

SERIES SR18, SR19

- $\pm 0.3\%$ High Accuracy Indication & Setting
- Twin Setting Function (SET 1, SET 2)
- SET 1: Proportional, 2-Position & PID Control Available.
Contact, Current & SSR Voltage Control Outputs Also Available.
- SET 2: Contact Output & 2-Position Control Modes Available.
Can Be Used for Auxiliary Control or Sequence Signal.
- Optional Function Available
—Analog Output

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Series SR18



Series SR19

SPECIFICATIONS

Display (SR18 only):

Display type:	Digital (red, 7-segment LED)
Display tolerance:	$\pm 0.3\%$ + 1 digit of measuring range (at 25°C $\pm 5^\circ\text{C}$ temp.range)
Indication range:	See Measuring Range Codes.
Display range:	3, 3.5 or 4-digit

Input:

Thermocouple:	T, J, E, K, R, S, B
Cold junction temp compensation range:	5~45°C
Burnout circuit:	Standard
Input resistance:	200k Ω
External resistance tolerance:	100 Ω max.
R.T.D.:	Pt100
Amperage:	2mA
Lead wire tolerable resistance:	5 Ω max. / wire
Voltage:	0~10mV DC Linear
Input impedance:	200k Ω
Current:	4~20mA DC Linear
Receiving impedance:	250 Ω

Control Output Rating:

SET 1 Contact:	240V AC, 3A / resistive load, 1A / inductive load
Current:	4~20mA DC, RA / DA 600 Ω max. load resistance
Voltage:	0~10V DC, RA / DA Approx. 500 Ω output resistance
SSR Voltage:	15V DC, 20mA max.
SET 2 Contact:	240V AC, 3A / resistive load, 1A / inductive load

Control Action Display:

SET 1 Current output:	Green lamp will stay lit.
SSR voltage output:	When output is being emitted, green lamp will light.
Contact output:	
C-L / ON:	Green lamp will light.
C-H / ON:	Red lamp will light.
SET 2 Contact output:	
C-L / ON:	Green lamp will light.
C-H / ON:	Red lamp will light.
Setting Mode:	Twin digital switches
Setting Tolerance:	$\pm 0.3\%$
Setting Range:	See Measuring Range Codes.
Analog Output:	
Voltage:	0~10mV DC, linear, non-isolation Output resistance: 10 Ω
Current:	4~20mA DC, linear, non-isolation Load resistance: 300 Ω max.
Operating Ambient Temperature Range:	-10~+50°C
Operating Ambient Humidity:	90% RH max.
Power Supply:	See Ordering Information.
Power Consumption:	Approx. 8VA
Insulation Resistance:	500V DC, 20M Ω min. between input terminal and power supply terminal 500V DC, 20M Ω min. between power supply terminal and earth terminal
Dielectric Strength:	1 min. at 500V AC between input terminal and power supply terminal 1 min. at 1000V AC between power supply terminal and earth terminal
External Dimensions:	96 (H) \times 96 (W) \times 166 (D) mm
Weight:	Approx. 900g

ORDERING INFORMATION

ITEMS		CODE		SPECIFICATIONS
SERIES	SR18-			Twin Setting Digital Controller
	SR19-			Twin Setting Digital Controller (Non-Display)
INPUT		1		Thermocouple, Input Resistance: 200kΩ
		2		R.T.D. (Pt100), Amperage: 2mA DC
		3		Voltage, 0~10mV DC Linear, Input Impedance: 200kΩ
		4		Current 4~20mA DC Linear, Receiving Impedance: 250Ω
		9		Others (Please consult before ordering.)
SET 1	CONTROL MODE	01		Proportioning, PB: 1~20% FS, Manual Reset
		02		On / Off (2-position), Not available with control output I or V
		05		P.I.D., PB: 1~20%FS, IT: 0.1~10min. DT: 0~5 min.
		99		Others (Please consult before ordering.)
CONTROL OUTPUT	Y-		Contact, 240V AC, 3A / Resistive Load, 1A / Inductive Load	
	I-		Current 4~20mA DC, RA / DA*, Load Resistance: 600Ω max.	
	P-		SSR Voltage, 15V DC, 20mA max. Only RA is available.	
	V-		Voltage, 0~10V DC, RA / DA*	
SET 2	CONTROL MODE	02		On / Off (2-position), SA: 0.2~5% FS
		99		Others (Please consult before ordering.)
CONTROL OUTPUT	Y-		Contact, 240V AC, 3A / Resistive Load, 1A / Inductive Load	
	X-		Others (Please consult before ordering.)	
ANALOG OUTPUT		0		None Provided
		3		0~10mV DC Linear, Non-Isolation Output Resistance: 10Ω
		4		4~20mA DC Linear, Non-Isolation, Load Resistance: 300Ω max.
		9		Others (Please consult before ordering.)
POWER SUPPLY		11-		100~110V / 200~220V AC ±10%, 50 / 60Hz
		12-		110~120V / 220~240V AC ±10%, 50 / 60Hz
		99-		Others (Please consult before ordering.)
INPUT STANDARD		N		None
		J		JIS
		F		JIS (New Pt100-JIS)
		D		DIN
		A		ANSI
		X		Others (Please consult before ordering.)
TYPE OF INPUT		T		Thermocouple (T)
		J		Thermocouple (J)
		E		Thermocouple (E)
		K		Thermocouple (K)
		S		Thermocouple (S)
		R		Thermocouple (R)
		B		Thermocouple (B)
		P		R.T.D. (Pt100)
		L		Linear — Voltage and Current Inputs
		X		Others (Please consult before ordering.)
MEASURING RANGE		□□□		See Measuring Range Codes.
LEGEND		N		No Legend
		C		°C Temperature
		F		°F Temperature
		H		% RH Humidity
		P		% Percent
		V		V Voltage
		E		mV Voltage
		A		A Current
		I		mA Current
		X		Others (Please consult before ordering.)
REMARKS		0		Without
		9		With (Please consult before ordering.)

*RA / Reverse Action (heating) or DA / Direct Action (cooling) can be selected by means of an internal switch. Factory setting will be RA / Reverse Action.

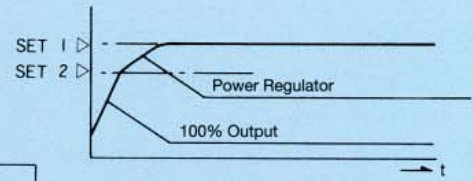
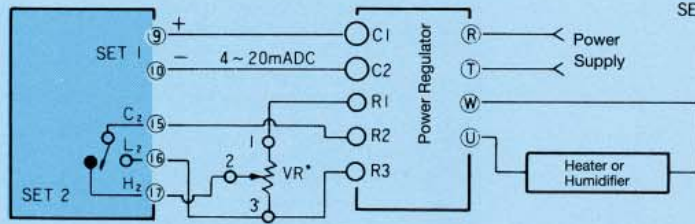
MEASURING RANGE CODES

INPUT	RANGE	CODE	
R.T.D. (Pt100)	-99.9~ +99.9°C	579	
	-99.9~+199.9°C	580	
	0 ~ 99.9°C	781	
	0 ~ 199.9°C	786	
	0 ~ 299 °C	789	
	0 ~ 399 °C	792	
Thermocouple	T -199 ~+199 °C	573	
	J 0 ~ 399 °C	792	
	E 0 ~ 399 °C	792	
	K	0 ~ 399 °C	792
		0 ~ 999 °C	874
		0 ~ 1199 °C	877
	S 0 ~ 1699 °C	885	
	R 0 ~ 1699 °C	885	
B 0 ~ 1799 °C	886		
Voltage / Current	0 ~ 99.9%	781	
	0 ~ 99.9%RH	781	

INPUT	RANGE	CODE	
R.T.D. (Pt100)	-99.9~+199.9°F	580	
	0 ~ 199.9°F	786	
	0 ~ 299 °F	789	
	0 ~ 499 °F	795	
	0 ~ 799 °F	871	
	0 ~ 499 °F	795	
Thermocouple	J 0 ~ 799 °F	871	
	E 0 ~ 799 °F	871	
	K	0 ~ 799 °F	871
		0 ~ 1499 °F	881
		0 ~ 1999 °F	887
		0 ~ 2499 °F	891
	S 0 ~ 3199 °F	894	
	R 0 ~ 3199 °F	894	
	B 0 ~ 3199 °F	894	

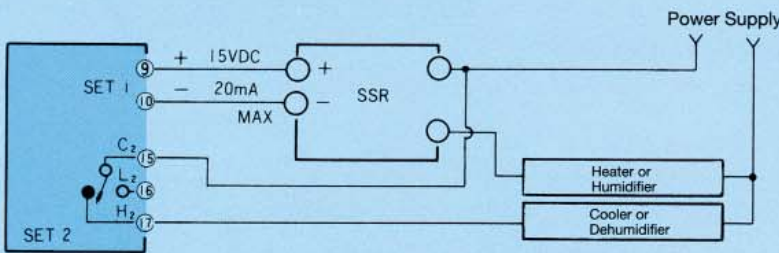
APPLICATIONS

Current Output (P, PID) + 2-Position

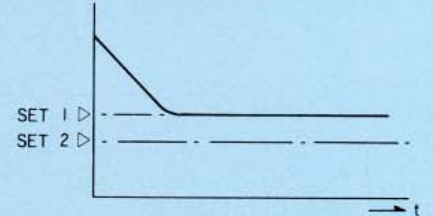


□ 100% Output is emitted up to SET 2 set point, where optimum power is altered by external power adjuster and SET 1 control begins.

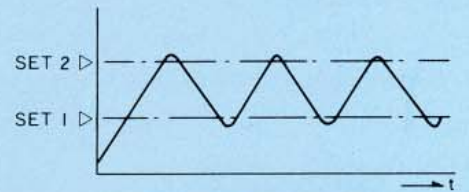
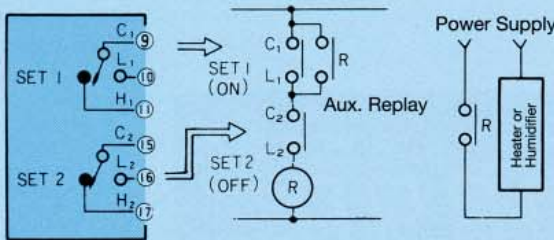
SSR Voltage Output (P, PID) + 2-Position



□ Control cooler or dehumidifier with SET 2, and heater or humidifier with SET 1

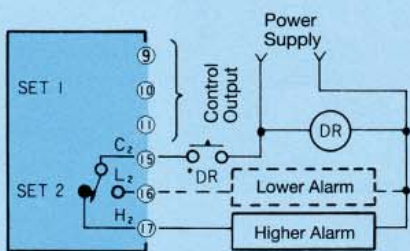


2-Position + 2-Position (Wide Hysteresis)



□ When using cooler or dehumidifier, use C-H contacts and wire so that SET 1 is OFF and SET 2 is ON.

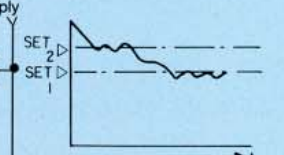
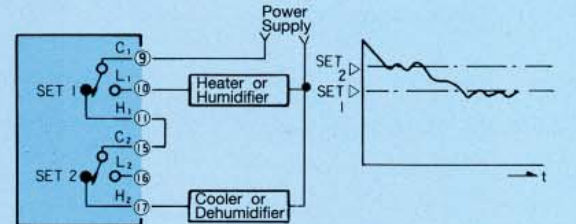
SET 2 + Alarm



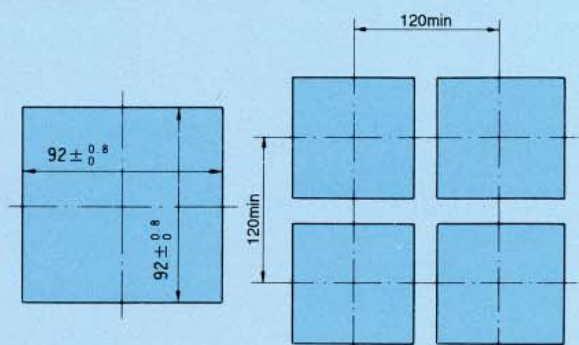
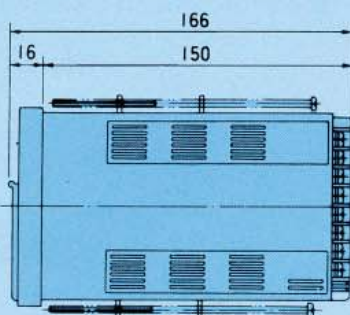
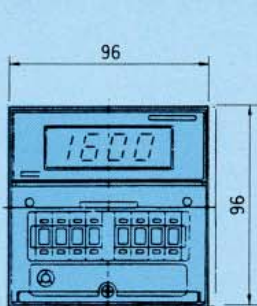
□ Alteration of control set point has no effect on set point of alarm.

*DR: Delay Relay 2-3 secs.

2-Position + 2-Position (Heating + Cooling)



EXTERNAL DIMENSIONS & PANEL CUTOUT



Unit : mm