## S1 TYPE P.01

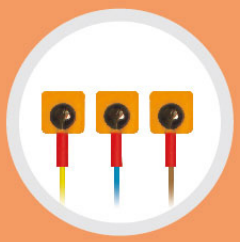
Application Example :

Power Plant
Cogeneration Plant
Chemical Plant
Large Pipe Diameter
Large Area
Surface Temperature Sensing

## M / M1 TYPE P.01

Application Example :

Refrigerator (Freezer) for Medical Products
Communication Machine Room
Central Control Room
Communication Environment Control Room
Indoor Temperature Sensing for Fire Alarm



## M2 TYPE P.04

Application Example :

Refrigerator (Freezer) for Medical Products
Communication Machine Room
Central Control Room
Communication Environment Control Room
Indoor Temperature Sensing for Fire Alarm

## MS TYPE P.05

Application Example :

Refrigerator (Freezer) for Medical Products
Communication Machine Room
Central Control Room
Communication Environment Control Room
Indoor Temperature Sensing for Fire Alarm

## B / B1 TYPE P.07

Application Example :

Chemical Plant
Power Plant
Cogeneration Plant
Pipe-shape Equipment
Surface Temperature Sensing

## R TYPE P.09

Application Example :

Roller Equipment
Power Equipment
Conveying Equipment
Surface Temperature Sensing

# FSTS®

## DETECT IT AHEAD OF TIME BEFORE THE PROBLEM HAPPEN

Mingyou Co., Ltd. has been specialized and dedicated in the R&D and sales of temperature control and heating control systems and components since its establishment in 1986, and the company has obtained good commendations from hundreds of industrial customers. In view of the issues that the improper installation, adverse environment, careless maintenance and overloading of the industrial production equipment and electrical power equipment may easily and frequently cause damage to the equipment, power interruption, or industrial safety incidents so that the finance or personnel of the enterprise may suffer heavy losses, Mingyou has invested substantial financial and human resources to develop the FSTS series products which are designed for sensing the small surface area on various equipment. These patented products can be employed as the alarm systems for the prevention of incidents for various kinds of equipment in the industry.

- 監視控制


(FSTS系列產品均可連接)


(FSTS系列產品均可連接)

**ACCURACY · PROFESSIONAL · QUALITY**

# FSTS® | S1 / M / M1 TYPE
## FLEXIBLE SURFACE TEMPERATURE SENSOR


## Features

Patent(M331662)

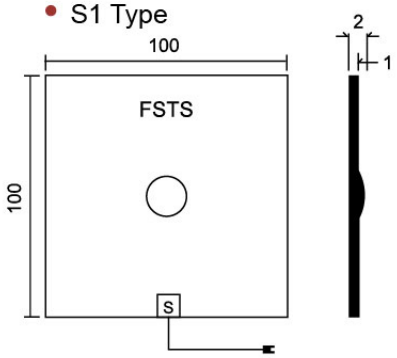
- The Best Solution of Surface Temperature Measurement.
- Detect it ahead of time before the problem happen.
- The best abnormal temperature detector for your equipment.
- The best solution for surface temperature sensing.
- Applicable temperature range:-30°C~250°C.
- Accuracy: DINIEC751 class A or B.
- The material has been certified by UL and complies with UL94HB fire-resistance rating.
- Fast and accurate temperature sensing; 100% IP68 water proof.
- It can be attached on the surface of the object to be sensed with the advantages of simple installation, resistance against severe environment and chemicals.
- Can be securely attached on glass, metal, plastics, etc.

## Specifications:

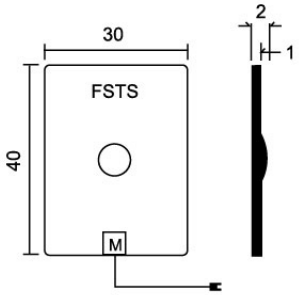
| Type | S | M | M1 | Note |
|---|---|---|---|---|
| Outer Dimensions | 100x100(mm) | 30x40(mm) | 10x30(mm) | Can be customized for special requirements |
| Temperature Sensing Body | P100Ω class A or B, K. T. Thermister | | | Can be customized for special requirements |
| Response Speed | 200℃/6S | | | DINIEC751 |
| Thermal Conductivity | 1.5W/mK | | | D547D |
| Temperature Sensing Range | -30~250℃ | | | |
| Safety Certification (PAD) | UL94HB/UL746C | | | E54153/E65361 |
| Adhesion of Backside Sticker | 1n$^2$ 1000(100℃) / 500(150℃) / 400(200℃) / 300(250℃) (g) | | | |
| Corrosion Resistance | Gasoline, Acetone, cleanser, mild acid/base, etc | | | SPLASH TESTING |
| Water Proof Rating | IP68 | | | CNS14165 |
| Insulation Voltage Resistance | 5KV | | | ASTM D-149-91 |
| Installation Type | Backside Sticker (-30°C~200°C) Silicone (>200°C) | | | |
| Conducting Wire | PVC(100°C) (Silicone 150°C) (Teflon 180°C) | | | |
| Connector | Cylindrical Body 17ψx80(mm) IP68 UL94V0<br>Terminal Box 82x50x40(mm) IP66 UL94V0 | | | Optional Accessories |

## Dimensions(mm):

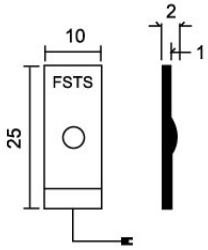
- S1 Type



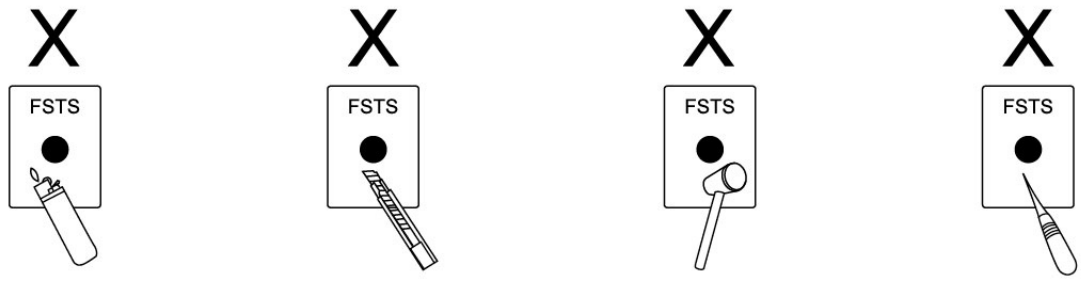

- M Type




- M1 Type



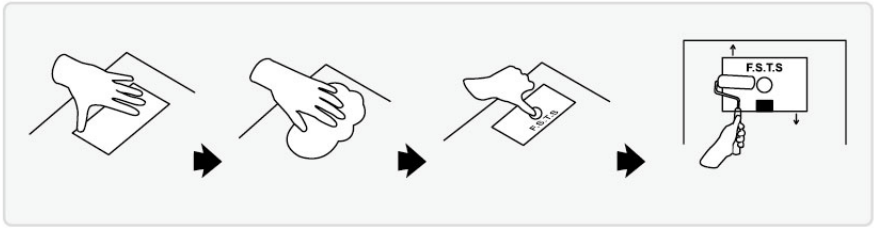
## Precautions for Operations:




After peeling off from attachment, it is necessary to stick a new backside sticker before another attachment (a spare backside sticker is supplied with the product).

## Attachment Technique:

- 220°C and below (Attach with the backside sticker)



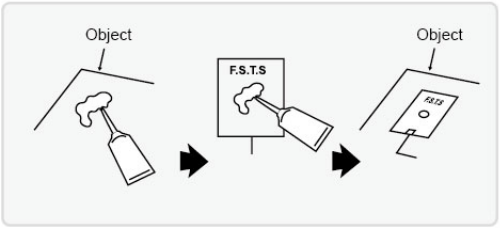

Step1. Clean the surface with cleaning naphtha

Step 2. Wipe the surface dry and clean

Step 3. Attach the temperature sensing point

Step 4. Attach its peripheral

- Above 220°C (Apply silicone adhesive); A bottle of silicone adhesive is supplied with the product




Apply silicone adhesive on both the surfaces of FSTS and the object to be sensed

After staying for 1 minutes, attach the FSTS on the object to be sensed

## Order Specifications:

FSTS — TYPE — INPUT TYPE — °C SELECT — LEAD WIRE — CONNECTOR — AUX

| TYPE |
|---|
| S1 |
| M |
| M2 |

| INPUT TYPE |
|---|
| DINPT100Ω3W class A |
| DINPT100Ω3W class B |
| K(CA) |
| J(IC) |
| T(CC) |
| OTHER |

| °C SELECT | |
|---|---|
| 1 | 100~220°C |
| 2 | 100°C以內 |
| 3 | 220~250°C |
| 4 | OTHER |

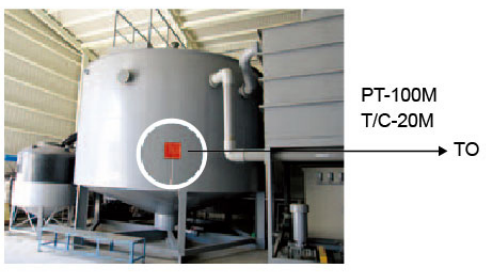
| LEAD WIRE | |
|---|---|
| 1 | PVC(105°C) 2M |
| 2 | PVC(105°C) 5M |
| 3 | TEFLON(180°C) 2M |
| 4 | TEFLON(180°C) 5M |
| 5 | OTHER |

| CONNECTOR | |
|---|---|
| 0 | NON |
| 1 | Cylindrical body (Male Female) IP68 |
| 2 | Terminal box IP66 |
| 3 | OTHER |

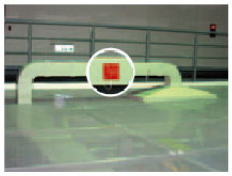
| AUX | |
|---|---|
| O | NON |
| B | TRANSDUCER |
| C | TRANSDUCER |
| D | OTHER |

## Application Example:

- S1 TYPE




Temperature Sensing of Large-scale Storage Tank (Connection Example)



Exhaust gas pipeAbnormal temperature detection (Installation Example in Shangcun Chemical)

Abnormal temperature detection for air conditioner pipe (Installation Example in Shangcun Chemical)

Abnormal temperature detection for electroplating exhaust gas pipe (Installation Example in Shangcun Chemical)

## Abnormal Temperature Detection for Electronic Equipment:

- M & M1 TYPE

PT-100M
T/C-20M
TO


ALARM & CONTROL
RS485

Channel 1

ALARM
RS485

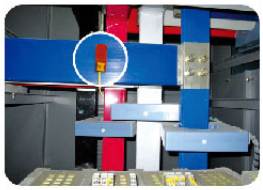
Channel 5


4~20mA

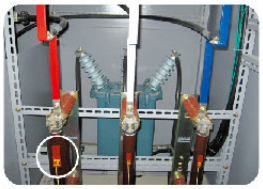
VCB過載異常溫度偵測

轉換器


Abnormal Temperature Detection for Large-scale UPS



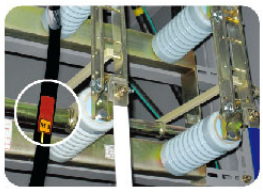
Abnormal Temperature Detection for Power Bus Bar



Abnormal Temperature Detection for High-Voltage Fuse Overload

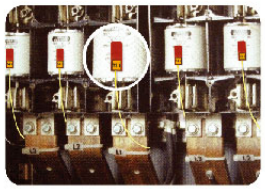
Abnormal Temperature Detection for Capacitor Cabinet


Abnormal Temperature Detection for Transformers



Abnormal Temperature Detection for High-Voltage Cables

Abnormal Temperature Detection for Motor Overload



Abnormal Temperature Detection for Low-Voltage Fuse

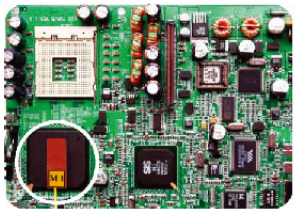
## Abnormal Temperature Detection for Boiler Cooling Pipe Ducts:

Abnormal Temperature Detection for Steam Pipes

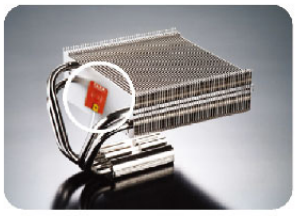
Abnormal Temperature Detection for Steam Pipes

Abnormal Temperature Detection for Water Chiller Pipes

## Abnormal Temperature Detection for Electronics Products:



Abnormal Temperature Detection for ICs

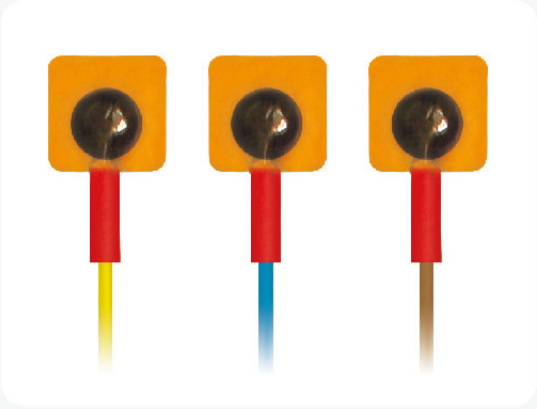


Abnormal Temperature Detection for Heat Sinks

Abnormal Temperature Detection for Solar Panels

# FSTS® | M2 TYPE
## FLEXIBLE SURFACE TEMPERATURE SENSOR

MINI



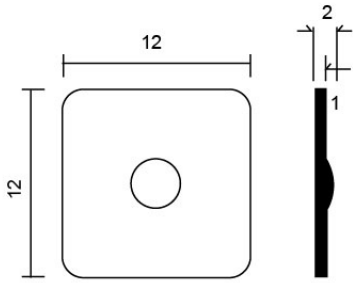
### Features

- Applicable temperature range:-30°C~150°C.
- Accucay: DIN IEC751 Class A or B, T/C Class 0.5.
- The material has been cerified by UL and complies with UL-510 fire-resistance rating.
- Mini size 12x12(mm), suitable to detect the temperature of IC.
- Fast and accurate temperature sensing; 100% IP68 water proof
- It can be attached on the surface of the object to be sensed with the advantages of simle installation, resistance against severe environment and chemicals.

## Specifications:

| Type | M2 | Note |
|---|---|---|
| Size | 12x12x2(mm) | Can be customized for special requirements |
| Temperature Sensing Body | PT100 Ω A or B, T/C K.J.T | Can be customized for special requirements |
| Response Speed | 200℃/5s | |
| Thermal Conductivity | 1.5w/mk | ASTMD547D |
| 撕裂強度 | 10kg/in$^2$ | |
| Temperature Sensing Range | -30~200℃ | |
| Safety Cerification (PAD) | UL | E117836 |
| Adhesion of Backside Sticker | in2 800g(100℃) / in2 400g(200℃) | |
| Comosion Resistance | Gasoline, Acetone, Cleanser, acid/base, etc. | |
| Water Proof Rating | 1P68 | CNS14165 |
| Insulation Voltage Resistance | 5kv | ASTM D-149-91 |

## Dimensions(mm):




## Order Specifications:

FSTS — TYPE M2 —

| INPUT TYPE | |
|---|---|
| 1 | K |
| 2 | J |
| 3 | T |
| 4 | PT100Ω |
| 5 | OTHER |

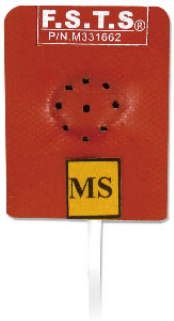
—

| °C SELECT | |
|---|---|
| 1 | 100℃內 |
| 2 | 101~200℃ |
| 3 | OTHER |

—

| LEAD WIRE | |
|---|---|
| 1 | K 1.2Φ TEFLON 2M |
| 2 | J 1.2Φ TEFLON 2M |
| 3 | T 1.2Φ TEFLON 2M |
| 4 | PT PVC 2M |
| 5 | PT TEFLON 2M |
| 6 | OTHER |

# FSTS® | MS TYPE ( FOR AIR )
## FLEXIBLE SURFACE TEMPERATURE SENSOR




Patent(M331662)

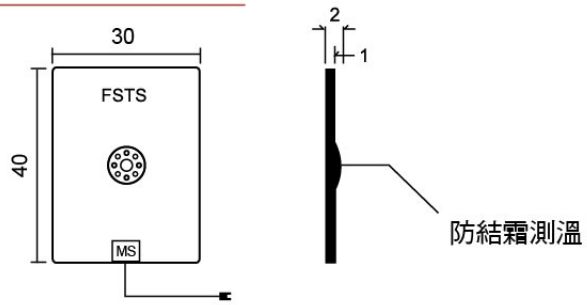
### Features

- The Best Solution of Surface Temperature Measurement.
- Detect it ahead of time before the problem happen.
- Suitable for the temperature sensing in refrigerators, freezers, communication machine rooms, and indoor environment.
- Can be attached on the surface made of PE, PP, ABS, PET and various metals.
- Can be attached repeatedly.
- Passed MSDS certification.
- Superconductive, fast, stable and accurate.

## Specifications:

| Type | MS | Note |
|---|---|---|
| Dimensions | 30x40(mm) | Can be customized for special requirements |
| Temperature Sensing Body | P100Ω K.J.T. Thermister | Can be customized for special requirements |
| Response Speed | 200℃/6S | |
| Thermal Conductivity | 1.5W/mK | ASTM D547D |
| Temperature Sensing Range | -40~250℃ | |
| Accuracy | P100Ω class A or B, 3850ppm/℃, ±4ppm/℃, T/C0.5 | DIN IEC751 |
| UL Certification (PAD) | UL94HB/UL746C | E54153/E65361 |
| Corrosion Resistance | Acid, Base, etc | Air dry 20 seconds after spraying |
| Water Proof Rating | IP68 | CNS14165 |
| Toxicity Test | 10°C for MSDS test | |

## Dimensions(mm):




## Order Specifications:

FSTS — TYPE MS —

| INPUT TYPE | |
|---|---|
| 0 | K(CA) |
| 1 | DINPT100Ω3W |
| 2 | DINPT100Ω2W |
| 3 | JISPT100Ω3W |
| 4 | JISPT100Ω2W |
| 5 | OTHER |

—

| °C SELECT | |
|---|---|
| 1 | 100℃以內 |
| 2 | 100~220℃ |
| 3 | 220~250℃ |
| 4 | OTHER |

—

| LEAD WIRE | |
|---|---|
| 0 | 1M SILICON |
| 1 | 2M SILICON |
| 2 | 1M TEFLON |
| 3 | 2M TEFLON |
| 4 | 1M PVC |
| 5 | 2M PVC |
| 6 | OTHER |

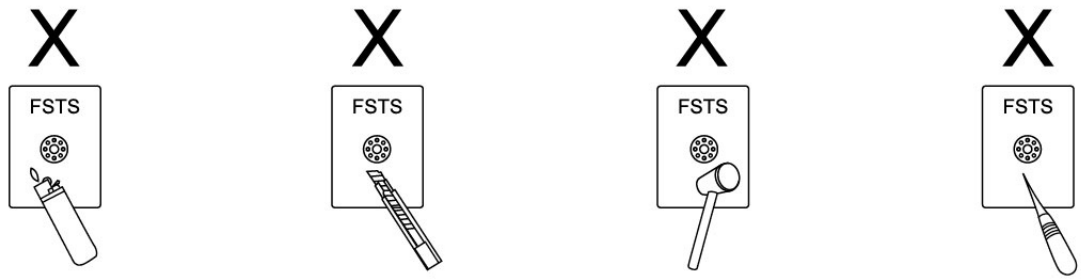
—

| CONNECTOR | |
|---|---|
| 0 | NON |
| 1 | Cylindrical body (Male-Female) IP68 |
| 2 | Terminal box IP66 |
| 3 | OTHER |

—

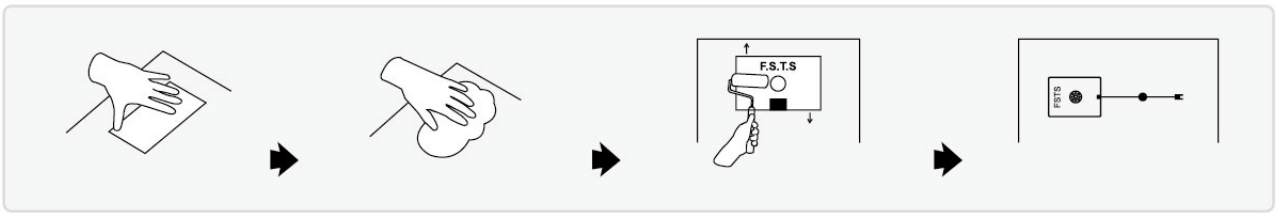
| AUX | |
|---|---|
| A | NON |
| B | TRANSDUCER |
| C | MONITOR |
| D | OTHER |

## Precautions for Operations:




After peeling off from attachment, it is necessary to stick a new backside sticker before another attachment (a spare backside sticker is supplied with the product).

## Attachment Technique:




Step 1.
Clean the surface with cleaning naphtha

Step 2.
Wipe the surface dry and clean

Step 3.
Attach the temperature sensing point

Step 4.
Attach its peripheral

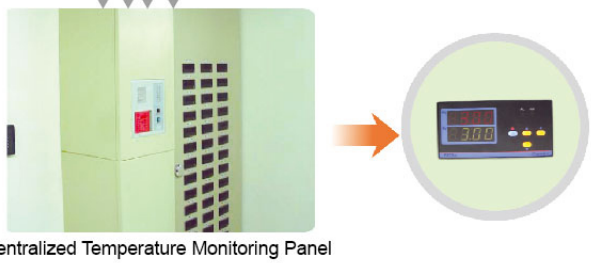
## Application Example:

Temperature Sensing for Medical Refrigerator

Abonormal Temperature Detection for Communication Machine Room

Temperature Sensing for UPS Machine Room

Abnormal Temperature Detection for Communication Environment Control Room



Centralized Temperature Monitoring Panel

(RS485)

Central Monitoring Center

預留B1

Patent(M331662)

## Features

- The Best Solution of Surface Temperature Measurement.
- Detect it ahead of time before the problem happen.
- Suitable for the abnormal temperature detection on the pipe-shape objects in power plants, cogeneration plants, chemical plants, and semiconductor manufacturing plants.
- Applicable Temperature Range: -30°C~250°C.
- Accuracy: DINIEC751 class A or B.
- Material is UL certified and complies with UL94HB rating.
- Superconductive temperature sensing, stable and fast response speed.
- Simple installation and resistance against severe environment and chemicals.

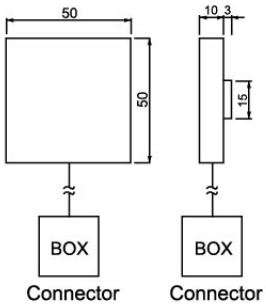
## Specifications:

| Type | B | B1 | Note |
|---|---|---|---|
| Dimensions | 30x40(mm) | | Can be customized for special requirements |
| Temperature Sensing Body | PT100Ω class Aor B | | Can be customized for special requirements |
| Response Speed | 200℃/6S | | |
| Thermal Conductivity | 1.5w/mk | | ASTM D547D |
| Temperature Sensing Range | -40℃~250℃ | | |
| Accuracy | PT class AorB, 3850ppm/℃, ±4ppm/℃ · T/C0.5 | | DIN IEC751 |
| UL Certification (PAD) | UL 94 HB/UL746C | | E54153/E65361 |
| Corrosion Resistance | Gasoline, Acetone, cleanser, mild acid/base, etc | | Air dry 20 seconds after spraying. |
| Water Proof Rating | IP68 | | CNS14165 |
| Toxicity Test | 10°C for MSDS test | | |

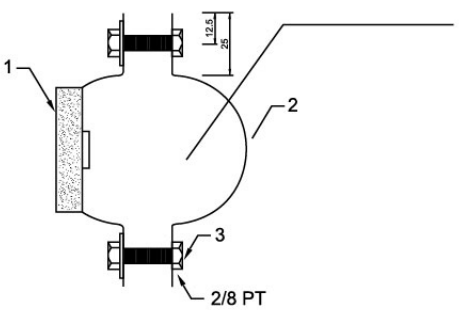
## Dimensions(mm):

- Stainless steel buckle type

F.S.T.S Body Dimension: (mm)




Overlook side:

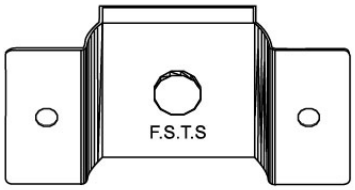



Buckles diagram :
2" - 55~65(mm) ψ
3" - 85~95(mm) ψ
5" - 130~140(mm) ψ

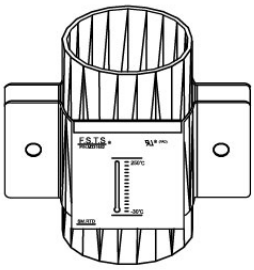
1. Buckle of Front Side (inside the F.S.T.S)
2. Buckle of Back Side
3. Fiting screw

## Installing:

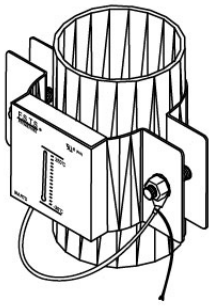
- Step1.
  Put the F.S.T.S in the buckle of Front Side.




- Step2.
  Wrap up on the pipe.



- Step3.
  Turn the Screw to tighten it.



## Precautions for Operations:

1.Please do not use this product on equipment with a temperature over 250°C.
2.While installing the product, please fasten the wire mounting ring and mounting rack (reinforce the tensile strength).
3.The product is supplied with a one-year warranty started from delivery date (excluding force majeure).

## Order Specifications:

FSTS — TYPE B —

| SIZE | |
|---|---|
| 1 | 2" |
| 2 | 3" |
| 3 | 4" |
| 4 | 5" |
| 5 | 6" |
| 6 | Special Requirements |

—

| INPUT TYPE | |
|---|---|
| 1 | DINPT100Ω3W Class A |
| 2 | DINPT100Ω3W Class B |
| 3 | K(CA) |
| 4 | J(IC) |
| 5 | T(CC) |
| 6 | OTHER |

—

| °C SELECT | |
|---|---|
| 1 | 100℃以內 |
| 2 | 100~150℃ |
| 3 | 150~250℃ |
| 4 | OTHER |

—

| LEAD WIRE | |
|---|---|
| 1 | M |
| 2 | 2M |
| 3 | 1M TEFLON |
| 4 | 2M TEFLON |
| 5 | 1M PVC |
| 6 | 2M PVC |
| 7 | OTHER |

—

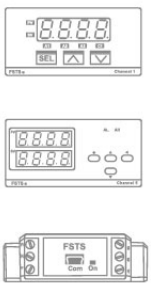
| CONNECTOR | |
|---|---|
| 0 | NON |
| 1 | Cylindrical body (Male-Female) IP68 |
| 2 | Terminal box IP66 |
| 3 | OTHER |

—

| AUX | |
|---|---|
| 0 | NON |
| 1 | Transmitter |
| 2 | Single point controller CH1 |
| 3 | 5-point controller CH5 |
| 4 | OTHER |

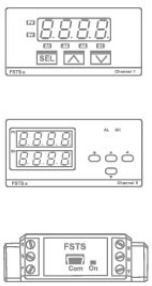
## Application Example:

PT-100M
T/C-20M



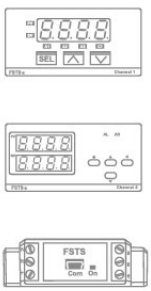
Abnormal temperature detection for power plant, cogeneration plant, heat recycling pipe, and ash ejectors (Example in Formosa Plastics)

PT-100M
T/C-20M

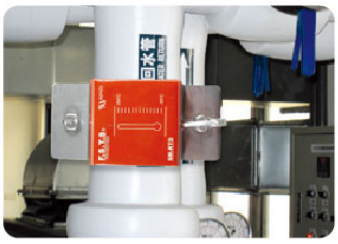


Abnormal temperature detection for steam pipes (Example in Shangcun Chemical)

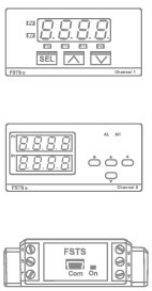
PT-100M
T/C-20M



Abnormal temperature detection for the cooling water used in the chiller for air conditioners



PT-100M
T/C-20M



Abnormal temperature detection for the return-loop water used in the cooling water for air conditioners

# FSTS® R TYPE
## FLEXIBLE SURFACE TEMPERATURE SENSOR

Patent(M349488)

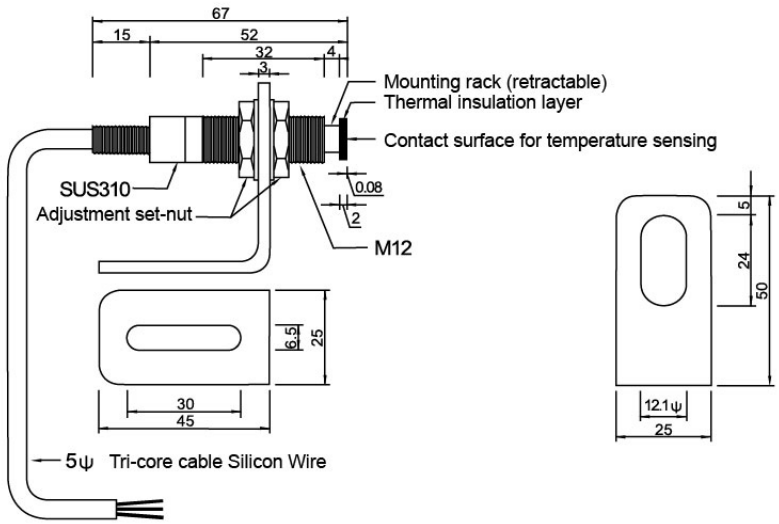
### Features

- The Best Solution of Surface Temperature Measurement
- Detect it ahead of time before the problem happen.
- Suitable for the temperature sensing of rubber, Teflon, silicone and metal heating rollers, conveyors, motor spindles, etc.
- Temperature sensing surface has excellent abrasion resistance and a long lifespan.
- Compact, simple installation.
- Temperature rise is fast and stable.
- Resistant against acid, base and various solvents.
- Applicable for heating rollers of any size.

## Specifications:

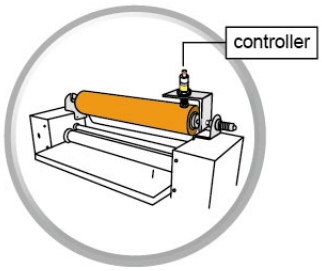
| Type | R | Note |
|---|---|---|
| Dimensions | m12ψX55(mm) SUS310 | Can be customized for special requirements |
| Temperature Sensing Range | -20℃~250℃ | |
| Type of Temperature Sensing Body | Pt100Ω ClassA / K.J Class.5 | DINIEC751 |
| Environment Temperatdure | -30℃~150℃ | |
| Measurement Distance | Contact type, adjustable distance 4 mm | Retractable spring |
| Response Speed | Approx. 6 seconds | DINIEC751 |
| Resistance against Solvent (Spray) | Gasoline, machine oil, alcohol, ammonia, acetone, and cleanser | |
| Resistance against Acid/Base | Mild acid or base | |
| Water Proof Rating | IP68 CNS14165 | 9030700066 |
| Fire-Resistance Rating | V094HB | UL E179854 |
| Roller Size | MIN 20mm ~ MAX unlimited | |
| Mounting Metho | L-shape mounting rack | |

## Dimensions(mm):

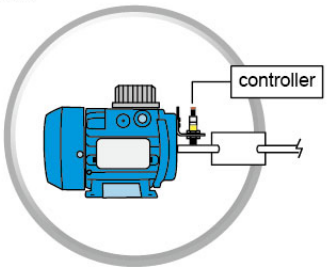


## Application Example:

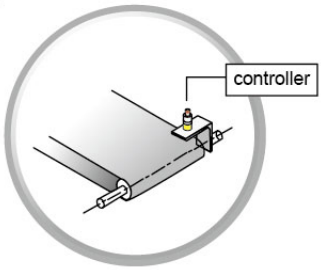
1. Heating Roller



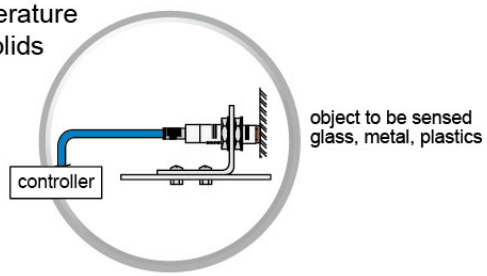

2. Power Transmission Axle




3. Conveyor

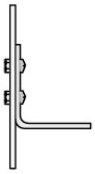



4. Surface Temperature Sensing for Solids

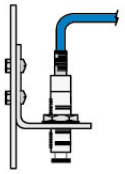



## Installing:

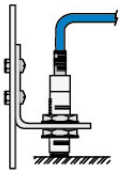
1. Mount the L-shape mounting rack at a proper location on the machine



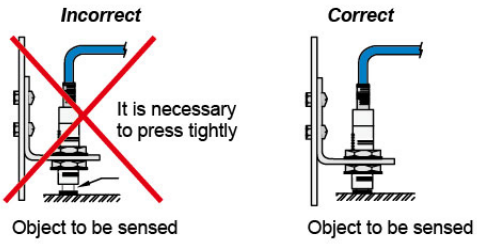
2. Place the temperature sensing head into the L-shape mounting rack



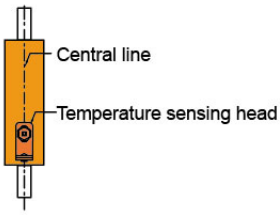
3. Fit the screw, adjust the distance and fasten the object to be sensed



4. Standard adjustment distance




5. Installed at the center of the roller




## Order Specifications:

FSTS — TYPE R —

| INPUT TYPE | |
|---|---|
| 1 | DINPT100Ω |
| 2 | JISPT100Ω |
| 3 | K TYPE |
| 4 | J TYPE |
| 5 | OTHER |

—

| °C SELECT | |
|---|---|
| 1 | 0~200°C |
| 2 | 200~250°C |
| 3 | OTHER |

—

| LEAD WIRE | |
|---|---|
| 1 | 2M SILICON |
| 2 | 2M TEFLON |
| 3 | OTHER |

—

| CONNECTOR | |
|---|---|
| 0 | NON |
| 1 | Cylindrical body (Male Female) IP68 |
| 2 | Terminal box IP66 |
| 3 | OTHER |

—

| AUX | |
|---|---|
| A | NON |
| B | Transducer TR-100 |
| C | Single point controller CH1 |
| D | OTHER |

- Channel 1


- Channel 5

## Features

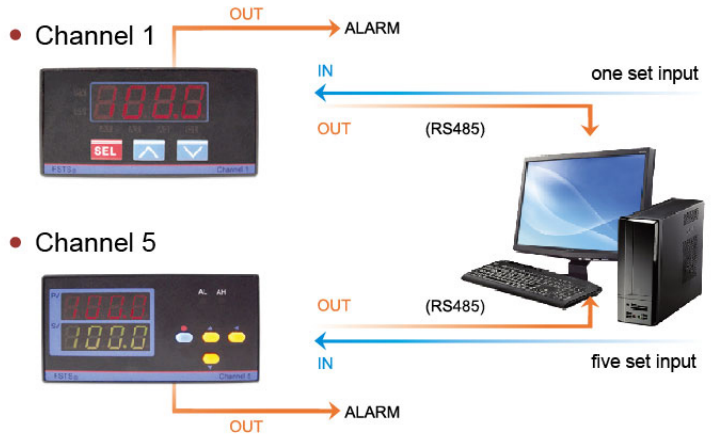
- CH1 or CH5 Inputs (K, J, T, DINPT100Ω4-20mA0
- 2 alarms, multi-mode time-delayed alarms
- After being converted into 4-20mA, it can be operated with recorder for centralized monitoring.
- RS485 communication capability (MOBUS RTU format)
- 90-264VAC or DC24V (Power)
- IP 65

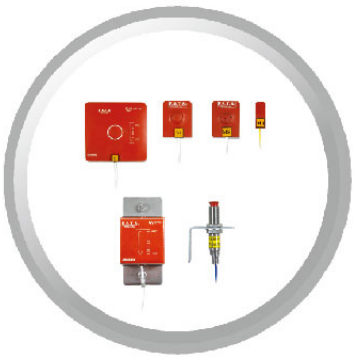
CE

## Specifications:

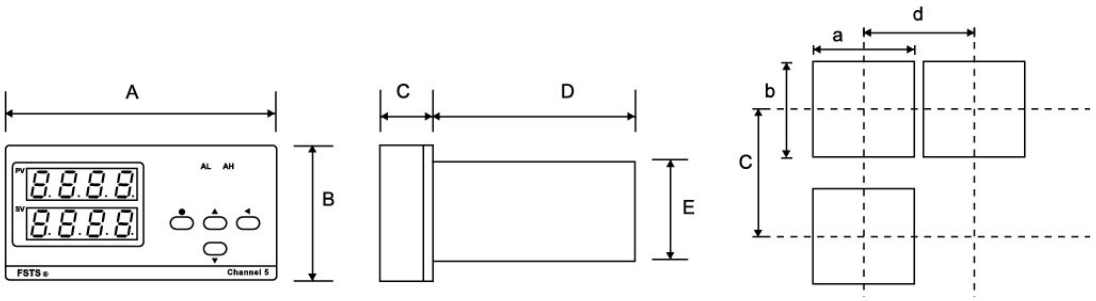
| Type | Channel1 | Channel5 |
|---|---|---|
| Input | T/C: K, T, B, S, C, J, E, R, N | T/C: K, J, T |
| | PT DINPT100ΩJIS100ΩLinnear 4-20mA 1-5V 0-10V | DINPT100ΩLinear4-20mA 1-5V |
| Accuray | T/C±1℃ RTD±0.2℃ Linear ±3uv | |
| Sampling Time | 0.25sec | |
| Control Mode | P:PB 0.0~300%FS ON/OFF Hysteresis 0~2000 | ON/OFF HI. LO. Hysteresis 0~2000 |
| Cycle time(0~100s) | Relay 0~15 sec, puls 1 sec, current(voltage) 0sec | |
| Output | Relay 10A/240VAC Puls:DC0/24V(250Ωmin)<br>4~20mA(600Ωmax) 0~10V(600Ωmax) | Relay 2a 5A/240NAC(Resistant Load) |
| Ratevoltage | AC90~264V 50/60HZ DC24V | |
| Ambient Temperature | 0~50℃ | |
| Ambient Humidity | 0~90% | |
| Consumption | 3W以下 | |
| Alarm mode | PV HI LO AL, Deviation Hi Lo AL, Band Hi Lo AL, PV Hi Lo AL with Delay time. | |

## Application Example:



## Dimensions:

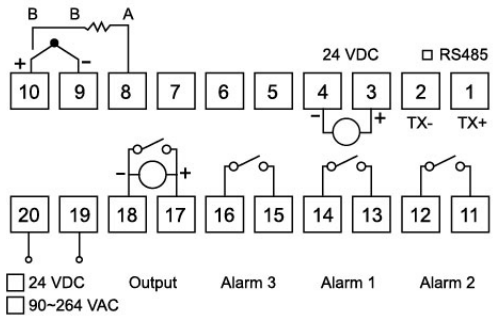



(Umit:mm)

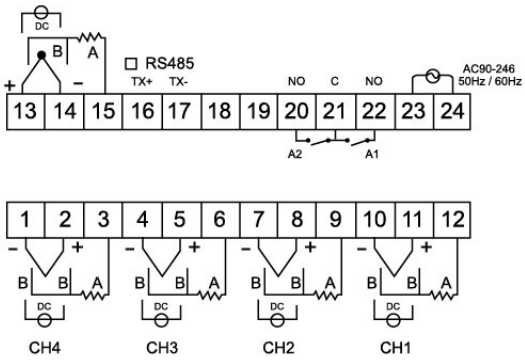
| Model | A | B | C | D | E | a | b | c | d |
|---|---|---|---|---|---|---|---|---|---|
| CH1.CH5 | 96 | 48 | 9 | 80 | 45 | $92^{+0.5}$ | $45^{+0.5}$ | 48 | 120 |

## Wiring Diagram:

- Channel 1




- Channel 5




## Order Specifications:

FSTS —

| CODE | MODE |
|---|---|
| C1 | CH1 |
| C5 | CH5 |

| CODE | INPUT |
|---|---|
| T | T/C |
| D | RTD |
| L | analogy |

| CODE | OUPUT |
|---|---|
| R | Realy |
| P | SSR |
| M | 4-20mA |
| V1 | 0~10V |
| V2 | 1~5V |

| CODE | ALSRM |
|---|---|
| 1 | 1AL |
| 2 | 2AL |
| 3 | 3AL |
| 4 | Hi Lo Al |

| CODE | CONTROL |
|---|---|
| C | ON-OFF |
| P | P |

| CODE | SELECTION |
|---|---|
| N | None |
| R | Retrairsmission |
| C | RS-485 |

| CODE | POWER |
|---|---|
| A | AC90-264V 50/60HZ |
| D | DC-24V |

# FSTS® | PC-1000
## RAIL-MOUNTED DISPLAY, ALARM, TRANSMISSION, CONTROLLER

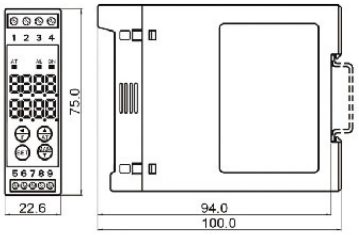
### Features

- Rail-mounted, precise, compact.
- Has display, control, alarm and transmission functions.
- RS485 (MODBUS) communication function, expandable to 256 points.
- Multiple input/output options.
- With FUZZY+PID control functions.
- With heater breakage alarm.

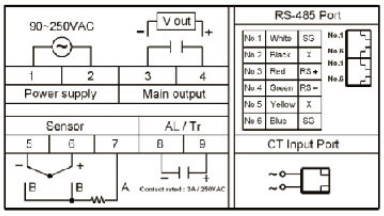
## Specifications:

| Type | PC-1000 |
|---|---|
| Dimensions | 22.6x75x100 (mm) |
| Input Method | PT100Ω(DIN)、T/C、4-20mA、0-10V |
| Output Method | Relay、SSR、4-20mA or DCV0-10V |
| Control Method | PID.ON-OFF、selectable |
| Alarm Output | 1組1a(5A/250VAC SPDT) |
| Display Range | -999～9999 |
| Precision | ±<0.2% OFF.S+1Digit |
| Working Voltage | 90～265VAC 50/60 Hz or 24VDC/AC (op) |
| Ampere Consumption | 5VA max. or 100mA max (24VDC) |
| Memory Type | EEPROM |
| Insulation Strength | OVER50mΩ/500VDC |
| Voltage Endurance | OVER2.5KV/1MINUTE |
| Operating Environment | -20℃~75℃ RH:85% |
| E MC Standard | ESD:8KV Air Discharge(L-13)/EN-6100-4-2<br>RFInterference: 10V/M/ENV-50140<br>Burst test:2KV/EN61000-4-4 |

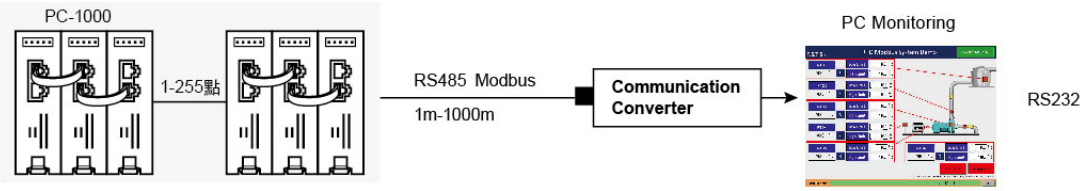
## Dimensions:




## Wiring diagram:




## Linking illustrations:




- The system can be linked with up to 255 monitors.
- Equipped with phone connectors, easy to install.
- We provide design and testing services for monitoring software (changed separately).

## Order Specifications:

FSTS-PC1000 ____ □ □ □ □ □ □

| CODE | IN |
|---|---|
| T | T/C |
| P | PT100Ω |
| L | 4-20mA |
| D | 0-10VDC |

| CODE | OUT |
|---|---|
| 1 | Relay |
| 2 | SSR |
| 3 | 4-20mA |
| 4 | 0-10VDC |
| 5 | OTHER |

| CODE | ALARM |
|---|---|
| Y | YES 1 組 |
| N | NO |

| CODE | COM |
|---|---|
| R | RS-485 |
| N | NO |

| CODE | POWER |
|---|---|
| A | AC90~260 |
| | 50/60 Hz |
| D | DC24V |
| S | OTHER |

| CODE | CT |
|---|---|
| 10A | |
| 30A | |
| 50A | |

# FSTS® | TPC-6000
## CHINESE TOUCH-PANEL TEXT MESSAGE ALARM


### Features

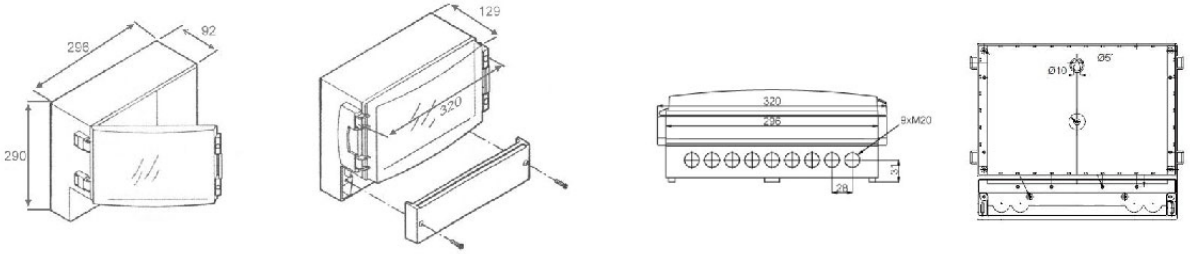
- Precise, reliable, easy installation and user-friendly operations.
- Anomaly message sent to manager's cell phone within 3 seconds.
- Accomplishes active and mobile management.
- Chinese touch-panel setting, easy to edit.
- Applicable to signal monitoring and alarms of both physical and chemical quantities.
- With RS485 MODBUS RTU communication port.

## Specifications:

| Type | TPC-6000 |
|---|---|
| Power Supply | 110/220 VAC |
| Temperature Of Working Environment | -20℃~70℃ |
| Temperature And Humidity For Storage | -20℃~70℃ 0~85%RH |
| Controlled Output | 5 Points. HH-H-L-LL 4 Sections |
| One Set Common-Point Alarm | 1A/125VAC (With Reset Function) |
| Communication Setting | RS485 Mobus RTU |
| Waterproof Class | IP65 Made Of ABS |
| Product Dimensions | 320 x 290 x 129 (WxHxD) |
| Input Signal | 4-20mA or PT100Ω or T/C |
| Input Terminals | 6 pt |
| Display | 7" Color Touch Panel (800x480) |
| Precision | ±0.1% F.S |
| Power Consumption | 8W~10W(MAX) |
| Sampling Time | 10 Times/Sec |
| Product Weight | 2.15kg |
| Installation Method | Wall-Mounted |

## Dimensions(mm):

- TPC-6000 Type



## Dimensions:

- Anomaly monitoring over sub-station equipment.
- Communication Equipment Room, Temperature/ Humidity Monitoring.
- Monitoring over machine shaft, electrical equipment.
- Temperature/ Humidity Monitoring of Refrigerators.
- Process Signal Monitoring.
- Smoke Exhaust Anomaly Monitoring.
- Wastewater Discharge Monitoring.
- Debris Flow, Water-level/anomaly monitoring.
- Cultivating temperature and oxygen content monitoring.

## Functions:

- Chinese touch panel, easy to operate and setup.
- User-defined channel name/ measurement range/ decimal point shifting/ slope/ HH-H-L-LL alarm levels.
- Chinese Alarm Messages include name, value, status, time.
- Automatic SIM card detection - search - system service icon - Pre-Paid Card enabled Service.
- USB recording module up to 3000 entries (operational).
- Setting of alarm Deby Time for a range of a delayed controls.
- Setting of up to 10 cell phone numbers, in 2-level managing groups.
- Stores 10 records of anomalies.
- Ring-tone before sending a message - reset notice - resend mechanism on a persistent anomaly
- Autonomous text message for acquiring current values of respective channels.
- Centralized integral management software - Statistics of channel anomalies in respective region, Monthly Anomaly Report Simplified statistics of active messages; Email sending manager (graph, report, optional).

## Product applications:


**Romote End**

Anytime/any place check on-site values

1. Send a blank message to console fist.
2. Receive message of current value in 3 seconds.
3. Content: No._ message Location/ Time.

**Romote End**

Value (reading) anomalies

1. Phone set rings first
2. Receive alarm message in 3 seconds.
3. Content: No._ message Channel name/ Anomaly status/ Value/ Time/ Location

**Romote End**

Value (reading) return to normal

1. Receive resume message
2. Content: No._ message Channel name Staus Resume notice Value/ Anomaly status/ Value/ Time/ Location


TR100


TR200

## Features

- Lightweight, thin, compact and small, installation with aluminum rails.
- Multiple inputs/outputs can be programmable freely.
- Isolated inputs and isolated outputs can avoid interference.
- Sensor failure protection can be configured with highest output or lowest output.
- Equipped with RS485 transmission capability (MODBUS RTU).

## Programmable:

Can be edited or modified without external power supply input/Output Specifications.


TR100
TR200


URC-1020
Transmission
Cables

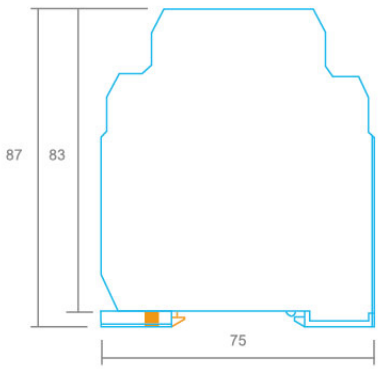

Computer Sofeware
(supplied with the product)

| Specifications | |
|---|---|
| Input | Thermal couples of K, J, T, E, B, R, S, N, C (ITS、90) |
| | Thermistor PT 100Ω, 2-wire or 3-wire |
| | Voltage ±60mVDC or ±10VDC |
| | Current 0 to 24mADC |
| Accuracy | Parameter table |
| A/D Resolution | 16 Bits |
| Sampling Time | <200ms |
| Power Supply | DC 10~36V |
| Max. Load | MAX LOOD、(V-10) 10.02(Ω) |
| Output Resolution | 0.6uA(15Bits) |
| Output Response Time | <200ms |
| Common Mode Rejection Ratio (CMRR) | >80dB |
| Battery Compatibility | En50081-2 . En50082-2 |
| Isolation | 4KV between input and output |
| Operating temperature | -40 to 85℃ |
| Humidity | 0 to 90%RH |
| Dimensions | 75mm(w) X 87mm(H) X 18.5mm(D) |

| Input type and range | | |
|---|---|---|
| Input Type | Max. Range | Precision |
| Thermocouple J | -50 to 1000 ℃ (-58 to 1832)°F | ±1℃ |
| Thermocouple K | -50 to 1370℃ (-58 to 2498)°F | ±1℃ |
| Thermocouple T | -270 to 400 ℃ (-454 to 752)°F | ±1℃ |
| Thermocouple E | -50 to 960 ℃ (-58 to 1780)°F | ±1℃ |
| Thermocouple B | 0 to 1750 ℃ (32 to 3182)°F | ±2℃ (註1) |
| Thermocouple R | -50 to 1750 ℃ (-58 to 3182)°F | ±2℃ |
| Thermocouple S | -50 to 1750 ℃ (-58 to 3182)°F | ±2℃ |
| Thermocouple N | -50 to 1300 ℃ (-58 to 2372)°F | ±2℃ |
| Thermocouple C | -50 to 1800 ℃ (-58 to 3272)°F | ±2℃ |
| Pt100 | -200 to 600 ℃ (-328 to 1112)°F | ±0.2℃ |
| mV | -60mV to 60mV | ±0.01mV |
| Voltage * | -10 to 10Vdc | ±1mV |
| Current * | 0 to 24mAdc | ±10 u A |

* The internal admonish switch must establish

## Dimensions:

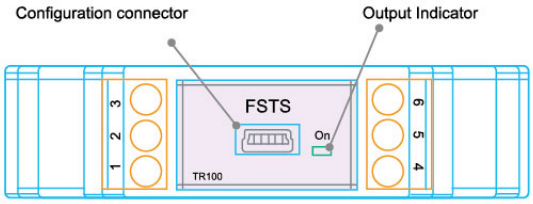


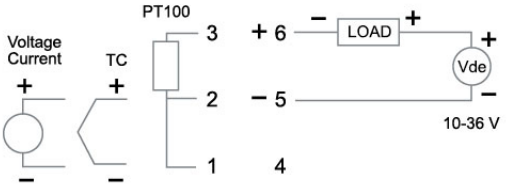


( Unit : mm )

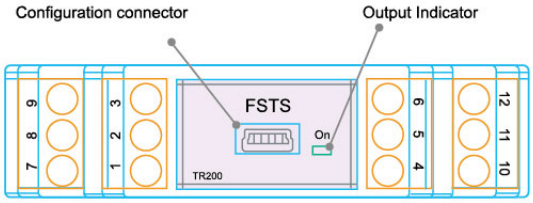
## Wiring Diagram:

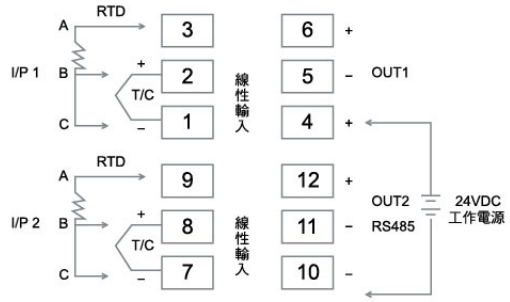
- TR-100




- TR-200




## Order Specifications:

FSTS — ☐ — ☐ — ☐☐ — ☐☐ — ☐☐

| CODE |
|---|
| TR100 |
| TR200 |

| 1ST INPUT | CODE |
|---|---|
| Themocouple J | J |
| Themocouple K | K |
| Themocouple T | T |
| Themocouple E | E |
| Themocouple B | B |
| Themocouple R | R |
| Themocouple S | S |
| Themocouple N | N |
| Themocouple C | C |
| Pt100 | D |
| mV | L |
| Voltage | V |
| Current | M |

| 2ED INPUT | CODE |
|---|---|
| Themocouple J | J |
| Themocouple K | K |
| Themocouple T | T |
| Themocouple E | E |
| Themocouple B | B |
| Themocouple R | R |
| Themocouple S | S |
| Themocouple N | N |
| Themocouple C | C |
| Pt100 | D |
| mV | L |
| Voltage | V |
| Current | M |
| NON | O |

| 1ST RANGE | CODE |
|---|---|
| Does not choose | N |
| -50~50℃ | 1 |
| 0~50℃ | 2 |
| 0~100℃ | 3 |
| 0~150℃ | 4 |
| 0~200℃ | 5 |
| 0~400℃ | 6 |
| 0~500℃ | 7 |
| 0~600℃ | 8 |
| 0~800℃ | 9 |
| 0~1000℃ | 10 |
| 0~1200℃ | 11 |
| Specifiec | S |

| 2ED RANGE | CODE |
|---|---|
| Does not choose | N |
| -50~50℃ | 1 |
| 0~50℃ | 2 |
| 0~100℃ | 3 |
| 0~150℃ | 4 |
| 0~200℃ | 5 |
| 0~400℃ | 6 |
| 0~500℃ | 7 |
| 0~600℃ | 8 |
| 0~800℃ | 9 |
| 0~1000℃ | 10 |
| 0~1200℃ | 11 |
| Specifiec | S |

| 1ST INPUT | CODE |
|---|---|
| DC 4 ~ 20mA | 1 |
| DC20 ~ 4mA | 2 |
| DC 0 ~ 20mA | 3 |
| DC 0 ~ 5V | 4 |
| DC 0 ~ 10V | 5 |
| Specifiec | S |

| 2ED INPUT | CODE |
|---|---|
| Nonselective | 1 |
| DC 4 ~ 20mA | 2 |
| DC 0 ~ 5V | 3 |
| DC 0 ~ 10V | 4 |
| RS485 | 5 |
| Specifiec | S |

| WORK POWER SOURCE | CODE |
|---|---|
| DC24V | D |
| Specifiec | S |

| SOFTWARE PLAN | CODE |
|---|---|
| yes | Y |
| NO | N |