

# MTMK5883 Temperature Transmitting Controller



## 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

## Introduction

The MTK5883 temperature transmitting controller is an intelligent 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  $-200^{\circ}\text{C} \sim 500^{\circ}\text{C}$ , 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.

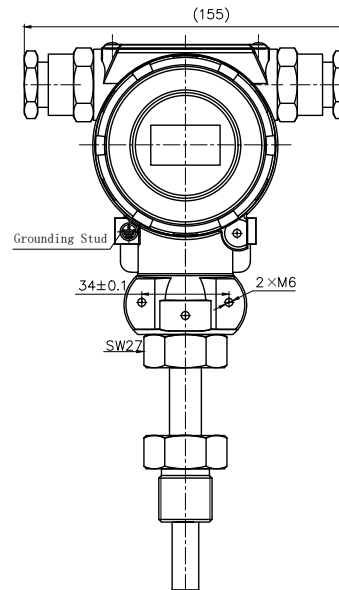
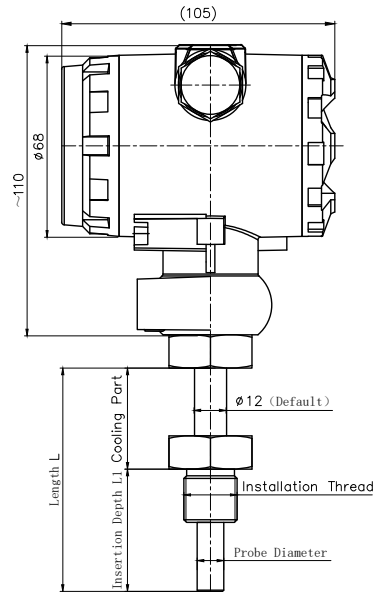
## Specifications

- Range:  $-200^{\circ}\text{C} \dots 0^{\circ}\text{C} \sim 500^{\circ}\text{C}$
- Power supply: 16V  $\sim$  30V DC (typical value 24V DC)  
10V  $\sim$  30V DC (without current output)
- Accuracy:  $\pm 0.5\% \text{FS}$  (FS  $\geq 100^{\circ}\text{C}$ ),  $\pm 0.5^{\circ}\text{C}$  (FS  $< 100^{\circ}\text{C}$ )
- Output signal: 2-relay output  
2-relay output +4mA  $\sim$  20mA DC
- Display: 4-digit LED display
- Insulation resistance:  $\geq 50 \text{M}\Omega @ 500 \text{V DC}$
- Maximum power consumption:  $\leq 3.5 \text{W}$
- Load capacity: Relay 250V/3A AC or 30V/3A DC
- Contact life:  $> 10^6$  times
- Control rate: 40 times/S
- Long-term stability:  $\pm 0.1\% \text{FS/year}$
- Working temperature:  $-30^{\circ}\text{C} \sim 70^{\circ}\text{C}$
- Storage temperature:  $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$
- 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

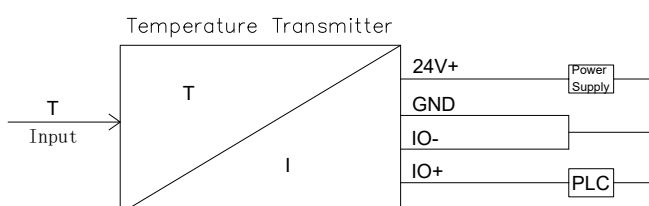
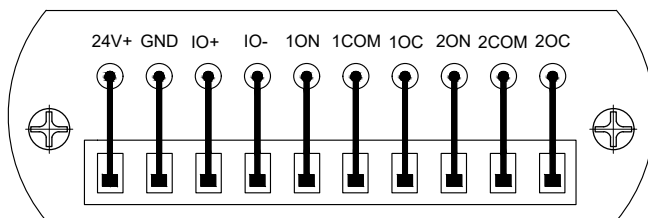
- Welded sleeve: Code HT
- Threaded sleeve: Code LT
- Flange sleeve: Code FT
- Welding fitting: Code HJ
- Electrical connector:
  - Code MD01 (suitable for wire diameter  $\phi 4 \sim \phi 8$ )
  - Code MD02 (suitable for wire diameter  $\phi 8 \sim \phi 12$ )
- Note: For specific specifications and selection, please refer to the temperature accessory.

## Button Definition

Button	Name	Function Definition
	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

## Electrical Connection



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

MTMK5883	Temperature Transmitting Controller															
	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 Pipeφ12 (φ12 Welding Sleeve)														
	816	Inner Pipe φ8, Outer Pipeφ16 (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 Sleevng														
	4	Customized material, please note.														
	Code	Cooling Part Dimension, unit: mm														
	XXX(Re- quired Fields)	0mm [-50°C~ 100°C]														
100mm[-200°C~ 150°C]																
150mm[-200°C~ 500°C]																
	Code	Accessories														
	Optional	None														
	HT	Welded Sleevng														
	LT	Thread Sleevng														
	FT	Flange Sleevng														
	HJ	Welded Fitting														
	MD1	Electrical Connection (Cable Diameterφ4~φ8)														
	MD2	Electrical Connection (Cable Diameterφ8~φ12)														
MTMK5883	[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: MTK5883[0 ~ 100°C]2J-6-I-200-1-150  
Description: MTK 5883 Temperature Transmitting Controller, measuring range 0 °C ~ 100 °C , 2-way relay output, outer diameter of probe 6mm, fixed thread installation M20×1.5, thread length 18mm, insertion depth of protection tube 150mm, including thread length.