

# MTM4831 Temperature Transmitter



## Features

- EXD / CCS certified
- Compact size, easy installation
- Zero and span adjustable
- Local display optional
- Multi-output signals
- Convenient filed configuration

## Introduction

MTM4831 temperature transmitter is available for measuring temperature from  $-200\text{ }^{\circ}\text{C} \sim 500\text{ }^{\circ}\text{C}$  of various liquid, gas or solid surface directly. It uses special temperature module to make linearity correction on temperature sensing element, outputting a standard analog/digital signal. With various outputs, it is easy to apply for temperature measurement in many different fields including petroleum, metallurgy, chemical industry, power station and light industry, etc.

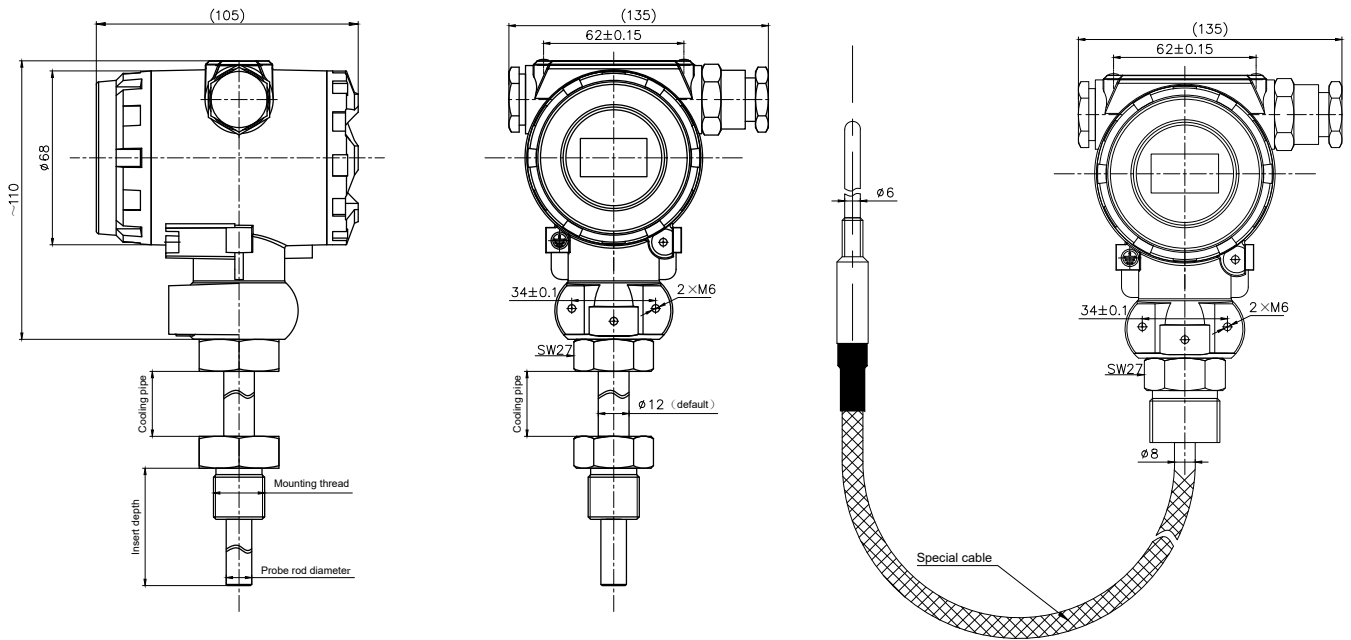
## Specifications

- Temperature Ranges:  $-200\text{ }^{\circ}\text{C} \cdots 0\text{ }^{\circ}\text{C} \sim 500\text{ }^{\circ}\text{C}$
- Power Supply:  $10\text{V} \sim 30\text{V DC}$  ( Typical:  $24\text{V DC}$  )  
 $15\text{V} \sim 30\text{V DC}$  ( Display )
- Output:  $4\text{mA} \sim 20\text{mA DC}$   
 $4\text{mA} \sim 20\text{mA DC} + \text{HART}$   
 $4\text{mA} \sim 20\text{mA DC} + \text{RS485}$   
RS485; Thermal Resistance
- Accuracy:  $\pm 1.0\% \text{FS}$  ( $-200\text{ }^{\circ}\text{C} \cdots 0\text{ }^{\circ}\text{C} \sim 500\text{ }^{\circ}\text{C}$  )  
 $\pm 0.5\% \text{FS}$  ( $-40\text{ }^{\circ}\text{C} \cdots 0\text{ }^{\circ}\text{C} \sim 150\text{ }^{\circ}\text{C}$  )  
 $\pm 0.25\% \text{FS}$  ( $-20\text{ }^{\circ}\text{C} \cdots 0\text{ }^{\circ}\text{C} \sim 105\text{ }^{\circ}\text{C}$  )
- Display: 4-digit LCD/LED
- Insulation Resistance:  $\geq 20\text{M}\Omega @ 500\text{V DC}$
- Stability:  $\pm 0.5\% \text{FS}/\text{year}$  (general)
- Ambient Temperature:  $-25\text{ }^{\circ}\text{C} \sim 70\text{ }^{\circ}\text{C}$
- Relative Humidity:  $< 95\%$
- Storage Temperature:  $-40\text{ }^{\circ}\text{C} \sim 120\text{ }^{\circ}\text{C}$
- Weight: About 1100g (header)
- Flameproof Sign: Ex d IIB T6 Gb

## Construction Material

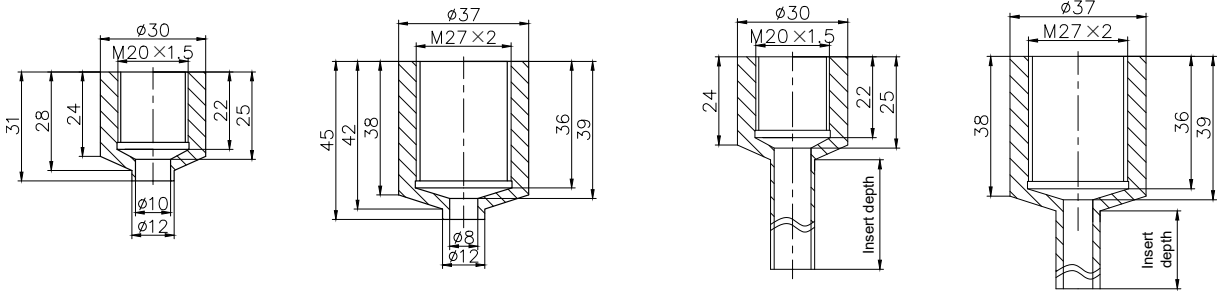
- Electronic housing: aluminum alloy
- Media wetted material: 304 stainless steel  
316 stainless steel/others
- Temperature sensing element: PT100/PT1000
- Display window: flameproof glass

Outline Construction (Unit: mm)



Integrated Type

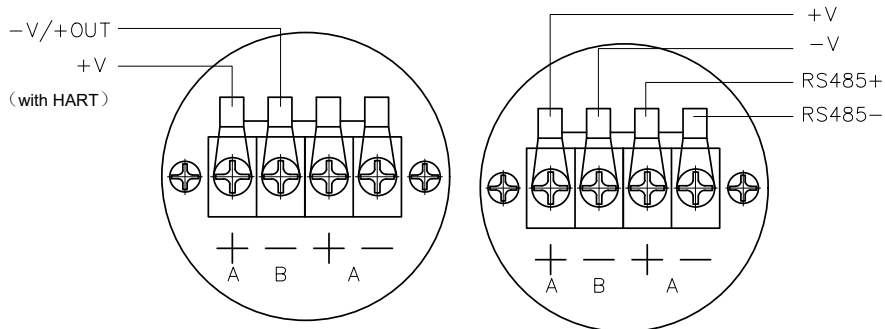
Split Type



Welding base

Welding sleeve

Electrical Connection



2-wire current with HART

RS485

**Order Guide**

MTM4831	Temperature Transmitter	
Range	[X ~ Y°C] X,Y is the temperature upper limit and lower limit, unit °C .(full range -200°C~ 500°C )	
L	Accuracy: ±1.0%FS (-200°C...0°C~ 500°C )	
M	Accuracy: ±0.5%FS (-40°C...0°C~ 150°C )	
H	Accuracy: ±0.25%FS (-20°C...0°C~ 105°C )	
Code	Output Signal	
E	4mA ~ 20mA DC	
EH	4mA ~ 20mA DC + HART	
R8	RS485	
ER8	4mA ~ 20mA DC + RS485	
Z	Thermal resistance	
Code	Protection pipe diameter Unit: mm	
6	φ6	
8	φ8	
12	φ12	
16	φ16	
612	Inner pipe φ6, Outer pipe φ12 (φ12 welding casing)	
816	Inner pipe φ8, Outer pipe φ16 (φ16 welding casing)	
Code	Installation Method and Process Connection (Split type: Header default)	
I	Fixed thread installation, M20×1.5 male, thread length 18mm	
II	Fixed thread installation, M27×2 male, thread length 32mm	
III	Fixed thread installation, G1/2 male, thread length 20mm	
IV	Fixed flange installation (DN10, DN15, DN20, DN32...)	
V	Chuck installation (Clamp φ25.4, φ50.4...)	
VI	Movable flange installation (DN10, DN15, DN20, DN32...)	
VII	Fixed thread installation, M16×1.5 male, thread length 18mm	
VIII	Fixed thread installation, G3/8 male, thread length 14mm	
IX	Other standard thread sizes, please note	
X	Fixed thread installation, NPT1/4 male, thread length 14mm	
XI	Fixed thread installation, G1/4 male, thread length 14mm	
Insert depth	Protection pipe insert depth (unit mm)	
XXX	According to the actual length required (the product with a base installation is required, the insertion depth is the size except the base)	
Code	Wetted part	
1	SS304 (default)	
2	SS316L	
3	PTFE sleeve	
4	Other materials, please note	
Code	Display type	
A	LCD display	
B	No display	
C	LED display (no flameproof type)	
Code	Other	
d	EXD (Exd II BT6Gb)	
T	CCS	
N	Null	
Code	Cooling pipe (unit: mm)	
XXX(Integrated)	0mm [-50°C~ 100°C ]	
	00mm[-200°C~ 150°C ]	
	50mm[-200°C~ 500°C ]	
F	Split Type	

MTM4831[0 ~ 200]°C L- E - 6 - I - 200 - 1 - A - d - 150 Complete specification

## Split type Order Guide

F	Split type, please continue to choose according to the following selection	
	Code	Cable length
	XXX	Specific length of high temperature shielded cable (unit: meter)
	Code	Cable form
	N	Non-armored cable
	KK	Armored tube cable (stainless steel corrugated tube)
	Code	Probe fixing method
	GL	Fixed thread installation,
	KT	Movable thread installation
	FL	Fixed flange installation
	KG	Chuck installation (Clamp $\phi 25.4$ , $\phi 50.4$ ...)
	TR	Immersion
	BG	Clamp type (The diameter of the protective tube can be customized)
	TP	Surface mount type(The diameter of the protective tube can be customized)
***-	F	- 5 - Kk - TR
Split type specification		

## Notes

1. If there is no special requirement, except the probe part and explosion-proof housing, other materials are stainless steel 304.
2. For the content not included in the order guide selection, please consult our company for customization. This item is replaced by '\*', and please explain them in the remarks or provide drawings.
3. Clamp type and surface mount type have a large deviation due to different environmental temperature. It is recommended to add heat preservation measures.
4. For example: MTM4831[0°C~ 200°C ]L-E-6\*-300-1-A-d-150
5. Description: MTM4831 temperature transmitter, accuracy  $\pm 1.0\%FS$ , range [0 ° C ~ 200 ° C], 4 ~ 20mA output, probe outer diameter 6mm, installation method shown in the drawings, protection pipe insertion depth 300mm, protection tube material SS304, LCD display, flameproof, cooling part length 150mm.