

Water  
proof  
type

TSURUGA

# *High brightness*

## *Large LED Display 4023 / 4024*



4023 High brightness waterproof type temperature Display



4024 High brightness waterproof type large display

*Adoption of high brightness dot LED*

**Excellent visibility under direct sunlight and even from a distance!!**

4023 and 4024 adopt the high brightness dot LED and ensure the visibility under direct sunlight and from a distance, and it is the waterproof structure of protection class IP65 level and is suitable for the display of all measurement values. 4023 is a flat type large temperature display. Temperature measuring sensor complies to thermocouple K, J, T and resistance temperature detector Pt100Ω. Integrated Pt100Ω sensor type is also available. 4024 complies with analog signal and is suitable for large display of all measurement values .

## ■ Appearance

4023 Temperature large display

4024 large display



- Adoption of 56 mm high brightness large dot LED
- Thin type resin case with compact design (depth 52 mm)
- Okay even when get wet because of waterproof type (IP65)
- Can be installed both as wall-mounting or hanging.
- Line up of thermometer, receiver, DC voltmeter
- Integrated type temperature sensor is also available

## ■ Model 402□ -□ -□ -□ -□



### ① Measurement input

Code	Measurement range (Sensor)	Display range Input resistance	Accuracy
4023-02	-200 to 999°C (K)	-270 to 999°C	±(0.3% of rdg + 1°C)
4023-04	-200 to 999°C (J)	-210 to 999°C	±(0.3% of rdg + 1°C)
4023-05	-200 to 400°C (T)	-270 to 420°C	±(0.3% of rdg + 1°C)
4023-11	-200 to 850°C (Pt100Ω)	-200 to 870°C	±(0.4% of rdg + 1°C)
4023-12	-99.9 to 99.9°C (Pt100Ω)	-99.9 to 99.9°C	±(0.2% of rdg + 0.3°C)
4024-03	±999 mV (DC V)	1 MΩ	±(0.1% of rdg + 1 digit)
4024-04	±9.99 V (DC V)	1 MΩ	±(0.3% of rdg + 1°C)
4024-09	1 to 5 V	1 MΩ	±(0.3% of rdg + 1°C)
4024-19	4 to 20 mA	12.5 Ω	±(0.4% of rdg + 1°C)

Accuracy Defined at the condition of 23°C ±5°C, 45 to 75% RH  
 Temperature coefficient ±300ppm/°C (K, J, T) ±200ppm/°C (Pt) ±100ppm/°C (-03 DCV)  
 Overload ±150ppm/°C (-04 DCV, -09, -19) Defined at the used temperature range 0 to 50°C  
 Calibration DC ±10V (K, J, T, Pt) DC ±250V (-03 DCV, -04 DCV, -09) DC ±150mA (-19)  
 Standard resistance element of resistance value of JIS C-1602-1995 year mV (K, J, T)  
 Standard resistance element of resistance value of JIS C-1604-1997 year (Pt)

### ② Power supply

Code	Power supply
3	AC 100 to 120 V
5	AC 200 to 240 V
9	DC 24 V

### ④ Option

Code	Contents
X	None
A01	Bottom hold
A02 <sup>※</sup>	Burn out (Min. value blinking)

※K, J, T input item only

### ③ Mounting method and sensor

Code	Method	Sensor	Protection
51	Wall mounting	Not included	IP55
52	Hanging		
53	Wall attached		IP65
61 <sup>※</sup>	Wall hanging	With Pt100Ω	IP55
62 <sup>※</sup>	Hanging		
63 <sup>※</sup>	Wall attached		

※Integrated type sensor (Pt100Ω input item only)

## ■ General specifications

- Display** : 3 digits 0 to 999 high brightness dot red LED (character height 60mm)  
With zero suppress function During negative polarity input (-) display
- Over display** : Temp. input Flashes with MIN value or MAX value within display range  
DC input Flashes with 130% display but if exceeds 999, then flashes with 999
- Decimal display** : Temperature input Fixed DC input optional setting
- Burn out** : Flashes with the maximum value of display range (thermometer only)
- Resolution** : Temperature input 1°C or 0.1°C DC input 1/1000
- External resistance** : Thermocouple input Less than 500 Ω  
Resistance temperature device input Lead wire Less than 5 Ω per wire
- Display period** : Temperature input About 5times/s DC input About 15times/s
- Input format** : Single-ended input
- AD conversion** :  $\Delta\Sigma$  Conversion method
- Noise rejection** : Normal mode (NMR) More than 50dB  
Common mode (CMR) More than 110dB  
Power line mixing noise 1000V
- Insulation res** : DC 500V More than 100MΩ
- Withstand volt** : Input terminal/ external box/ Input terminal Each AC 1500V 1min  
(Respective DC power items AC 500V 1min)
- Power supply** : AC 100 to 120V, AC 200 to 240V (50/60Hz), DC 24V
- Power allowance range** : AC 85 to 132V, AC 170 to 250V, DC 20 to 30V
- Power consumption** : During AC100V About 7VA During DC24V About 150mA
- Op. temp** : 0 to 50°C
- Storage temp** : -20 to 70°C
- Weight** : About 1.5 kg
- Unit display** : Paste in the front window plate  
Optional unit display in 4024 is possible. Please specify

## ■ Standard specifications (※ Excluding thermometer)

- Hold Function** : Retain the display value
- Peak hold function** : Retain the maximum value
- Scaling function (※)** : Scaling display value and offset display value is possible to set between the range of -999 to 999
- Offset fixed function (※)** : The display during the input below the offset value is fixed with the offset display value
- Zero set function (※)** : Initial input value is electrically made zero
- Average processing function** : Interval average/ displays the ave. value of 6 times  
Moving ave./Select display from 2,4,8,16,32 times of the data number

## ■ Optional specifications

- Burn out display** : K, J, T input item can be specified in minimum value flashes
- Bottom hold function** : Minimum value is retained. (There will be no peak hold function)

## ■ External dimensions

