IQTT-C Temperature Transmitting Controller

Introduction

The IQTT-C temperature transmitting and controller is an intelli-gent digital temperature measurement and control instrument that integrates temperature measurement, display control, and transmitting output. It can directly measure the surface temperature of various liquids, gaseous media and solids within the range of -200℃～500℃ , and output control signals. It uses a high-precision and high-reliability temperature sensor for measurement; the signal is processed by high-precision, low-temperature drift amplification; and converted into a microprocessor digital signal by a high-precision A/D converter; the two-way switch is controlled by the signal after arithmetic processing,then achieve the real-time measurement and control of the on-site temperature system, and linear correction. The digital temperature controller is flexible to use, simple to operate, easy to debug, safe and reliable. It is widely used in thermal pipeline, oil tank inspection, industrial automation control and inspection, etc.It can meet the temperature measurement and control requirements of various fields in petroleum, chemical industry, metallurgy, powerstation, light industry, and other fields.

Features

- Small meter head, easy to install
- Digital instrument, easy to debug
- Measurement, transmitting and control in one product
- High precision, high stability, high reliability
- Linear compensation
- Flexible and convenient on-site configuration

Specifications

- Range: -200℃ ...0℃～ 500℃
- Power supply: 16V ～ 30V DC (typical value 24V DC)
             10V ～ 30V DC (without current output)
- Accuracy: ±0.5%FS (FS ≥ 100℃), ±0.5℃ (FS ＜ 100℃)
- Output signal: 2-relay output
             2-relay output +4mA ～ 20mA DC
- Display: 4-digit LED display
- Insulation resistance: ≥ 50MΩ@500V DC
- Maximum power consumption: ≤ 3.5W
- Load capacity: Relay 250V/3A AC or 30V/3A DC
- Contact life:> 106 times
- Control rate: 40 times/S
- Long-term stability: ±0.1%FS/year
- Working temperature: -30℃～ 70℃
- Storage temperature: -40℃～ 120℃
- Degree of protection: IP65
- Temperature sensing element: PT100, PT1000 thermocouple

Structural Materials

- Housing material: Aluminum alloy
- Probe material: Stainless steel 304/316 or others

## Outline Structure （Unit: mm）
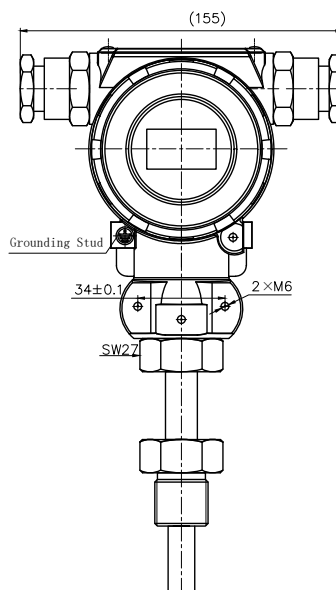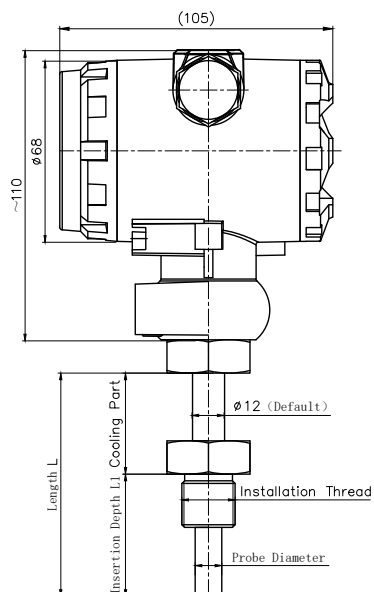
Optional Accessories

- Welded sleeve: Code HT
- Threaded sleeve: Code LT
- Flange sleeve: Code FT
- Welding fitting: Code HJ
- Electrical connector:
  Code MD01 (suitable for wire diameter φ4~φ8)
  Code MD02 (suitable for wire diameter φ8~φ12)
- Note: For specific specifications and selection, please refer to the temperature accessory.

Electrical Connection

Button Definition

Button	Name	Function Definition
SET	Setting	Confirm (click) / Move cursor (long press)
▲	Up	Up / Increase the value
▼	Down	Down / Decrease the value

Note: Please refer to the instruction manual for the setting logic
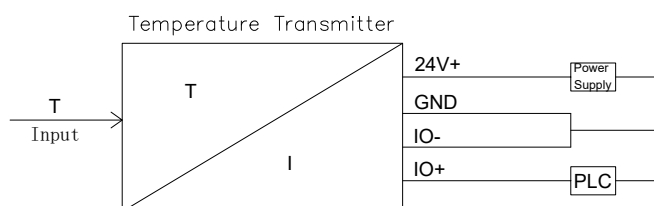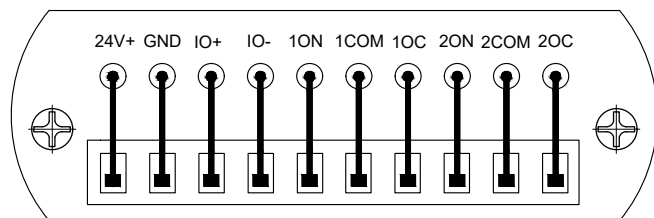
Item	Definition
24V+	24V +
GND	24V -
IO+	4~20mA Output +
IO-	4~20mA Output -
1ON	Relay 1 normally open terminal
1COM	Relay 1 GND terminal
1CN	Relay 1 normally closed terminal
2ON	Relay 2 normally open terminal
2COM	Relay 2 GND terminal
2CN	Relay 2 normally closed terminal

Order Guide

IQTT-C	Temperature Transmitting Controlle				
	Code	Measuring Range			
	[X°C～Y°C]	X and Y represent the value of lower limit and upper limit			
		Code	Output		
		2J	2-way relay		
		2JE	2-way relay + 4mA～20mA DC		

Code	Outer Diameter of Protection Tube, unit: mm
6	φ6
8	φ8
12	φ12
16	φ16
612	Inner Pipe φ6，Outer Pipe φ12（φ12 Welding Sleeve）
816	Inner Pipe φ8，Outer Pipe φ16（φ16 Welding Sleeve）

Code	Installation Methods & Interface
I	Fixed Thread Installation，Thread M20×1.5，Thread Length18mm
II	Fixed Thread Installation，Thread M27×2，Thread Length32mm
III	Fixed Thread Installation，Thread G1/2，Thread Length20mm
IV	Fixed Flange Installation（DN10、DN15、DN20、DN32…）
V	Chuck Installation（Clamp φ25.4、φ50.4…）
VI	Flexible Flange Installation（DN10、DN15、DN20、DN32…）
VII	Fixed Thread Installation，Thread M16×1.5，Thread Length18mm
VIII	Fixed Thread Installation，Thread G3/8，Thread Length14mm
IX	Other standard thread sizes, please note
X	Fixed Thread Installation，Thread NPT1/4，Thread Length14mm
XI	Fixed Thread Installation，Thread G1/4，Thread Length14mm

Code	Protection Tube Insertion Depth
XXX	Calculated by the actual length, unit is mm (the thread length is included by default, if not, please note in detail; if a product with a base is required, the insertion depth is the extra length except the fitting)

Code	Material of Parts in Contact
1	Stainless Steel304
2	Stainless Steel316L
3	PTFE Sleeving
4	Customized material, please note.

Code	Cooling Part Dimension, unit: mm
XXX(Required Fields)	0mm [-50°C～100°C]
	100mm[-200°C～150°C]
	150mm[-200°C～500°C]

Code	Accessories
Optional	None
HT	Welded Sleeving
LT	Thread Sleeving
FT	Flange Sleeving
HJ	Welded Fitting
MD1	Electrical Connection（Cable Diameter φ4～φ8）
MD2	Electrical Connection（Cable Diameter φ8～φ12）

| IQTT-C | [0～200]°C | - | 2J | - | 6 | - | I | - | 200 | - | 1 | - | 150 | - | HTMD2 | Whole Spec. |

Notes

1. If there is no special note, except for the probe part and the housing, other materials are stainless steel 304;
2. For the content not included in the order guide, please consult our company for customization. The code should be replaced by '*', and explained in the remarks or provided with drawings;
3. Code Example:
   Example: IQTT-C [0 ～ 100℃]2J-6-I-200-1-150
   Description: IQTT-C Temperature Transmitting Controller, measuring range 0 ℃ ～ 100 ℃, 2-way relay output, outer diameter of probe6mm, fixed thread installation M20×1.5, thread length 18mm, insertion depth of protection tube 150mm, including thread length.