



**Large Display
Easy-to-Use**

CH902



CH402



CH102



The CB Series combines easy-to-use operation with the latest temperature control advances at a competitive price.

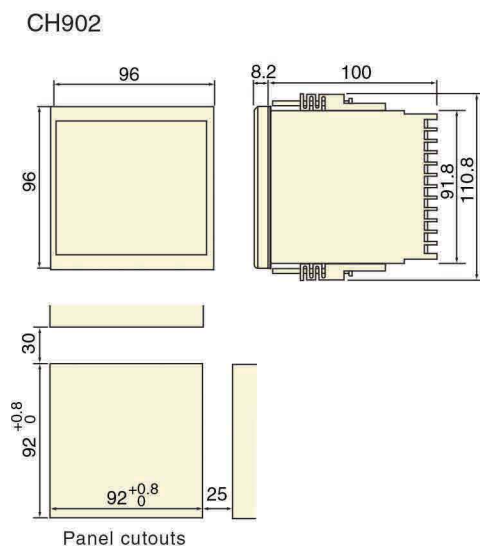
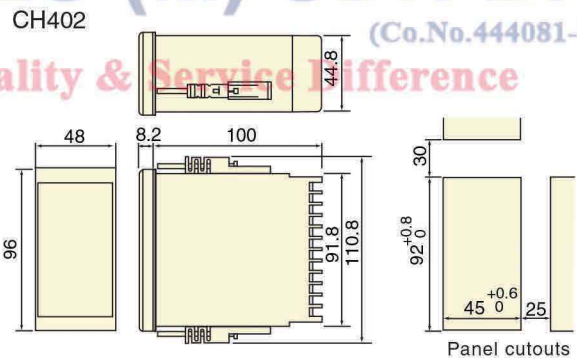
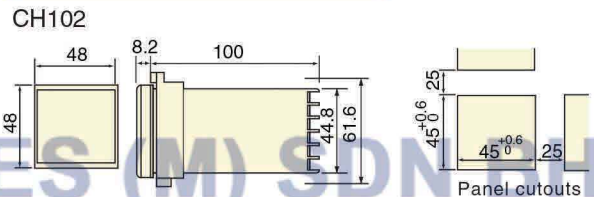
Specifications

- Input Units : mm
- Thermocouple : K, J, R, S, B, E, T, N (JIS/IEC), PLII (NBS) W5Re/W26Re (ASTM)
 - Influence of external resistance : Approx. 0.2μV/Ω
 - Input break action : Up-scale
 - RTD : Pt100 (JIS/IEC), JPt100 (JIS)
 - Influence of input lead resistance : Approx. 0.01[%/Ω] of reading
 - Maximum 10Ω per wire
 - Input break action : Up-scale
- Sampling Time : 0.5 sec
Measuring Accuracy
- Thermocouple : ±(0.3% of reading + 1 digit) or ±2°C whichever is larger
 - Accuracy is not guaranteed between 0 and 399°C for type R, S and B.
 - Accuracy is not guaranteed between -199.9 and -100.0°C for type T and U.
 - RTD : ±(0.3% of reading + 1 digit) or ±0.8°C whichever is larger
- Control Method : PID control (with autotuning and self-tuning function)
Major Setting Range
- Set value : Same as input range.
Proportional band : 1 to span or 0.1 to span
When 0.1°C resolution, within 999.9°C (ON/OFF action when P=0)
- Integral time : 0 to 3600sec. (P + D action when I=0)
Derivative time : 0 to 3600sec. (P + I action when D=0)
Anti-Reset Windup (ARW) : 1 to 100% of heat side proportional band
Proportional cycle time : 1 to 100 sec.
- Control Output
- Relay output : Form C contact, 250V AC 3A (resistive load)
Voltage pulse output : 0/12V DC (Load resistance : More than 600Ω)
- Alarm
- Temperature Alarm

Type : Deviation High, Low, High/Low, Band, Process High, Low, Set value High, Low
 - Control Loop Break Alarm (LBA)
- Alarm Output
- Relay output, Form A contact 250V AC 1A (resistive load)
- Supply Voltage
- 85 to 264V AC (Including supply voltage variation) [Rating : 100 to 240V AC] (50/60Hz common)
 - 21.6 to 26.4V AC (Including supply voltage variation) [Rating : 24V AC] (50/60Hz common)
 - 21.6 to 26.4V DC (Ripple rate 10% p-p or less) [Rating : 24V DC]
- Power Consumption
- Less than 10VA for standard AC type
Less than 5VA for 24V AC type
Less than 160mA for 24V DC type
- Power Failure Effect
- Not affected by power failure shorter than 20msec, otherwise reset to the initial state.
- Operating Environments : 0 to 50°C, 45 to 85% RH
Net Weight :
CH102 : Approx. 170g
CH402 : Approx. 250g
CH902 : Approx. 340g

External Dimensions

Units : mm



Model & Suffix Code

Specifications	Model and Suffix Code	
Size	CH102 (48X48mm 1/16 DIN size) CH402 (48X96mm 1/8 DIN size) F □□□-□*□ □-□ □ CH902 (96X96mm 1/4 DIN size)	
Control method	PID control with AT (reverse action) F	
Input type and Range	See Range and Input Code Table	□□□
Control output	Relay output Voltage pulse	M V
Alarm 1	No alarm See Alarm Code Table	N □
Alarm 2	No alarm See Alarm Code Table	N □
Digital communications	Not supplied	N
Waterproof/Dustproof	Not supplied Waterproof/Dustproof protection : IP66 (Only front panel in panel mounted installations)	N 1

Alarm Code Table

Code	Type
A	Deviation High
B	Deviation Low
C	Deviation High/Low
D	Band Alarm
E	Deviation High with Alarm Hold
F	Deviation Low with Alarm Hold
G	Deviation High/Low with Alarm Hold
H	Process High
J	Process Low
K	Process High with Alarm Hold
L	Process Low with Alarm Hold
R	Loop break alarm (LBA)
V	Set value High
W	Set value Low

Input Code Table

Thermocouple

Input	Code	Range
K	K 01	0 - 200°C
	K 02	0 - 400°C
	K 03	0 - 600°C
	K 04	0 - 800°C
	K 05	0 - 1000°C
	K 06	0 - 1200°C
	K 07	0 - 1372°C
J	J 01	0 - 200°C
	J 02	0 - 400°C
	J 03	0 - 600°C
	J 04	0 - 800°C
	J 05	0 - 1000°C
	J 06	0 - 1200°C
R 1	R 01	0 - 1600°C
	R 02	0 - 1769°C
S 1	S 01	0 - 1600°C
	S 02	0 - 1769°C

RTD

Input	Code	Range
B 1	B 01	400 - 1800°C
	B 02	0 - 1820°C
E	E 01	0 - 800°C
	E 02	0 - 1000°C
N	N 01	0 - 1200°C
	N 02	0 - 1300°C
T 2	T 01	-199.9 - 400.0°C
	T 02	-199.9 - 100.0°C
	T 03	-100.0 - 200.0°C
	T 04	0.0 - 350.0°C
W5Re W26Re	W 01	0 - 2000°C
	W 02	0 - 2320°C
A	A 01	0 - 1300°C
	A 02	0 - 1390°C
PL II	A 03	0 - 1200°C

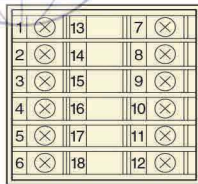
1 Type R, S and B input : Accuracy is not guaranteed between 0 to 399°C.
2 Type T input : Accuracy is not guaranteed between -199.9 to -100.0°C.

Supply Voltage

100 - 240V AC
24V AC
24V DC

Rear Terminals

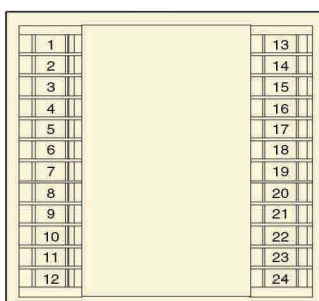
CH102



CH402



CH902



No.	Description	No.	Description
1	AC 100 to 240V	7	Alarm 2
2	24V	8	Alarm 1
3	24V	9	Relay contact
4	(1) C	10	Measured input (1) Thermocouple
5	(2) NO	11	(2) RTD
6	(1) NC	12	

No.	Description
1	AC100 to 240V
2	AC24V
3	DC24V
4	Control Output
5	(1) Relay contact
6	(2) Voltage pulse
7	Alarm 2
8	Alarm 1
9	Relay contact
10	Measured input
11	(1) Thermocouple
12	(2) RTD



•Before operating this product, read the instruction manual carefully to avoid incorrect operation.
•This product is intended for use with industrial machines, test and measuring equipment. It is not designed for use with medical equipment.
•If it is possible that an accident may occur as a result of the failure of the product or some other abnormality, an appropriate independent protection device must be installed.

Caution for imitated products

As products imitating our product now appear on the market, be careful that you don't purchase these imitated products. We will not warrant such products nor bear the responsibility for any damage and/or accident caused by their use.

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