



CHANGZHOU TIANLI INTELLIGENT CONTROL CO.,LTD.

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541/7T、541/7TK Temperature Switches

541/7t Explosionproof Temperature Switches

The sensor is Capillary thermometer bulb, it can be suitable for fluid neutral gas and liquid medium,if the medium is corrosive, then the stainless thermometer bulb socket can be optical used to cover the brass thermometer bulb(refer to the accessory). The Set-point of the switch is adjustable, and the adjustable range is from -30℃ to 280℃.



Technical Performance:

	Typical	Explosion Type
Switching Elements:	Microswitches	Sealed Switches
Explosion Class		Exed II CT4~T6 Certificate No. GYB04396X
Protection Class of Enclosure:	IP65 (accord with DIN40050)	IP54 (accord with DIN40050)
Ambient temperature::	-25℃~60℃	-20℃~50℃
Capillary length	1.5m(optional length maximum can be 6m, please indicate in the order)	1.5m(optional length maximum can be 6m, please indicate in the order)
Mounting Position:		virtically downward the horizontal plane
Anti-Vibration:	541/7T:40m/s2	Max. 20m/s2
	541/7TK:20m/s2	
Therometer bulb material	Brass	Brass
Repeatability Error:	≤3%	≤3%
Electrical rating :	AC 220V ,6A(Resistance)	DC 250V ,0.25A(Resistance), 60W max.
		AC 250V ,5A(Resistance),1250VA max.

Characteristic

High sensitive

Specifications

541/7T Dead Band Non-adjustable

Set Point adjustable range ℃	Dead Band No Greater Than		Max. Allowable Temperature ℃	Weight kg	Order Content No.	
	Lower limit of Set Point Range ℃	Upper limit of Set Point Range ℃			Typical	Explosionproof Type
-30...40	4	2	70	0.95	0891500	0891580
10...75	5	2.5	95		0891700	0891780
60...165	12	4	190		0891800	0891880
160...280	14	6	320		0891900	0891980

541/7T Dead Band Adjustable

Set Point adjustable range ℃	Dead Band No Greater Than		Max. Allowable Temperature ℃	Weight kg	Order Content No.	
	Lower limit of Set Point Range ℃	Upper limit of Set Point Range ℃			Typical	Explosionproof Type
-30...40	8...20	6.5...8	70	1	0890500	0890580
10...75	9...25	4...10	95		0890700	0890780
60...165	18...30	6...10	190		0890800	0890880
160...280	20...40	8...15	320		0890900	0890980

541/7TK Dead Band Non-adjustable (Narrow Dead Band, No explosionproof type)

Set Point adjustable range ℃	Dead Band No Greater Than		Max. Allowable Temperature ℃	Weight kg	Order Content No.
	Lower limit of Set Point Range ℃	Upper limit of Set Point Range ℃			
-30...40	2.5	1.5	70	0.95	0891507
10...75	3	2	95		0891707
60...165	6	3	190		0891807
160...280	7	4	320		0891907

The Adjustment for Set Point(please refer to the Set-point Adjustment for Pressure Switches)

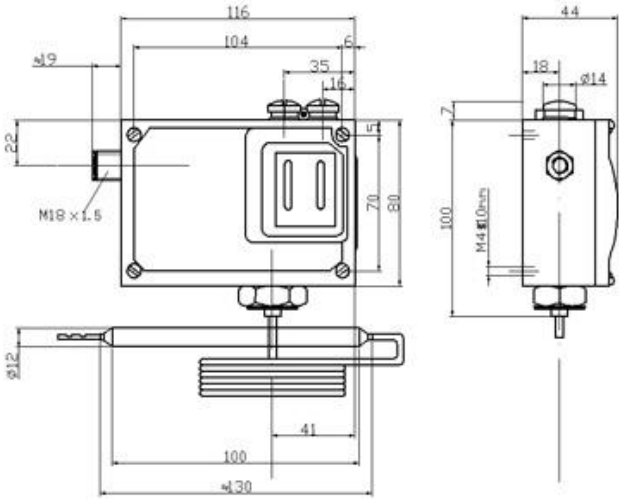
Selection and Installation (Please refer to the selection and Installation of Switches)

Accessories

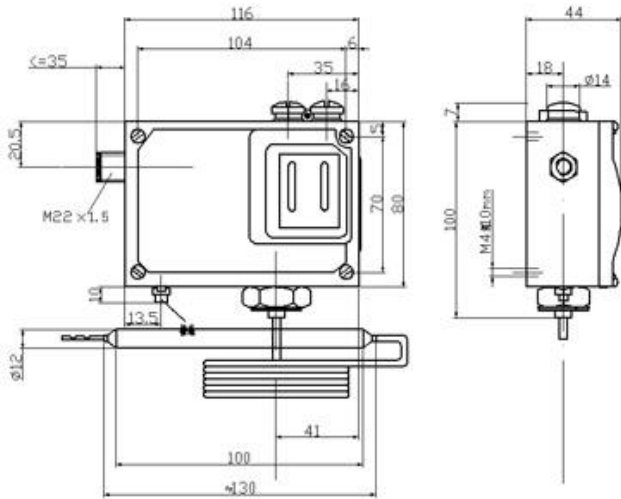
The optional accessories catalog No.0574757,0574758,0574755,0574772,0574759,0574760

Drawings

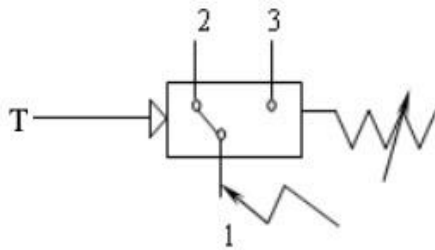
Typical



Explosionproof Type



Mode of connection



SPDT Switching process:

Terminals 1-3: switching element switch-on when pressure rises to Increasing set point

Terminals 1-2: switching element switch-off when pressure rises to Increasing set point

The Adjustment Steps of Temperature Switch

*The Set-up should be done in the thermostat, the thermometer bulb should be totally immersed into the medium . the speed of rising or falling of the temperature should not greater than 0.5°C/min.

Example 1

Choose switch model 541/7T, order content No. 0891700, it is required that a contact signal to be generated when temperature rise up to 40°C (the Increasing Set Point), for specific operating methods, please refer to followings:

1. Loose the locknut, put the product into the thermostat.
2. Open the cover, make the cable pass through connector and to be connected on the terminal of microswitch (caution: do not loose the microswitch), connect the other end of cable to multimeter..
3. Heat the temperature up to 40°C, this value can be read from the standard thermometer
4. Counter-clockwisely rotate the adjusting bolt, turn up the Set Point until the switching elements switches at 40°C
5. Screw the locknut, regulate the inner temperature of the thermostat to make it changing up and down around 40°C, to ensure the switching elements actuate at 40°C when temperature is rising, this result is just the Increasing Set Point, and its corresponding Decreasing Set Point is to be 40°C minus 3.5°C, just 36.5°C.

example 2

Choose switch model 541/7T, order content No. 0891500,a contact signal is required to be generated when temperature fall to 10°C, for specific operating methods, please refer to followings:

1. Loose the locknut, put the product into the thermostat.
2. Open the cover, make the cable pass through connector and to be connected on the terminal of microswitch (caution: do not loose the microswitch), connect the other end of cable to multimeter..
3. Heat the temperature up to 10°C, this value can be read from the standard thermometer
4. Clockwisely rotate the adjusting bolt, turn up the Set Point until the switching elements switches at 10°C.
5. Screw the locknut, regulate the inner temperature of the thermostat to make it changing up and down around 10°C, to ensure the switching elements actuate at 10°C when temperature is falling. this result is just the Decreasing Set Point, and its corresponding Increasing Set Point is to be 10°C plus the Dead Band 3°C, just 13°C.

example 3

Choose switch model 541/7T, order content No. 0890700,a contact signal is required to be generated when temperature rise to 50°C, and contact points return when temperature fall to 40°C. for specific operating methods, please refer to followings:

1. Loose the locknut, put the product into the thermostat.
2. Open the cover, make the cable pass through connector and to be connected on the terminal of microswitch (caution: do not loose the microswitch), connect the other end of cable to multimeter..
3. Heat the temperature up to 40°C, this value can be read from the standard thermometer
4. Counter-clockwisely rotate the adjusting bolt, turn up the Set Point until the switching elements switches at 40°C, this is the Decreasing Set Point.
5. Then counter-clockwisely rotate the adjusting bolt, to enlarge the value of Dead Band, until the contact points act at 50°C when temperature is rising to.
6. Screw the locknut, regulate the inner temperature of the thermostat to make it changing up and down between 40°C and 50°C, to ensure the switching elements actuate at 50°C when temperature is rising. this result is just the Increasing Set Point, and to ensure the switching element deactivated when temperature fall to 40°C, this is the