

Simple Temperature Controller



Digital Temperature Indicating Controllers

BCS3

The New Basic Model

4-Digit LED Display

Large and easy-to-read display. Enhanced visibility with a contrast of red characters on a black background.

Large Key Switch

Simple, large-sized key switch. Designed for easy setup and operation.

OPTION

Dustproof and Waterproof Specifications

(Front IP65 Structure)

IP65 structure for dust and water resistance. Adopted to withstand harsh environments where dust and water exposure may occur.



Action Indicators

Mode Key

POINT

1

POINT

2

Simple Design for
Easy Operation Settings

Compact Design Packed
with Features

Model Name

		BCS3	R	-	0	0	M00	-	0	0
Model	BCS3	BCS3								
Control Output(OUT)	Relay Contact		R							
	Non-Contact Voltage		S							
Power Supply Voltage	100~240 V AC				0					
Input	Thermocouples(K,J),RTD(Pt100)Multi-Input					M00				
	Thermocouples(R,S,T)Multi-Input					M01				
Event Output (Optional)	No Event Output								0	
	Event Output 2 Points								2	
Dustproof and Waterproof(Optional)	No Specification									0
	Dustproof and Waterproof Specification									1

Terminal Arrangement

- POWER SUPPLY ● Power Supply Voltage 100 to 240V
- EV1 ● Event 1 Output (Option Marking SA)
- EV2 ● Event 2 Output (Option Marking SA)
- OUT ● Control Output
- TC ● Thermocouple Input
- RTD ● Resistance Temperature Detector In

POINT 1

Temperature Sensor Uses Thermocouples with Fast Thermal Response, Capable of High-Temperature and Wide-Range Measurements

Thermocouples are used in various applications, including industrial uses, because they exhibit stable performance even in high and low temperature environments. BCS3 is a basic model that supports five types of thermocouples: K, J, R, S, and T*¹

*¹ When selecting model M00, it corresponds to thermocouples (K, J), while selecting M01 corresponds to thermocouples (R, S, T), indicating a distinction in input types.



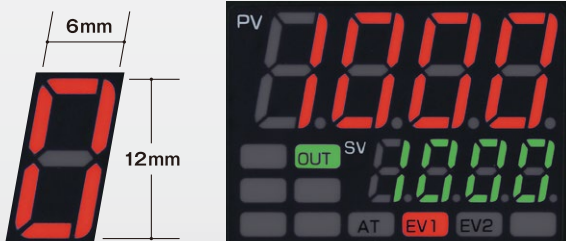
POINT 2

Relay Contact or Non-Contact Voltage Output

You can choose between control outputs: relay outputs with contact points and non-contact voltage outputs for SSR driving. Please specify your preference when placing your order according to your application.

High-visibility characters (H12×W6mm)

We are enhancing visibility by increasing the display font size.



POINT 3

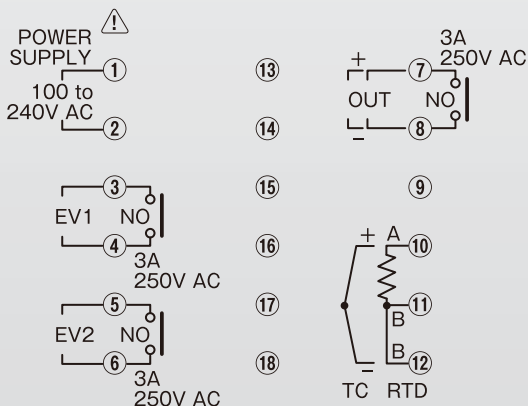
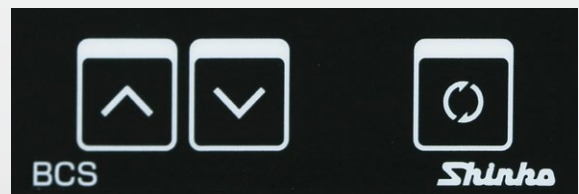
Event Output 2 Points

OPTION

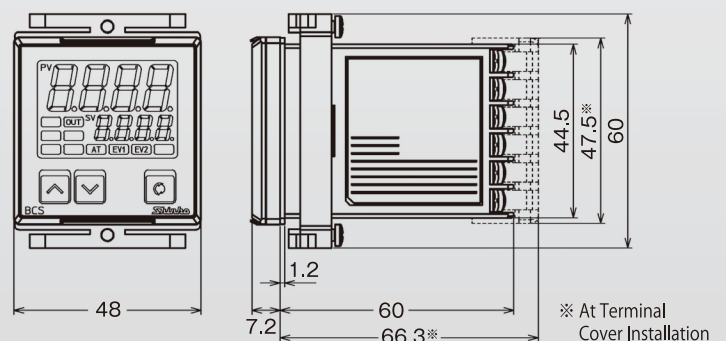
By adding an option, you can use up to a total of 2 event outputs.

Easy-to-Operate Key Switch Design

We have achieved a design that emphasizes the placement of keys and ease of pressing. By simplifying the setup options, it becomes easy to change settings quickly.



■ Dimensions (Unit: mm)



Specifications

Rated Scale	Input		Input Range		Resolution
	M00	K	-200~1370°C	-320~2500°F	1°C(°F)
		J	-200~1000°C	-320~1800°F	1°C(°F)
		Pt100	-199.9~850.0°C	-199.9~999.9°F	0.1°C(°F)
	M01	R	0~1760°C	0~3200°F	1°C(°F)
		S	0~1760°C	0~3200°F	1°C(°F)
T		-199.9~400.0°C	-199.9~750.0°F	0.1°C(°F)	
Input	Thermocouple: K, J, R, S, T (External resistance: 100Ω or less) RTD: Pt100, 3-wire type (Allowable input lead wire resistance: 10Ω or less per wire)				
Power Supply Voltage	100~240V AC 50/60Hz				
Allowable Voltage Fluctuation Range	85~264V AC				
External Dimensions	W48XH48XD68 (Depth of control panel interior: 60) mm				
Mounting	Flush				
Material	Case: Flame-resistant resin (color: Black) Panel: Membrane sheet				
Accuracy (Setting/Indication)	Thermocouple: Within ±0.3% of each input span ±1 digit. For temperature below 0°C (32°F), within ±0.4% of input span ±1 digit. However, for R, S input ranging from 0 to 200°C (32 to 392°F), the tolerance is within ±8°C (46°F). RTD: Within ±0.2% of input span ±1 digit.				
Input Sampling Period	500 ms				
Control Action	<ul style="list-style-type: none"> · PID control (with Auto-Tuning Function) · PI control When Derivative Time Setting is Set to 0 · PD control (with Auto-Reset Function) ... When Integral Time Setting is Set to 0 · P control (with Auto-Reset Function) When Both Integral Time and Derivative Time Settings are Set to 0 · ON/OFF control When Proportional Band Setting is Set to 0 <p style="margin-left: 20px;">Output Proportional Band (P) 0 to 1000°C or 2000°F (Factory default at 10°C). Setting it to 0 activates ON/OFF control.</p> <p style="margin-left: 20px;">If the input includes decimals, the range is 0.0 to 999.9°C or 0.0 to 999.9°F. Setting it to 0.0 also activates ON/OFF control.</p> <p style="margin-left: 20px;">Integral time (I) Range: 0 to 1000 seconds (Setting it to 0 disables integral action). Factory default: 200 seconds.</p> <p style="margin-left: 20px;">Derivative time (D) Range: 0 to 300 seconds (Setting it to 0 disables derivative action). Factory default: 50 seconds.</p> <p style="margin-left: 20px;">OUT proportional cycle Range: 1 to 120 seconds (Factory default: 30 sec for Relay contact, 3 sec for non-contact voltage).</p> <p style="margin-left: 20px;">ON/OFF hysteresis Range: 0.1 to 100.0°C (°F) (Factory default: 1.0°C).</p> <p style="margin-left: 20px;">Output high limit, low limit Range: 0 to 100% (Not applicable during ON/OFF control). Factory defaults: Output low limit 0%, Output high limit 100%.</p>				
Control Output	Relay contact 1 a, control capacity: 3A 250V AC (resistive load), 1A 250V AC (inductive load, cosϕ=0.4), electrical lifespan: 100,000 cycles. Non-contact voltage (for SSR drive) 10V DC, maximum 20mA DC				
Insulation Resistance	500V DC 10MΩ or more				
Dielectric Strength	Between input terminal and power terminal: 1.5kV AC for 1 minute Between output terminal and power terminal: 1.5kV AC for 1 minute				
Power Consumption	Approximately 8VA				
Ambient Temperature	-10 to 55°C				
Ambient Humidity	35 to 85% RH (non-condensing)				
Altitude	2,000m or less				
Weight	Approximately 94g				
Environmental Specifications	RoHS directive compliant				
Attached Functions	Sensor correction, Set value lock, LED Display Area Selection, Power Failure Countermeasures, Self-Diagnosis, Automatic Cold Junction Temperature Compensation, Burnout Detection (Over-Scale), Indication range and Control Range, Warm-up indication				
Options	Event Output (Alarm Output 2 Points): Relay contact 1 a, control capacity 3A 250V AC (resistive load), electrical life 100,000 cycles. Loop Abnormal Alarm (Detects Abnormalities at the Control End, such as Heater Disconnection or Sensor Disconnection), Dustproof and Waterproof (Front Panel IP65)				
Included Accessories	Mounting frame (1 piece), User manual (1 copy), Gasket A (1 piece, for optional dustproof and waterproof addition)				
Accessories Sold Separately	Terminal cover				

[Important Notice]

- To use this product correctly and safely, please be sure to read the user manual for important precautions and instructions.
- This product is intended for use in industrial machinery, machine tools, and measurement equipment. Before use, please consult with the distributor or our company to clarify the intended purpose and ensure proper usage (note that it should not be used for life-critical medical devices, etc.).
- In the event of a malfunction or abnormality in this product that could cause a serious system accident, install appropriate protective devices such as external over-temperature prevention equipment. Additionally, perform regular maintenance as needed.
- Please refrain from using this product under conditions or in environments not specified in the user manual. If used under conditions or environments not described in the user manual, our company cannot be held responsible for any physical or personal damage that may occur.
- [Attention Regarding Export Trade Control Regulations] ● To ensure that this product is not used for weapons of mass destruction (military purposes, military equipment, etc.), please investigate the final purpose and end customer. Additionally, exercise caution to prevent unauthorized exports during resale.

● The contents of this catalog are as of Nov. 2024. Please be aware that specifications may change for quality improvement. ● The photos included are not indicative of the actual usage conditions. ● If you have any orders or inquiries, please feel free to contact your nearest branch office or sales outlet.

Shinko Technos Co., Ltd.

Head Office
 2-5-1, Senbahigashi, Minoo, Osaka, 562-0035, Japan
TEL: 81-72-727-6100 FAX: 81-72-727-7006
 [URL] <https://shinko-technos.co.jp/>
 [E-mail] overseas@shinko-technos.co.jp