Product model: HTM108L Low Power consumption Temperature Transmitter

Manufacturer: Nanjing Hangjia Electronic Technology Co., LTD.

Product Category: temperature transmitter

Application: IoT, industrial process control

Overview

HTM108L low-power temperature sensor uses high-quality and high-stability PT100 or PT1000 as the sensing element, coupled with a dedicated electronic conditioning circuit, and is assembled and produced through strict technological processes. This product has an all-stainless-steel appearance, multiple electrical outlet methods and multiple output signals. This product can be powered by an external lithium battery, with extremely low power consumption and long service life. It can also be connected to a wireless module to achieve wireless transmission.

The product has been screened for long-term aging and stability, and its performance is reliable and stable. It can be used in open spaces with relatively harsh environments. It is widely used in temperature measurement and various industrial process control in the IoT industry.
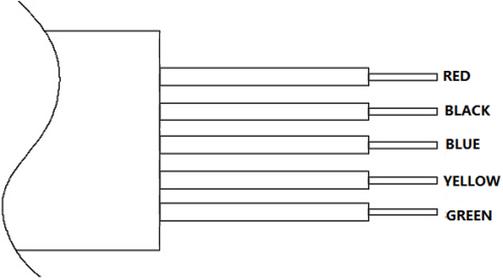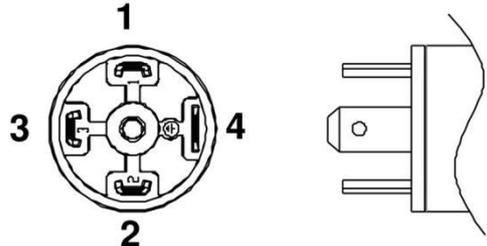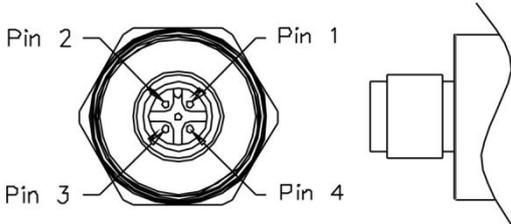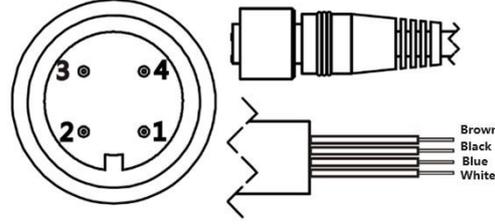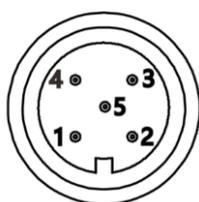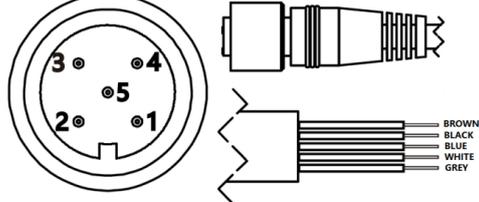
Feature

◆ Dedicated temperature measurement for the Internet of Things
◆ Can be powered by external lithium battery
◆ Low power consumption
◆ Support I^2C, RS485 or voltage signal output
◆ Compact size and easy to install
◆ High protection level
◆ Support customer customization

Technical Parameters

Temperature Range	50···0～100···500℃
Measuring Medium	Various liquids compatible with contact materials
Output Signal/Power Supply	I²C / Vs=3.0~5.5 VDC RS485 / Vs=3.1~8.0 VDC 0.25~1.25、0.5~2.5V, etc. voltage / Vs=3.1~8.0 VDC
Power consumption (I2C output)	Normal working mode <3mA Sleep mode <100nA Wake-up time 4ms
Power consumption (RS485 output)	Standby current: <20uA Date collection cycle: 0~65535s Power Consumption: 　　About 200uA with data collection cycle as 1s 　　About 70uA with data collection cycle as 3s 　　About 50uA with data collection cycle as 5s. 　　Note: Longer data collection cycle, lower consumption.
Power consumption (voltage output)	Working current <2.5mA
Accuracy	±0.5℃ （-50℃≤range≤100℃） ±1.0℃ （-50℃≤range≤300℃） ±3.0℃ （-50℃≤range≤500℃）
Ambient Temperature	-40～85℃
Storage Temperature	-40～85℃
Reverse polarity protection	No damage. Product will not work.
EMC	Compliance EN 61326
Protection grade	IP65
Insulation resistance	>100MΩ @500VDC
Insulation strength	Apply 500VAC 50Hz test voltage, no breakdown or arcing for 1 minute.

Electrical Connection

Cable outlet (Ordering code: C2)	Hirschmann /DIN43650 (Ordering code: C1)
RED BLACK BLUE YELLOW GREEN	1 3 4 2
M12x1 4P (Ordering code: C5)	M12x1 4P with cable (Ordering code: C5X)
Pin 2 Pin 1 Pin 3 Pin 4	3 4 2 1 Brown Black Blue White
M12x1 5P (Ordering code: C6)	M12x1 5P with cable (Ordering code: C6X)
4 3 5 1 2	3 4 5 2 1 BROWN BLACK BLUE WHITE GREY

3- wire 0.25-1.25, 0.5-2.5V Voltage output			
Signal definition	**Power+(+V)**	**Power – (GND)**	**Signal+(+OUT)**
Hirschmann/DIN43650	1	2	3
Cable outlet	Red	Black	Blue
M12×1-4P	1	2	3
M12×1-4P, with cable	Brown	Black	Blue

4- wire Modbus-RTU/RS485				
Signal definition	**Power+(+V)**	**Power – (-V)**	**RS485A**	**RS485B**
Hirschmann/DIN43650	1	2	3	4
Cable outlet	Red	Black	Yellow	Green
M12×1-4P	1	2	3	4
M12×1-4P, with cable	Brown	Black	Blue	White

I^{2}C (W/O PD Hibernate control pin*) *Hibernate Control Pin, built-in 68k pull-up resistor, high level hibernates, low level wakes up				
Signal definition	**Power+(+V)**	**Power – (-V)**	**SCL**	**SDA**
Hirschmann/ DIN43650	1	2	3	4
Cable outlet	Red	Black	Yellow	Green
M12×1-4P	1	2	3	4
M12×1-4P, with cable	Brown	Black	Blue	White

I^{2}C (With PD sleep control pin*) *Hibernate Control Pin, built-in 68k pull-up resistor, high level hibernates, low level wakes up				
Signal	**Power+(+V)**	**Power – (-V)**	**SCL**	**SDA**	**PD(Sleep)**
Cable outlet	Red	Black	Yellow	Green	Blue
M12×1-5P	1	2	3	4	5
M12×1-5P, with cable	Brown	Black	Blue	White	Grey

Structure Drawings(Unit:mm)
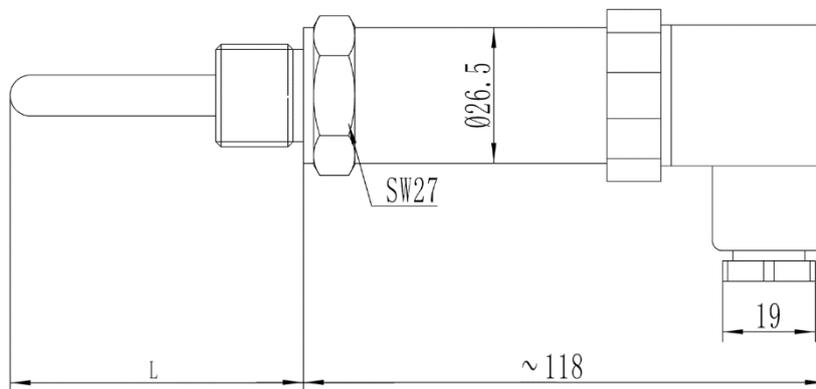
Material

Ordering code	Part	Description
S4	temperature probe	SS 304
S6		SS 316

Ordering Guide

Model No.	Type							
HTM108L	Low power consumption Temperature Transmitter							
	Code	Output Signal						
	C	IIC						
	R	RS485						
	V	voltage						
		Pressure Range	Measuring Range					
		(T1~T2)°C	T1 is lower limit T2 is upper limit					
			Code	Temperature measuring element				
			PT100	PT100				
			PT1000	PT1000				
				Code	Process connection			
				P1	M20×1.5			
				P4	G1/2			
				P17	M27×2			
				K1	1.5" clamp			
				K2	2" clamp			
					Code	Electronic connection		
					C1	DIN43650		
					C2	cable outlet		
					C5	M12×1-4P		
					C5X	M12×1-4P with cable		
					C6	M12×1-5P		
					C6X	M12×1-5P with cable		
						Code	Probe Material	
						S4	304	
						S6	316L	
							Code	Probe length
							L	L=insertion depth (mm)
								Code	Others
								Others requests
eg: HTM108L	R	(0~100)°C	PT100	P1	C2	S4	L=150mm	

Certification Information

Factory certification	
Certification organization	CQM
Quality management system	ISO 9001:2015
Certification scope	Research, development and manufacture of pressure transmitter and temperature transmitter
Certificate No.	00223Q21711R1S