

Intelligent temperature controller TS420



principle structure

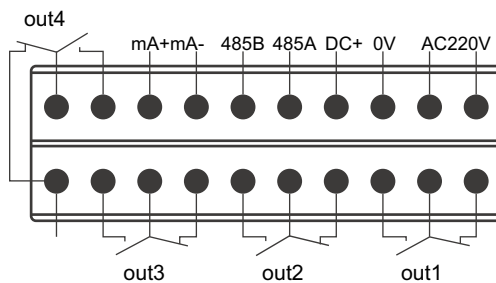
Intelligent temperature controller is set temperature measurement, display, output, control in one of the intelligent digital display temperature measurement and control products. The product is fully electronic structure, the front end of the PT100 platinum resistance imported from Germany, by high precision A/D conversion, microprocessor operation processing, field display, and output one analog and four switch.

The intelligent digital temperature controller is flexible, easy to operate, easy to debug, safe and reliable. Widely used in hydropower, tap water, petroleum, chemical, machinery, hydraulic and other industries, the pressure of fluid media field measurement display and control.

Product features

- 100 standard meter installation
- 4-bit LED digital tube display
- Four-way control point relay output
- Field setting of control points
- 4 to 20mA standard signal output
- Power supply 24VDC, 220VAC

wiring diagram

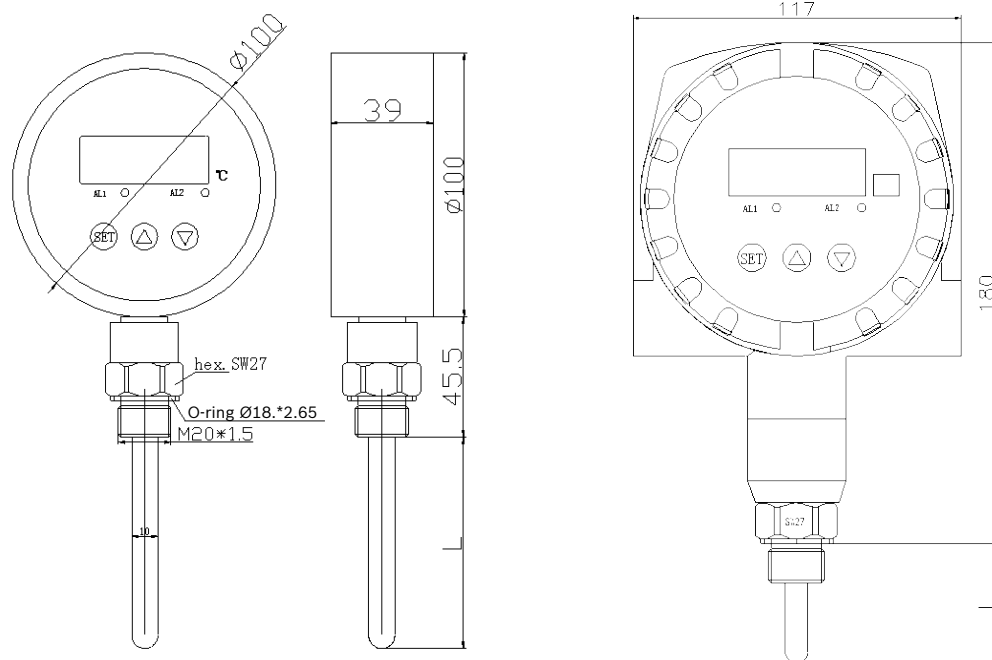


Technical parameters

Scale range	See selection table	Precision grade	$\pm 1^{\circ}\text{C}$
stability	$\leq 0.1\%$ /years	power supply voltage	24V/220V
Display mode	0.56" Digital tube	Display range	-1999~9999
environment temperature	-20°C~70°C	Relative humidity	$\leq 80\%$
mounting thread	optional	material	Stainless steel

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Size chart (mm)



Selection table

TS420-	C2080	G12M	025	detailed
TS420-				TS420 series intelligent temperature controller
	C2080			Range: -20... 80 ° C (User can specify the range)
	C0100			Range: 0... 100 ° C (User can specify the range)
	C50200			Range: -50... 200°C high and low temperature type (user can specify the range)
	C50400			Range: -50... 400°C high and low temperature type (user can specify the range)
	C100100			Range: -100... 100°C high and low temperature type (user can specify the range)
	C200100			Range: -200... 100°C high and low temperature type (user can specify the range)
		G12M		Process connection: G1/2 external thread
		M27M		Process connection: M27*2 external thread
		F25		Process connection: DN25 caliber flange
			025	Rod length (without thread) : 25mm
			050	Rod length (without thread) : 50mm
			100	Rod length (without thread) : 100mm
			150	Rod length (without thread) : 150mm
			200	Rod length (without thread) : 200mm
			250	Rod length (without thread) : 250mm
			300	Rod length (without thread) : 300mm
			350	Rod length (without thread) : 350mm
			400	Rod length (without thread) : 400mm
			450	Rod length (without thread) : 450mm
			500	Rod length (without thread) : 500mm

Operating Instructions

Intelligent temperature controller

TS420 Series



Product Overview

The intelligent temperature controller is an intelligent digital display temperature measurement and control product that integrates temperature measurement, display, output and control. This product features an all-electronic structure, with A PT100 sensor at the front end. It undergoes high-precision A/D conversion, is processed by a microprocessor, displayed on-site, and outputs one analog quantity and four switch quantities. This intelligent temperature controller is flexible to use, simple to operate, easy to debug, and safe and reliable. It is widely applied in industries such as hydropower, tap water, petroleum, chemical engineering, machinery, and hydraulics for on-site measurement, display and control of fluid medium pressure.

Product features

- ◆ Installation of 100 standard instruments
- ◆ 4-digit LED digital tube display
- ◆ Four-channel control point relay output
- ◆ On-site setting of control points
- ◆ 4~20mA standard signal output
- ◆ The power supply can be selected as 24VDC or 220VAC

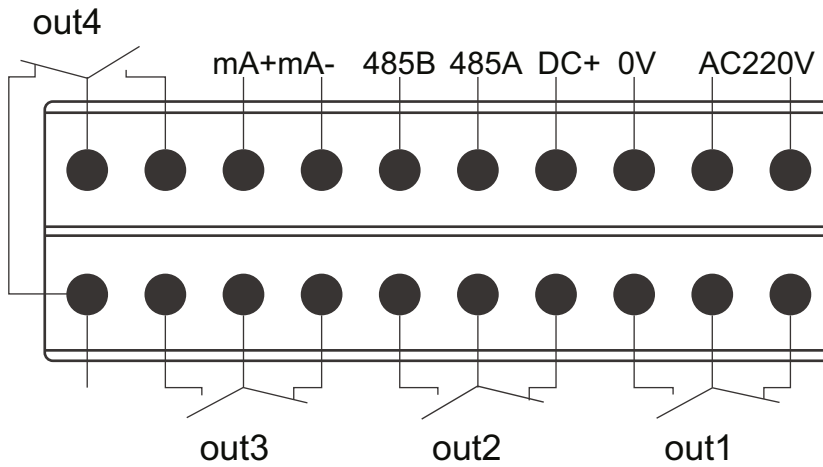
Technical parameters

Scale range	See selection table	Precision grade	±1°C
stability	≤0.1% /years	power supply voltage	24V/220V
Display mode	0.56" Digital tube	Display range	-1999~9999
environment temperature	-20°C~70°C	Relative humidity	≤80%
mounting thread	optional	material	Stainless steel

Mechanical connection

It can be directly installed on the hydraulic pipeline through the pressure pipe joint (M20*1.5) (other sizes of joints can be specified when placing an order). In critical application scenarios (such as severe vibration or shock), pressure pipe connectors can be mechanically decoupled through micro hoses.

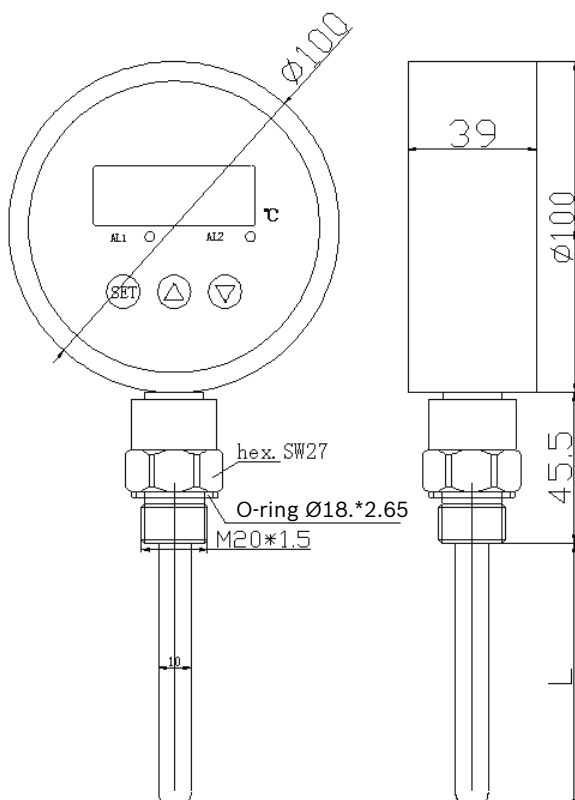
Electrical connection



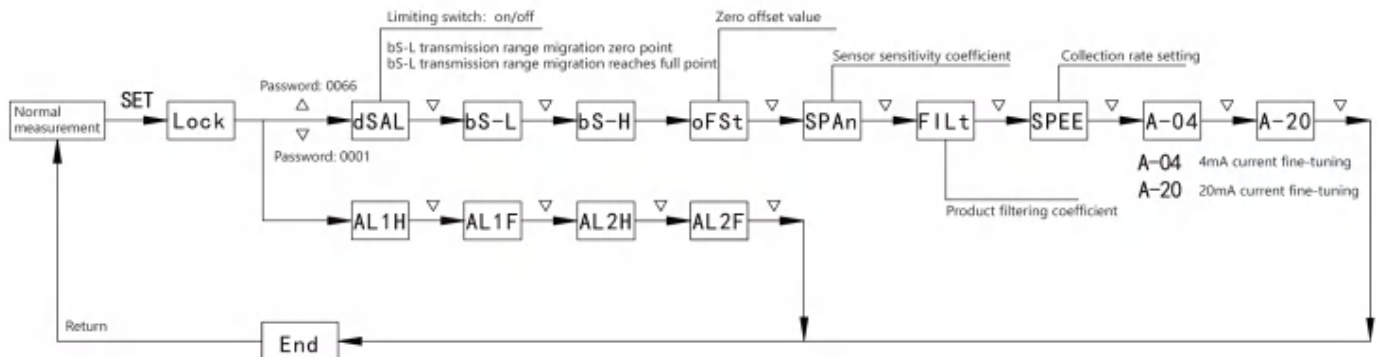
To prevent the influence of electromagnetic interference, the following points should be noted:

- Keep the line connections as short as possible and use shielded wires
- Try to avoid direct contact with the wiring of user devices or electrical and electronic devices that may cause interference
- If a micro hose is used for installation, the housing must be grounded separately

Dimension drawing (mm)



Output



The product has four switch output channels. The corresponding output will switch when the pull-in value of the switch point is reached and recover when the pressure drops below the release value.

Set the switch point

AL1H represents the closing value of switch 1, and AL1F represents the releasing value of switch 1
 AL2H represents the closing value of switch 2, and AL2F represents the releasing value of switch 2
 AL3H represents the closing value of switch 3, and AL3F represents the releasing value of switch 3
 AL4H represents the closing value of switch 4, and AL4F represents the releasing value of switch 4
 "END Save exit"

Note: The switch point is determined by the configuration of the pull-in value and the release value. When the pull-in value is greater than the release value, it is the upper limit alarm output (normally open function); when the pull-in value is less than the release value, it is the lower limit alarm output (normally closed function). The difference between the pull-in value and the release value is the hysteresis of the switch point.

Instructions for Use

The instrument is suitable for storage and use in an environment with a temperature ranging from -20°C to 70°C and a humidity of less than 80%.

When connecting the instrument to the power supply, the operation should be carried out in accordance with 5.2 Electrical Connection. Only after confirming that the operation is correct can the power be connected for operation.

When disassembling the instrument, do not apply force to the instrument housing.



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