and the interface is standard I2C interface. Please refer to the product manual of chip manufacturer SENSIRION SHT35 for communication operation instruction and output detection value calculation.

Storage conditions and precautions

- ① Long-term exposure of the humidity sensor to high concentration of chemical vapor or other corrosive gases will cause the reading of the sensor to drift. Therefore, the product should be kept away from high concentration of chemical solvents or corrosive gases during use.
- ② If the sensor is exposed to extreme operating conditions or chemical vapors that cause the humidity reading to drift, it can be essentially restored to calibration by baking at 80°C , $< 5\% \text{ RH}$ for more than 10 hours, and then holding at $20 \sim 30^{\circ}\text{C}$, $> 75\% \text{ RH}$ for 12 hours.
- ③ Pay attention to avoid soaking the sensor in water or using it under the condition of high humidity ($> 90\% \text{ RH}$) and condensation for a long time.