

# Explosion proof temperature switch

## Model : T953 (953 series)

Spec. sheet no. TD09-04

### Service intended

This temperature switch is installed with a micro contact, and it is suitable for measuring the temperature of corrosive fluid. Dead band is fixed.



### Repeatability

±1.0 % of adjustable range

### Dimension

Refer to type of mounting

### Measuring system

Organic gas : 0 ~ 200 °C  
Inert gas : -200 ~ 300 °C

### Working range

Maximum scale value

### Working temperature

Ambient : -40 ~ 65 °C



## Standard features

### Location of stem

Bottom connection, surface, case mounting

### Stem, process connection

3/8", 1/2", 3/4" PT, NPT and PF

### Case

Silver gray finished aluminium

### Switch form

Micro contact type  
One SPDT (Model : T953-1B3)  
Two SPDT (Model : T953-2B3)

### Cover

Silver gray finished aluminium

### Capillary

Capillary : 1.6/0.2 mm, 316SS  
Armored tube : 7.5/5.5 mm, 304SS

### Certificates

KCS Ex d IIC T6  
ATEX II 2G Ex d IIC T6 Gb  
IECEX Ex d IIC T6 Gb

### Stem

8.0, 10.0 and 12.0 mm  
316SS and 316L SS

**1. Base model**

**T953** Explosion proof temperature switch  
(Only available with single setpoint)

**2. Switch form**

- 1 One SPDT
- 2 Two SPDT

**3. Unused character**

**B3** None

**4. Stem material**

- 1 316SS
- 2 316L SS

**5. Stem, process connection**

- A None
- D  $\frac{3}{8}$ "
- E  $\frac{1}{2}$ "
- F  $\frac{3}{4}$ "

**6. Stem connection type (CF: Compression fitting)**

- A None
- E CF + PT
- F CF + NPT
- G CF + PF
- H MT + PT (Movable thread)
- I MT + NPT (Movable thread)
- J MT + PF (Movable thread)

**7. Stem outer diameter (mm)**

- 2 8.0
- 3 10.0
- 4 12.0
- Z Other

**8. Range**

**XXX** Refer to temperature range table

**9. Capillary length (m)**

- A Direct mounting type
- P 2
- Q 3
- S 5
- V 8
- X 10
- Z Other

**10. Accessories**

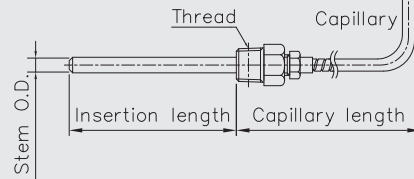
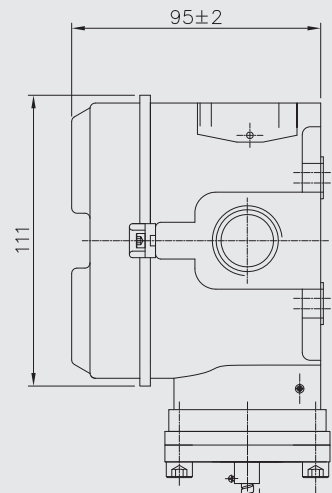
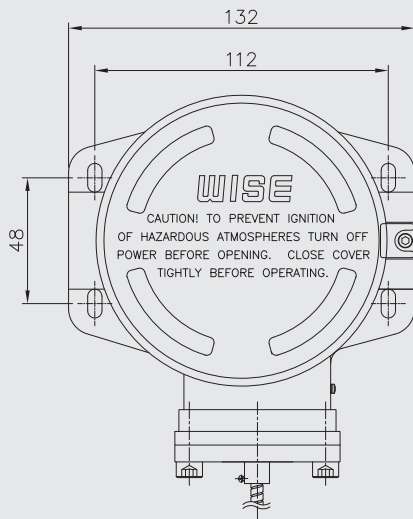
- 0 None
- 1 Thermowell

1	2	3	4	5	6	7	8	9	10
T953	1	B3	1	E	C	3	XXX	P	1

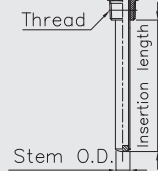
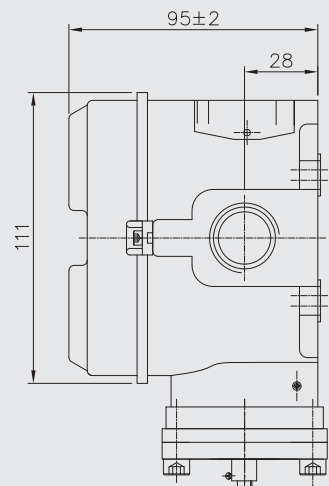
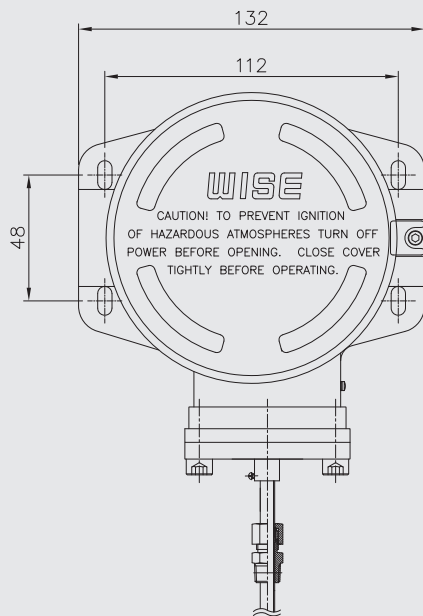
Sample  
ordering code

## T953 : Type of mounting

\* Remote reading type



\* Direct mounting type



## Temperature switch

A bi-stable electro-mechanical device that actuates/deactuates one or more electrical switching element at a predetermined discrete temperature upon rising or falling.

### Adjustable range

The span of temperature between upper and lower limited within which the temperature switch can be adjusted to actuate/deactuate.

It is expressed for increasing temperature.

### Setpoint

That discrete temperature at which the temperature switch is adjusted to actuate/deactuate on rising or falling temperature. It must fall within the adjustable range and be called out as increasing.

### Dead band

The difference in temperature between the increasing setpoint and decreasing setpoint.

## Proof pressure

The maximum input temperature that can be continuously applied to the pressure switch without causing permanent change of setpoint, leakage or falling, material failure.

### Burst temperature

The maximum input temperature that can be continuously applied to the temperature switch without causing leakage or catastrophic material failure. Permanent change of setpoint may occur, or the device may be rendered inoperative.

### Repeatability

The ability of a temperature switch to successively operate at a setpoint that is approached from a starting point in the same direction and returns to the starting point over three consecutive cycles to establish a temperature profile.

## Temperature range table

Code	Adjustable setting range (°C)	Maximum working temperature (°C)	Minimum stem length (mm)			Standard stem length (mm)		
			8.0	10.0	12.0	8.0	10.0	12.0
032	-50 ~ 30	35	100	85	65	200	130	100
037	-50 ~ 80	90	100	88	65	200	130	100
074	-10 ~ 65	75	100	85	65	200	130	100
104	20 ~ 90	95	100	85	65	200	130	100
109	50 ~ 120	130	100	85	65	200	130	100
114	100 ~ 170	180	100	85	65	200	130	100
119	150 ~ 220	230	100	85	65	200	130	100
124	190 ~ 260	270	100	85	65	200	130	100
129	230 ~ 300	310	100	85	65	200	130	100

## Insertion length

Code	1	2	3	4	5	6	7	8	9	A	B	C
Length (mm)	50	60	70	80	100	120	130	150	175	200	225	250

Code	D	E	F	G	H	J	K	L	M	N	P
Length (mm)	275	300	350	375	400	450	500	550	1,000	1,500	2,000

Rated voltage	Resistance load		Inductive load	
	NC	NO	NC	NO
125 V AC	15 (10)		15 (10)	
250 V AC	15 (10)		15 (10)	
480 V AC	10		10	
8 VDC	15		15	
14 V DC	15		10	
30 V DC	2		1	
125 V DC	0.4		0.03	
250 V DC	0.2		0.02	

### SPDT switching element

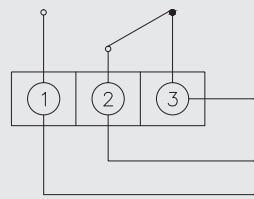
Single-pole, double throw (SPDT) has three connection : C-common, NO-normally open and NC-normally closed, which allows the switching element to be electrically to the circuit NO or NC state.

### DPDT switching element

Double-pole, double throw (DPDT) is two SPDT switching elements operated by a common lever assembly so simultaneous actuation/deactuation occurs at both the increasing and the decreasing set point. Two independent electrical circuits can be switched, i.e. one AC and one DC.

#### Single type

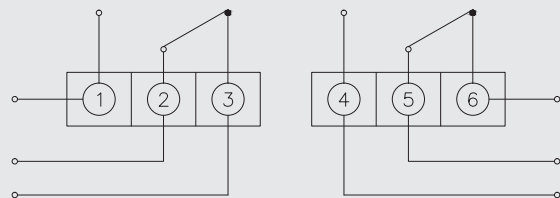
When the input pressure reach the upper or lower limit setpoint. The circuit is closed and opened.



①:N.O ②:COM ③:N.C

#### Double type

When the input pressure reach the upper or lower limit setpoint. Two circuit are simultaneously closed and opened.



①,④:N.O ②,⑤:COM ③,⑥:N.C

N.O : Normal open  
N.C : Normal close