

**Digital Indicating Controllers** 

ACD-13A,ACR-13A

**ON/OFF SERVO Digital Indicating Controllers** 

ACD-15A, ACR-15A

# Distinguished Visibility, Functionality



Simplified setting – Set frequently used settings for streamline

Easy status checking using 3-color switching



Industry leading large display Easier viewing display

## **Industry Leading Large Display**

# **Multi-Functions, Simple to Operate**

### Large LCD display

A specially treated large LCD display makes it easier to view even in bright light and open-air. PV display (ACD series): 24.0 x 11.0mm (H x W)



**Digital Indicating Controllers** ACD-13A, ACR-13A

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ACD-15A, ACR-15A

Up to 5 groups of PID parameters can be set. When SV is changed, PID parameters are automatically changed for optimal control. (It is not necessary to reset PID after SV is changed.)

### ACD series An easily viewable bar graph

22-segment bar graph allows simultaneous PV, SV, MV viewing.

Ease of viewing for manual output operation. For the ACD-15A and ACR-15A, the motor valve opening can be checked with the bar graph. (when feedback potentiometer "Yes" is set)

MV indication	DV indication
Scale is -5 to 105%, and bars light increasingly to the right in accordance with the MV.	In the case of zero (0) deviation, central 2 bars light. For positive deviation, bars light increasingly to the right. For negative deviation, bars light Increasingly to the left.
· (e.g.) MV 50% -5% 105%	• (e.g.) Deviation O (zero) - 0 + 000000000
• (e.g.) MV 100% -5% 105%	• (e.g.) Negative deviation - 0 + 00000

### **Enhanced visibility**

PV display color selectable from red, green and orange. Colors can be set depending on the deviation between PV and SV, so status can be checked from a distance.

PV color continuous change mode



It is easier to see the SV. PV and setting characters. as an 11-segment LCD display is used.

SET

ACD

OUT1

MV BERBERBERBERBERBERBER

A/M

B.MODE

- All seaments SENS are backlit
- PV display color is selectable from 7 modes below.

ARW

- PV display: Green, Red, Orange • Event output (any event from EVT1 to EVT5) Alarm OFF: Green, Alarm ON: Red Alarm OFF: Orange, Alarm ON: Red
- PV color changes continuously : Orange→Green→Red
- PV color changes continuously + Event output (any event from EVT1 to EVT5) ON (Red)

#### Actual size

MODE

RUN

STOP

Shinko





ACR-13A bottom



Selectable using the front keypad. If "Yes" is selected, feedback potentiometer position Fully Closed/Fully Open can be automatically adjusted. If "No" is selected, it is manually adjustable (only for ACD-15A, ACR-15A).

## PID zone function: PID resetting due to SV change Unnecessary



## Simple operation in Simplified setting mode

Without setting engineering items, simplified setting mode can prevent operational mistakes, and simple operations run smoothly. Basic settings and key operations now are doable via 3-key usage.



## Power unnecessary if USB comm. cable used

By connecting to a PC using the USB communication cable (CMB-001) (sold separately), initial settings can be made easily without complicated wiring.

[USB communication cable (sold separately) and dedicated software (free of charge) are required.]

OS: Windows 7/8/10 (Japanese/English) https://shinko-technos.co.jp/e/ → Support & Downloads → Downloads → Software  $\rightarrow$  ACD, ACR-13A(15A) console software (SWS-AC001M)

#### Model

ACD - 1 🗌 A - ACR - 1 🔲 A -	□/M □/M		W96×H96mm W48×H96mm		
Control 3			PID		
action 5			ON/OFF servo output PID		
A1 A			Selectable with the keypa	d operation (*1)	
Control output	R		Relay contact :1a1b (ACx-15A: 1a x 2)		
(OUT1)	S		Non-contact voltage(SSR drive): 12VDC ±15%		
()	А		DC current: 4 to 20mA DC		
Input	М		Multi-range (*2)	Multi-range (*2)	
Supply voltage			100 to 240V AC(Standard)		
oupply voltage		1	24V AC/DC (*3)		
		EI	Event input (*5)	Event input (*5)	
		A3	Event output (EVT1 to EV	Event output (EVT1 to EVT3) (*4)(*6)(*7)	
A5		Event output (EVT4, EVT	5)		
		W	Single-phase	Heater burnout	
W3 DR		W3	3-phase	alarm (*4)(*8)	
		Relay contact: 1a			
		DS	Non-contact voltage (SSR	Heating / Cooling	
B3		drive):12V DC±15%	control output		
Option		DA	DC current:	(OUT2) (*4)(*6)(*7)	
(Multiple options selectable) C C5 EA1 EA2 EV1 EV2 TA1 TV1 P		4 to 20mA DC			
		RS-232C	Serial		
		RS-485	communication (*5)		
		4 to 20mA DC			
		0 to 20mA DC	External setting		
		0 to 1V DC	input		
		1 to 5V DC			
		TA1	4 to 20mA DC (*9)	Transmission	
		0 to 1V DC (*10)	output		
		Insulated power output 24	4V DC (*4)(*6)(*7)		

Input		Scale range		Resolution
	к	-200 to 1370 °C	-328 to 2498 °F	1℃(°F)
		-200.0 to 400.0 °C	-328.0 to 752.0 °F	0.1°C(°F)
	J	-200 to 1000 °C	-328 to 1832 °F	1℃(°F)
	R	0 to 1760 ℃	32 to 3200 °F	1℃(°F)
	S	0 to 1760 °C	32 to 3200 °F	1℃(°F)
Thermocouple	В	0 to 1820 °C	32 to 3308 °F	1℃(°F)
	E	-200 to 800 °C	-328 to 1472 °F	1℃(°F)
	Т	-200.0 to 400.0°C	-328.0 to 752.0 °F	0.1℃(°F)
	N	-200 to 1300 °C	-328 to 2372 °F	1℃(°F)
	PL-II	0 to 1390 °C	32 to 2534 °F	1℃(°F)
	C(W/Re5-26)	0 to 2315 ℃	32 to 4199 °F	1℃(°F)
	Pt100	-200.0 to 850.0°C	-328.0 to 1562.0 °F	0.1°C(°F)
		-100.0 to 100.0°C	-148.0 to 212.0 °F	0.1℃(°F)
RTD		-100.0 to 500.0 °C	-148.0 to 932.0 °F	0.1℃(°F)
I I I		-200 to 850 °C	-328 to 1562 °F	1℃(°F)
	JPt100	-200.0 to 500.0°C	-328.0 to 932.0 °F	0.1°C(°F)
		-200 to 500 °C	-328 to 932 °F	1℃(°F)
DC current	4 to 20mA			
Do current	0 to 20mA			
	0 to 10mV			
DC voltage	-10 to 10mV			
	0 to 50mV	-2000 to	1	
	0 to 100mV	200010		
	0 to 1 V			
	0 to 5V			
	1 to 5V			
	0 to 10V			
*1: Decimal point place change and scaling are possible.				

Rated scale

 P
 Insulated power output 24V DC (\*4)(\*6)(\*7)

 (\*1): Alarm types (12 types and No alarm action) and status Energized/De-energized can be set by front keypad.
 \*

 (\*2): Thermocouple, RTD, DC current or DC voltage is selectable by front keypad.
 \*

 (\*3): For the supply voltage, 100 to 240V AC is standard. When ordering 24V AC/DC, enter "1" after the input code.
 \*

 (\*4): Applicable to the ACD-13A, ACR-13A.
 \*
 \*

 (\*5): If El and C/C5 options are added together.
 \*
 \*

 (\*6): A3, D□ and P options are added, Event output EVT2 cannot be used.
 \*

 (\*8): The rated current (20A, 100A) for single phase and 3-phase is selectable by front keypad. The CT is sold separately. Not available for the DC current output type.
 \*

 (\*9): It can be changed to '0 to 20 mA DC", "0 to 5 mA DC" or "0 to 12 mA DC". Please consult us.
 \*

 (\*10): It can be changed to to 5 V DC", "1 to 5 V DC" or "0 to 10 V DC". Please consult us.
 \*

#### Standard specifications

Display	PV display       : 11-segment LCD 5-digit, backlight Red/Green/Orange, Character size: ACD: 24.0x11.0mm(HxW), ACR: 14.0x5.4mm(HxW)         SV/MV/TIME display       : 11-segment LCD 5-digit, backlight Green, Character size: ACD: 14.0x7.0mm (HxW), ACR: 10.0x4.6mm(HxW)         MV/DV bar graph       : 22-segment LCD bar graph, backlight Green         MEMO/STEP display       : 11-segment LCD 2-digit, backlight Green
Rated input	Thermocouple: K, J, R, S, B, E, T, N, PL-II, C(W/Re5-26), External resistance, 100Ω or less         (However, B input: External resistance, 40Ω or less)         RTD       : Pt100, JPt100, 3-wire system Allowable input lead wire resistance: 10Ω or less per wire         DC current       : 0-20mA DC, 4-20mA DC Input impedance: 50Ω Allowable input current, 50mA or less         DC voltage       : 0-10mV DC, -10-10mV DC, 0-50mV DC, 0-100mV DC, 0-1V DC:         Input impedance: 1MΩ or more       Allowable input voltage: 5V DC or less         Allowable signal source resistance: 0-10mV DC: 20Ω or less, -10-10mV DC: 40Ω or less, 0-50mV DC: 200Ω or less, -0-100mV DC: 200Ω or less, 0-50mV DC: 200Ω or
Accuracy (Setting, Indication)	Hernocodpe       Within 10:2% of each input spant logit, However R, S input, 0 to 300°C (3 to 392°F): Within ±6°C (12°F) B input, 0 to 300°C (0 to 572°F): Accuracy is not guaranteed. K, J, E, T, N input, less than 0°C (32°F): Within ±0.4% of input span±1digit         RTD       : Within ±0.1% of each input span±1digit         DC current       : Within ±0.2% of each input span±1digit         DC voltage       : Within ±0.2% of each input span±1digit         Cold junction temperature compensation accuracy: Within ±1°C at 0 to 50°C
Input sampling period	125ms (250ms when EA1/EA2 or EV1/EV2 option is added)
Control output	ACD-13A, ACR-13A         Relay contact       : 1a 1b, Control capacity; 3A 250V AC (resistive load), 1A 250V AC (inductive load cosφ=0.4), Electrical life, 100,000 cycles Non-contact voltage (for SSR drive): 12V DC±15% Max. 40mA (short circuit protected)         DC current       : 4 to 20mA DC (Resolution 1/12000) Load resistance, Maximum 600Ω         ACD-15A, ACR-15A       Relay contact       : 1ax2, Control capacity; 3A 250V AC (resistive load), 1A 250V AC (inductive load cosφ=0.4), Electrical life, 100,000 cycles
FBP resolution	1/1000 (corresponds to fully open and fully closed by FBP adjustment) (ACD-15A, ACR-15A)
Feedback resistance	100Ω to 10kΩ
Control action	PID action (with auto-tuning function), PI, PD action (with Auto/Manual reset function), P action (with Auto/Manual reset function), ON/OFF action         OUT1 proportional band (P)       : 0 to Input span <sup>2</sup> C(°F) or 0.0 to 1000.0% (ON/OFF action when set to 0 or 0.0) (Default: 10°C)         OUT1 Integral time (I)       : 0 to 3600sec (OFF when set to 0) (Default: 200sec)         OUT1 Derivative time (D)       : 0 to 1800sec (OFF when set to 0) (Default: 200sec)         OUT1 proportional cycle (*1)       : 1 to 120sec (Default: Relay contact; 30sec, Non-contact voltage; 3sec, DC current; Not available)         ARW       : 0 to 100% (Default: 50%)         OUT1 NN/OFF action hysteresis       : 0.1 to 1000.°C(°F) or 1 to 10000 (The placement of the decimal point follows the selection) (Default: 1.0°C)         OUT1 high limit, low limit       : 0 to 100% (DC current: -5 to 105%) (Not available for ON/OFF action) (Default: OUT1 low limit; 0%, OUT1 high limit; 100%)         MV high limit, low limit (*2)       : 0 to 100% (Not available for ON/OFF action) (Default: WI low limit; 0%, MV high limit; 100%)         Open output time (*2)       : 0.1 to 1000.0sec (Default: 30.0sec)       Output time corresponds to the MV 0 to 100%.         Open/Closed output time (*2)       : 0.1 to 1000.0sec (Default: 10%)       Output time corresponds to the MV 0 to 100%.         Open/Closed output typestersis (*2) : 0 to 100% of the proportional band (Default: 10%)       Open/Closed output hysteresis (*2) : 0 to 100% of the proportional band (Default: 1%)         (*1): ACD-13A, ACR-13A,
EVT output	EVT1 output Output: Relay contact 1a, Control capacity: 3A 250V AC (resistive load), 1A 250V AC (inductive load cos¢=0.4), Electrical life: 100,000 cycles EVT2 output (ACD-13A, ACR-13A) Output: The same as EVT1 If DR/DS/DA or P option is added. EVT2 output is disabled.

Airm action Alarm types: High limit alarm, Low limit alarm, High/Low limits alarm, High/Low limits independent, High/Low limits with standby, High/Low limit alarm with standby, High/Low limits with standby, High/Low limits with standby, High/Low limits with standby, High/Low limits with standby High/Low limits			
Alarm types: High limit alarm, Low limit alarm, High/Low limits independent, High/Low limits independent, High/Low limits with standby, High/Low limits with standby, High/Low limits with standby, High/Low limits with standby. High/Low limits with standby, High/Low limits with standby. High/Low limits with standby, High/Low limits with standby. High/Low limits alarm, High/Low limits alarm, High/Low limits with standby. High/Low limits alarm, High/Low limits alarm, High/Low limits alarm, High/Low limits with standby. High/Low limits alardby. High/Low limits alardby. High/Low limits alardby. High/Low limits alardby. High/Low limits alarm, High/Low limits alardby. High/Low limits alardby. High/Low limits alardby. High/Low limits alarm, High/Low limits alardby. High/Low lints alardby. High/Low limits alardby. High/Low limits ala		Alarm action	
High/Low limit range independent, Process high alarm, Process low alarm, High limit alarm with standby, Ligh/Low limits with standby, High/Low limits with standby. High/Low limits with standby, High/Low limits with standby, High/Low limits with standby. High/Low limits with		Alarm types: High limit alarm, Low limit alarm, High/Low limits alarm, High/Low limits independent, High/Low limit range,	
EVT output         Low limit airm with standby, High/Low limits with standby independent One type can be selected from 24 types (with status Energized/De-energized) and No event. (Default value: No event)           Setting accuracy:         Based on the Accuracy and Cold junction temperature compensation accuracy Action         No event. (Default value: No event.)           VT output         EVT output for which alarm is selected during Event output allocation         Loop break alarm Loop break alarm span: TC, RTD input; 0: 10 1500 (°F) DC voltage, current input: 0 to 1500 (°F) DC voltage, current input: 0 to 1500 (°F)           Supply voltage         100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)           Power consumption         Approx. 18VA           Insulation resistance         10MQ or more, at 500V DC           Between input terminal and ground         : 1.5KV AC for 1 minute Between input terminal and ground           Between power terminal and ground         : 1.5KV AC for 1 minute Between input terminal and ground           Mounting; Fluids         Stis 0 85%RH (Non-condensing)         Conforms to RoHS directive. Drip-proof/Dust-proof (IP66)           Case Material/Color         Material: Flame-resistant resin, Color: Black         Mounting; The Setting; Sheet key input           Dimensions: AcD: 96x96x110mm (WxHxD). ACR: 48x96x110mm (WxHxD)         Weight: ACD: Approx. 460g, ACR: Approx. 330g           Case Material/Color         Flame-resistant resin, Color: Black		High/Low limit range independent, Process high alarm, Process low alarm, High limit alarm with standby,	
EVT output         One type can be selected from 24 types (with status Energized/De-energized) and No event. (Default value: No event)           EVT output         Setting accuracy: Based on the Accuracy and Cold junction temperature compensation accuracy Action : ON/OFF action Hysteresis : Thermocouple, RTD input : 0.1 to 1000.0°C (°F) DC voltage, current input : 1 to 10000 (The placement of the decimal point follows the selection)           Output         :EVT output for which alarm is selected during Event output allocation Loop break alarm Setting range : Loop break alarm span: TC, RTD input: 0 to 1500 (°FF), DC voltage, current input: 0 to 1500 (The placement of the decimal point follows the selection)           Output         :EVT output for which Loop break alarm is selected during Event output allocation.           Supply voltage         100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)           Power consumption         Approx. 18VA           Insulation resistance         10MO or more, at 500V DC           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and power terminal : 1.5kV AC for 1 minute           Between input terminal and power terminal : 1.5kV AC for 1 minute           Between input terminal and power terminal : 1.5kV AC for 1 minute           Between input terminal and power terminal : 1.5kV AC for 1 minute           Between input terminal and power t		Low limit alarm with standby, High/Low limits with standby, High/Low limits with standby independent	
EVT output       Setting accuracy: Based on the Accuracy and Cold junction temperature compensation accuracy         Action       : ON/OFF action         Hysteresis       : Thermocouple, RTD input: 0.1 to 1000.0°C (°F)         Do uptut       : EVT output for which alarm is selected during Event output allocation         Loop break alarm       Setting range         Setting range       : Loop break alarm span: TC, RTD input: 0 to 150°C(°F), 0.0 to 150.0°C(°F)         Do uptut       : EVT output for which Loop break alarm selected during Event output allocation.         Supply voltage       100 to 240V AcC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       10MQ or more, at 500V DC         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute </th <th></th> <td>One type can be selected from 24 types (with status Energized/De-energized) and No event. (Default value: No event)</td>		One type can be selected from 24 types (with status Energized/De-energized) and No event. (Default value: No event)	
EVT output       Action       : ON/OFF action         Hysteresis       : Thermocouple, RTD input : 0.1 to 1000.0°C (°F) DC voltage, current input : 1 to 10000 (The placement of the decimal point follows the selection)         Output       : EVT output for which alarm is selected during Event output allocation         Loop break alarm       Setting range       : Loop break alarm time: 0 to 200minutes Loop break alarm selected during Event output allocation.         Supply voltage       100 to 240V AC 50/60Hz/Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz/Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       10M 0 or more, at 500V DC         Between input terminal and ground       : 1.5kV AC for 1 minute Between input terminal and ground       : 1.5kV AC for 1 minute Between input terminal and ground         Environment       Ambient temperature: 0 to 50°C Ambient humidity: 35 to 85%RH (Non-condensing)       Conforms to RoHS directive. Drip-proof/Dust-proof (IP66)         Munting, Setting       Mounting: Flush       Setting: Sheet key input       Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value range, Marnu-up indication, console communication, PV color selection, Timer function, Set value range, Warn-up indication, Console communication, PV color selection, Timer function, Ber graph, PID zone function.         Attached functions       sensor correction, Set value lock, Auto/Manual control, Program control function, Set value range, Warnu-up indica		Setting accuracy : Based on the Accuracy and Cold junction temperature compensation accuracy	
EVT output       Hysteresis       : Thermocouple, RTD input: 0.1 to 1000 (Che placement of the decimal point follows the selection)         Output       : EVT output for which alarm is selected during Event output allocation         Loop break alarm       Setting range       : Loop break alarm         Setting range       : Loop break alarm span: TC, RTD input: 0 to 150°C(°F), 0.0 to 150.°C(°F)         Dc       Dc op break alarm span: TC, RTD input: 0 to 150°C(°F), 0.0 to 150.°C(°F)         De voltage, current input: 1: DC voltage, current input: 0 to 150°C(°F), 0.0 to 150.°C(°F)         De voltage       100 to 2400 VAC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       10MQ or more, at 500V DC         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute </th <th></th> <td>Action : ON/OFF action</td>		Action : ON/OFF action	
DC voltage, current input: 1 to 10000 (The placement of the decimal point follows the selection)         Output       :EVT output for which alarm is selected during Event output allocation         Loop break alarm       Setting range       :Loop break alarm time: 0 to 200minutes Loop break alarm span: TC, RTD input; 0 to 150°C(°F), 0.0 to 150.°C(°F)         Output       :EVT output for which Loop break alarm is selected during Event output allocation.         Supply voltage       100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       10MQ or more, at 500V DC         Between power terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal setting: Sheet key input       Material: Flame-resistance         Dimensions: ACD: 96x96x110mm (WxHxD). ACR: 48x96x110mm (WxHxD)       Weight: ACD: Approx. 460g, ACR: Approx. 330g         Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale),	EVT output	Hysteresis : Thermocouple, RTD input : 0.1 to 1000.0°C (°F)	
Output       : EVT output for which alarm is selected during Event output allocation         Loop break alarm       Setting range       : Loop break alarm time: 0 to 200minutes Loop break alarm span: TC, RTD input; 0 to 150°C(°F), 0.0 to 150.°C(°F) DC voltage, current input; 0 to 1500°C(°F)         Supply voltage       100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Dielectric strength       Between power terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Between input terminal and ground : 1.5kV AC for 1 minute         Sensor correction, Set value proper terminal: 1.5kV AC for 1 minute         Between input termin		DC voltage, current input : 1 to 10000 (The placement of the decimal point follows the selection)	
Loop break alarm       Setting range       : Loop break alarm time: 0 to 200minutes Loop break alarm span: TC, RTD input; 0 to 150°C(°F), 0.0 to 150.°C(°F) DC voltage, current input: 0 to 1500 (The placement of the decimal point follows the selection)         Output       : EVT output for which Loop break alarm is selected during Even toutput allocation.         Supply voltage       100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       10MQ or more, at 500V DC         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and power terminal: 1.5kV AC for 1 minute         Between input terminal and power terminal: 1.5kV AC for 1 minute         Between input terminal and power terminal: 1.5kV AC for 1 minute         Between input terminal and power terminal: 3.5kV AC for 1 minute         Between input terminal and power terminal: 3.5kV AC for 1 minute         Between input terminal and power terminal: 3.5kV AC for 1 minute         Between input terminal and power terminal: 3.5kV AC for 1 minute         Setting       Mounting; Flush Setting: Sheet key input         Mounting; Flush Setting: Sheet key input       Mounting, Setting <th></th> <td>Output : EVT output for which alarm is selected during Event output allocation</td>		Output : EVT output for which alarm is selected during Event output allocation	
Setting range       : Loop break alarm time: 0 to 200minutes Loop break alarm span: TC, RTD input; 0 to 150°C(°F) DC voltage, current input: 0 to 1500 (The placement of the decimal point follows the selection) Output         Supply voltage       100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Power consumption       Approx. 18VA         Insulation resistance       100 fo 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)         Dielectric strength       Between power terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and power terminal : 1.5kV AC for 1 minute       Between input terminal and power terminal : 1.5kV AC for 1 minute         Between input terminal and power terminal : 1.5kV AC for 1 minute       Between input terminal and power terminal : 1.5kV AC for 1 minute         Between input terminal and power terminal : 1.5kV AC for 1 minute       Between input terminal and power terminal : 1.5kV AC for 1 minute         Between input terminal and power terminal : 1.5kV AC for 1 minute       SetSore Color: Black         Mounting; Flush       Setting: Sheet key input         Dimensions, Weight       Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 4896x110mm (WxHxD)       Weight: ACD: Approx. 460g, ACR: Approx. 330g         Attached functions       Self-diagnosis, Automatic cold junction temperature compensation, Burrout (overscale), Input error indication, nodication range / Control ran		Loop break alarm	
Loop break alarm span: TC, RTD input; 0 to 150°C(*F), 0.0 to 150.°C(*F)           Output         : EVT output for which Loop break alarm is selected during Event output allocation.           Supply voltage         100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)           Power consumption         Approx. 18VA           Insulation resistance         10MQ or more, at 500V DC           Between power terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Sentreal/Color         Material: Elame-resista		Setting range : Loop break alarm time: 0 to 200minutes	
DC voltage, current input: 0 to 1500 (The placement of the decimal point follows the selection)           Output         : EVT output for which Loop break alarm is selected during Event output allocation.           Supply voltage         100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)           Power consumption         Approx. 18VA           Insulation resistance         10MΩ or more, at 500V DC           Between power terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Sensor correction, Set value b		Loop break alarm span: TC, RTD input; 0 to 150 C(°F), 0.0 to 150.0 C(°F)	
Output         : EV1 output for which Loop break alarm is selected during Event output allocation.           Supply voltage         100 to 240V AC 50/60Hz(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60Hz(Allowable fluctuation range: 20 to 28V AC/DC)           Power consumption         Approx. 18VA           Insulation resistance         10MQ or more, at 500V DC           Between power terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and power terminal: : 1.5kV AC for 1 minute           Between input terminal and power terminal: : 1.5kV AC for 1 minute           Case Material/Color           Material: Flame-resistant resin, Color: Black           Mounting; Setting           Dimensions, Weight           Dimensions, AcD: 96x98x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)           Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure,           Attached functions           Ref-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control           range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.           Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece           Instruction manual 1 copy, Communication instruction manual 1 co		DC voltage, current input: 0 to 1500 (The placement of the decimal point follows the selection)	
Supply voltage         100 to 240V AC 50/b0H2(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/b0H2(Allowable fluctuation range: 20 to 28V AC/DC)           Power consumption         Approx. 18VA           Insulation resistance         10M0 or more, at 500V DC           Between power terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and gover terminal : 1.5kV AC for 1 minute           Environment         Ambient temperature: 0 to 50°C         Ambient humidity: 35 to 85%RH (Non-condensing)         Conforms to RoHS directive.         Drip-proof/Dust-proof (IP66)           Case Material/Color         Material: Flame-resistant resin, Color: Black         Mounting.         Setting: Sheet key input         Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)         Weight: ACD: Approx. 460g, ACR: Approx. 330g           Dimensions, Weight         Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)         Weight: ACD: Approx. 460g, ACR: Approx. 330g           Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.           Accessories included         Harness EVT5 : 1 piece [When Event output (A5 option) is added]		Output : EVI output for which Loop break alarm is selected during Event output allocation.	
Power consumption         Approx. 18VA           Insulation resistance         10M2 or more, at 500V DC           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and ground         : 1.5kV AC for 1 minute           Between input terminal and power terminal : 1.5kV AC for 1 minute         Between input terminal and power terminal : 1.5kV AC for 1 minute           Environment         Ambient temperature: 0 to 50°C         Ambient humidity: 35 to 85%RH (Non-condensing)         Conforms to RoHS directive. Drip-proof/Dust-proof (IP66)           Case Material/Color         Material: Flame-resistant resin, Color: Black         Mounting: Flush Setting: Sheet key input           Dimensions, Weight         Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)         Weight: ACD: Approx. 460g, ACR: Approx. 330g           Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.           Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece         Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is	Supply voltage	100 to 240V AC 50/60HZ(Allowable fluctuation range: 85 to 264V AC), 24V AC/DC 50/60HZ(Allowable fluctuation range: 20 to 28V AC/DC)	
Institution resistance       Town 70 mole, at 3000 DC         Dielectric strength       Between power terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Between input terminal and power terminal : 1.5kV AC for 1 minute         Between input terminal and ground       : 1.5kV AC for 1 minute         Case Material/Color       Amterial: Flame-resistant resin, Color: Black         Mounting: Flush       Setting: Sheet key input         Dimensions, Weight       Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)       Weight: ACD: Approx. 460g, ACR: Approx. 330g         Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, arage, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.         Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece       Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only:       Harness W : 1 piece [When Heater burnout alarm (W option) is added]         Harness W : 2 pieces [When Heater burnout alarm (W option) is added] (ACR-13A)         Harness E = 1 piece [When Event output (A5 option) is added]         Harness E = 1 piece [When Event output alarm (W option) is added] (ACR-15A)         Harm	Power consumption		
Dielectric strength         Delween power ferminal and ground         1.5kV AC for 1 minute           Between input terminal and ground         1.5kV AC for 1 minute           Between input terminal and ground         1.5kV AC for 1 minute           Between input terminal and power terminal : 1.5kV AC for 1 minute           Environment         Ambient temperature: 0 to 50°C           Case Material/Color         Material: Flame-resistant resin, Color: Black           Mounting, Setting         Mounting: Flush           Dimensions, Weight         Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)           Weight         Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)           Veight         Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)           Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.           Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece           Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)           For the ACR only:           Harness W         1 piece [When Heater burnout alarm (W option) is added] (ACR-13A)           Harness W <td< th=""><th>Insulation resistance</th><th>10/002 of more, at 500V DC</th></td<>	Insulation resistance	10/002 of more, at 500V DC	
Dielectric strengtin         Deleveen input terminal and ground         1.5xV AC for 1 minute           Environment         Ambient temperature: 0 to 50°C         Ambient humidity: 35 to 85%RH (Non-condensing)         Conforms to RoHS directive.         Drip-proof/Dust-proof (IP66)           Case Material/Color         Material: Flame-resistant resin, Color: Black         Mounting, Setting         Mounting: Flush         Setting: Sheet key input           Dimensions, Weight         Dimensions: ACD: 95x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)         Weight: ACD: Approx. 460g, ACR: Approx. 330g           Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.           Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece         Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)           For the ACR only:         Harness EVT5 : 1 piece [When Event output (A5 option) is added]           Harness W         : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A)           Harness E         : 1 piece [When Event output alarm (W3 option) is added] (ACR-15A)	Distantia strength	Detween power terminal and groundsky AC for 1 minute	
Environment       Ambient temperature: 0 to 50°C       Ambient humidity: 35 to 85%RH (Non-condensing)       Conforms to RoHS directive.       Drip-proof/Dust-proof (IP66)         Case Material/Color       Material: Flame-resistant resin, Color: Black         Mounting: Flush       Setting: Sheet key input         Dimensions, Weight       Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)       Weight: ACD: Approx. 460g, ACR: Approx. 330g         Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, arange, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.         Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece       Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only:       Harness W : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A)         Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added] (ACR-15A)         Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added]	Dielectric strength	Detween input terminal and ground . T.Sky AC for 1 minute	
Environment       Antibient (environmentation)       Antibient (environmentation)       Control back         Mounting, Setting       Material: Flame-resistant resin, Color: Black         Mounting: Flush       Setting: Sheet key input         Dimensions, Weight       Dimensions: ACD: 96x96x110mm (WxHxD), ACR: 48x96x110mm (WxHxD)       Weight: ACD: Approx. 460g, ACR: Approx. 330g         Attached functions       Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.         Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece       Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only:       Harness W : 1 piece [When Event output (A5 option) is added]         Harness W : 2 pieces [When Heater burnout alarm (W option) is added] (ACR-13A)         Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added]         Harness E : 1 piece         Horne E : 1 piece         Harness E : 1 piece	Environment	Detween input terminal and power terminal. T.SKV AC for Timindle	
Class indicidit	Case Material/Color	Ambient emperature, o to ob C Ambient munitury, 35 to 65 /km (Non-condensing) Conforms to Kons directive. Dhp-proof/Dust-proof (P60)	
Accessories included       Monthing: One of the processory of the procesory of the processory of the procesory of th	Mounting Setting	Mounting Flush Setting: Sheet key input	
Attached functions       Sensor correction, Set value lock, Auto/Manual control, Program control function, Set value ramp function, Power failure countermeasure, Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.         Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only:         Harness W : 1 piece [When Event output (A5 option) is added]         Harness W : 2 pieces [When Heater burnout alarm (W option) is added] (ACR-13A)         Harness W : 2 pieces [When Peder burnout alarm (W3 option) is added]         Harness E = 5 : 1 piece	Dimensions Weight	Informations: ACD: 06V06V110mm (MVHVD) ACD: 48V06V110mm (MVHVD) Weight: ACD: Approv. 460g. ACD: Approv. 330g	
Attached functions         Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.           Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only: Harness EVT5 : 1 piece [When Event output (A5 option) is added]           Harness W         : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A) Harness W         : 2 pieces [When Heater burnout alarm (W option) is added]	Dimensione, Weight	Sensor correction. Set value lock. Auto/Manual control. Program control function. Set value ramo function. Power failure countermeasure.	
range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.         Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only: Harness EVT5 : 1 piece [When Event output (A5 option) is added]         Harness W : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A) Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added] (ACR-15A)         Harness E : 1 piece [When Event output (A5 option) is added] (ACR-15A)	Attached functions	Self-diagnosis, Automatic cold junction temperature compensation, Burnout (overscale), Input error indication, Indication range / Control	
Accessories included       Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece         Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)         For the ACR only:         Harness EVT5 : 1 piece         [When Heater burnout alarm (W option) is added]         Harness W : 1 piece         [When Heater burnout alarm (W option) is added] (ACR-13A)         Harness E : 1 piece         [When Heater burnout alarm (W3 option) is added] (ACR-15A)         Harness E : 1 piece         Harness E : 1 piece         Harness E : 1 piece         [When Heater burnout alarm (W3 option) is added] (ACR-15A)         Harness E : 1 piece         Harness E : 1 piece         [When Heater burnout alarm (W3 option) is added]		range, Warm-up indication, Console communication, PV color selection, Timer function, Bar graph, PID zone function.	
Accessories included Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added) For the ACR only: Harness EVT5 : 1 piece [When Event output (A5 option) is added] Harness W : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A) Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added] (ACR-15A) Harness E : 1 piece [When Event setting input (E41 E42 EV1 EV2 option) is added]	Accessories included	Mounting brackets 1 set, Gasket (Front mounted to the unit) 1 piece	
Accessories included       For the ACR only:         Harness EVT5 : 1 piece [When Event output (A5 option) is added]         Harness W       : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A)         Harness W       : 2 pieces [When Heater burnout alarm (W option) is added] (ACR-15A)         Harness E       : 1 piece [When Event al setting input (EA1 EA2 EV1 EV2 option) is added]		Instruction manual 1 copy, Communication instruction manual 1 copy (when C or C5 option is added)	
Accessories included Harness EVT5 : 1 piece [When Event output (A5 option) is added] Harness W : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A) Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added] (ACR-15A) Harness E : 1 piece [When Evternal setting input (EA1 EA2 EV1 EV2 option) is added]		For the ACR only:	
Accessories included Harness W : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A) Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added] (ACR-15A) Harness E : 1 piece [When External setting input (EAL EA2 EVIL EV2 option) is added]		Harness EVT5 : 1 piece [When Event output (A5 option) is added]	
Harness W : 2 pieces [When Heater burnout alarm (W3 option) is added] (ACR-15A) Harness E : 1 piece [When External setting input (EA1 EA2 EV1 EV2 option) is added]		Harness W : 1 piece [When Heater burnout alarm (W option) is added] (ACR-13A)	
Harness E 1 niece [When External setting input (EA1 EA2 EV1 EV2 option) is added]		Harness W : 2 pieces When Heater burnout alarm (W3 option) is added] (ACR-15A)	
Trancos E . T piece [when Exema Setting input (EAT, EAZ, EVT, EVZ option) is added]		Harness E : 1 piece [When External setting input (EA1, EA2, EV1, EV2 option) is added]	
Harness VT : 1 piece [When Transmission output (TA1, TV1 option) is added]		Harness VT : 1 piece [When Transmission output (TA1, TV1 option) is added]	
Harness FBP : 1 piece (ACR-15A)		Harness FBP : 1 piece (ACR-15A)	
Accessories sold separately Terminal cover, Heater burnout alarm (W, W3 option): 20A; CT (CTL-6S), 100A; CT (CTL-12-S36-10L1U), USB communication cable (CMB-001)	Accessories sold separately	Terminal cover, Heater burnout alarm (W, W3 option): 20A; CT (CTL-6S), 100A; CT (CTL-12-S36-10L1U), USB communication cable (CMB-001)	

#### Optional specifications

	An Event input comprises events from EVI1 to EVI4. Events selected from Event input allocation will be performed depending on the Input ON
EVT input [EI]	(Closed) or OFF (Open) status.
	In set value memory function is setected, 2, 2, 2 and 2 will be anotated to Event input Evit to Evit respectively, and SV to SV is will be determined by each value of Evit to EVIt to EVIt The setected memory number is indicated on the MEMO(STEP display)
	Circuit current when Closed: Approx. 16 mA
	If this option and Serial communication (C, C5 option) are added together, Event input EVI3 and EVI4 cannot be used.
	A3: EV 11 to EV 13 will be added using a common terminal. Output will be turned ON or OFF depending on the conditions selected from Event output allocation.
Event output [A3] (*),	If EVT3 (A3 option) is added, Heating/Cooling control (DR/DS/DA option) or Insulated power output (P option) cannot be added together.
Event output [A5]	A5: EVT4 and EVT5 can be added. Output will be turned ON or OFF depending on the conditions selected from Event output allocation.
	Output: Relay contact 1a, Control capacity: 3A 250V AC(resistive load), 1A 250V AC (inductive load cos¢=0.4), Electrical life: 100,000 cycles
	Single-phase Detects burnout with CT1 input
	Setting range : 0.0 to 20.0A for Heater rated current 20A [W(20A) W3(20A)] (Off when set to 0.0)
Heater burnout alarm	0.0 to 100.0A for Heater rated current 100A [W(100A) W3(100A)] (Off when set to 0.0)
[vv, vv3]()	Action patients - 55% of the fate carrent
	Action : ON/OFF action
	Output : Relay contact 1a, Control capacity: 3A 250V AC (resistive load), 1A 250V AC (inductive load cos¢=0.4), Electrical life: 100,000 cycles
	Heating control action: The same as Control output (OUT) Conting control action:
	OUT2 proportional band : 0.0 to 10.0 times OUT1 proportional band (ON/OFF action when set to 0.0)
	OUT2 integral time, OUT2 derivative time: The same as those of OUT1
	OUT2 proportional cycle : 1 to 120sec [Default: DR; 30sec, DS; 3sec, DC current (DA); Not available]
	DC input -2000 to 2000 C(17),
Heating/Cooling control	OUT2 ON/OFF action hysteresis ∶ TC, RTD input: 0.1 to 1000.0℃(°F) (Default: 1.0℃),
Output [DR, DS, DA]	DC input: 1 to 10000 (The placement of the decimal point follows the selection)
(*)	Default: OUT2 low limit. () Default: OUT2 low limit. () OUT2 high limit; () OUT2 high
	OUT2 action mode : (1) Air cooling (linear characteristic) (2) Oil cooling (1.5th power of the linear characteristic)
	(3) Water cooling (2nd power of the linear characteristic) (Default: Air cooling) Output: DB: Bolov control operation 2A 250 (AC (relativity lead) 14 250 (AC (relativity lead each of A) Electrical life; 100,000 puelos
	DS: Non-contact voltage (for SSR drive) 12V DC+15% Max. 40mA DC (short circuit protected)
	DA: DC current 4 to 20mA DC, Resolution (1/12000), Load resistance: Max. 600Ω
	If this option is added: Event output (A3 option) or Insulated power output (P option) cannot be added together, and Event output
	This option and Console communication cannot be used together. The following operations can be carried out from the external computer.
	(1) Reading and setting of the SV (desired value), PID values and various set values
	(2) Reading of the PV (process variable) and action status (3) Function change
	Communication method : Half-duplex communication
	Synchronization method : Start-stop synchronization
Serial communication	Communication speed : 9600, 19200, 38400bps Selectable by keypad (Default: 9600bps)
[0, 05]	Stop bit : 1.2 (Selectable by keybad) (Default 1)
	Communication protocol : Shinko protocol/Modbus ASCII/Modbus RTU (Selectable by keypad) (Default: Shinko protocol)
	Number of connectable units : 1 unit to 1 host computer (C), Maximum 31 units to 1 host computer (C5)
	Communication error detection: Parity, checksum (Sninko protocol), LRC (MOLBUS ASCII), CRC-16 (MOLBUS R10) Digital external setting Receives digital set values from Shinko programmable controllers (PC-900 PCD-33 with SVTC option)
	If this option and Event input (El option) are added together, Event input EVI3 and EVI4 cannot be used.
	SV adds external analog signal to remote bias value.
External setting input	De voltage: 0 to 1/ (EV1 option), 1 to 5/ (EV2 option)
[EA1, EA2, EV1, EV2]	Allowable input : EA1, EA2: 50mA DC or less, EV1: 5V DC or less, EV2: 10V DC or less
	Input impedance : EA1, EA2: 50Ω, EV1, EV2: 100kΩ
Transmission output [TA1, TV1]	Converting the value (PV, SV, MV or DV) to analog signal every 125ms, outputs the value in current or voltage. (Default: PV transmission)
	Outputs Transmission output low limit value (4mA DC or 0V DC) if Transmission output high limit and low limit value are the same.
	Resolution : 1/12000
	Output accuracy : Within ±0.3% of Transmission output span
	Output voltage : 24±3V DC (when load current is 30mA DC)
Insulated power output [P] (*)	Ripple voltage : Within 200mV DC (when load current is 30mA DC)
	Max. load current. Some bo
	Event output EVT2 cannot be used.

(\*): Applicable to the ACD-13A, ACR-13A.





- · This controller does not have a built-in power switch, circuit breaker or fuse. It is necessary to install them near the controller.
- For a 24V AC/DC power source, do not confuse
- polarity when using direct current (DC).
- To ensure safe and correct use, thoroughly read and understand the manual before using this instrument. This instrument is intended to be used for industrial machinery, machine tools and measuring equipment. Verify correct usage after purpose-of-use consultation with our agency or main office.
- (Never use this instrument for medical purposes with which human lives are involved.)
- External protection devices such as protection equipment against excessive temperature rise, etc. must be installed, as malfunction of this product could result in serious damage to the system or injury to personnel. Also proper periodic maintenance is required.
- This instrument must be used under the conditions and environment described in the manual. Shinko Technos Co., Ltd. does not accept liability for any injury, loss of life or damage occurring due to the instrument being used under conditions not otherwise stated in this manual.
- This catalog is as of September 2021 and its contents are subject to change without notice.
   The photos in this catalog do not show actual usage.
- · If you have any inquiries, please consult us or our agency.

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SAFETY

PRECAUTIONS

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#### Caution with respect to

Export Trade Control Ordinance To avoid this instrument from being used as a component in, or as being utilized in the manufacture of weapons of mass destruction (i.e. military applications, military equipment, etc.), please investigate the end users and the final use of this instrument. In the case of resale, ensure that this instrument is not illegally exported.