SM100

Board type multi channel Temperature controller

- Cooling control and heating control selection
- Alarm output and timer output selection
- ON / OFF and proportional control selection
- 0.1 ℃ / 1 ℃ selection
- Delay output time setting

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▌ Specification

Model		SM100-□A12	SM100-□A16	SM100-□A20
Control output channel		12 channel	16 channel	20 channel
Measurement input	Input type	• Thermocouple (K), range : -199.9 ℃ ~ 999.9 ℃ • RTD (Pt100 Ω), range : -199.9 ℃ ~ 640.0 ℃		
	Display accuracy	± 0.5 % of max range (± 0.5 % of F.S)		
	RJC compensation accuracy	within the display accuracy		
	Sampling cycle	1 sec		
	Input compensation	-1200.0 ℃ ~ 1200.0 ℃		
	Input filter	0.0 sec ~ 120.0 sec		
	Burn-out action	Thermocouple : Upscale RTD : Upscale		
Setting and display	Setting type	Setting by thecommunication program		
	Number of setting	12	16	20
	Memory Storage	Storage by the semiconductor		
	Device address setting	Setting (1~15) by the internal HEX BCD switch		
	Display LED	Power indication, communication indication, control output indication		
Control output	Output type	Voltage pulse output for starting SSR (Starting voltage, resistive load: min 600 Ω)		
	Control action	time sharing PID or ON/OFF control		
	Number ofPID group	1 group / channel		
	Proportional cycle (output cycle)	1 sec ~ 100 sec		
	Proportional band (P)	0 ~ 1200.0 ℃		
	Integral time (I)	1 sec ~ 3600 sec		
	Derivative time (D)	1 sec ~ 3600 sec		
	Over integral prevention	0.1 % ~ 100.0 % ※ "0" setting (Auto)		
	Manual reset	0.0 % ~ 100.0 % (when performing ON/OFF control)		
	Hysteresis	0 ℃ ~ 120.0 ℃ (when performing ON/OFF control)		
	Control output action	cooling control (forward action)/heating (reverse action) selectable		
	Emergency output	0.0 % ~ 100.0 %		
Event output	Number of output	1a 3 (AL1, AL2, AL3)		
	Control action type	15 types (Refer to the alarm operation)		
	Loop break alarm	0 sec ~ 7200 sec (OFF when "0" is set)		
	Hysteresis	0 ℃ ~ 120.0 ℃		

	Output action	ON/OFF action
	Output type	Relay output
	Contact capacity	5 A 250 V a.c. (5 A 30 V d.c.)
Contact input	Number of external contact input	1 (RUN/STOP by the inernal DIP switch)
Communication specification	Communication standard	ELA-RS485/422(4-Wire type)
	Communication type	Half duplex
	Max number of connectable device	15 ※ HEX BCD Address setting type by the BCD switch
	Start bit	1 Bit
	Stop bit	1 Bit
	Parity bit	Even
	Data length	8 Bit
	Transmission speed	19200 bps
	Communication distance	1.2 ㎞ max
	Communication protocol	PC Link with SUM
	Response time	Receiving processing time + (response setting time x 25 ㎳)
General specification	Power supply voltage	100 V - 240 V a.c. 50 Hz - 60 Hz
	Power supply voltage fluctuation	± 10 % of the rated power supply voltage
	Power consumption	25 VA max.
	Insulation resistance	20 ㏁ min. power terminal and earth (ground) terminal (500 V d.c. mega)
	Dielectric strength	2000 V a.c. for 1 min, power terminal and earth (ground) terminal
	Ambient temperature	0 ℃ ~ 50 ℃
	Ambient humidity	20 % ~ 85 % RH (dew condensation not allowed)
	Storage temperature	-20 ℃ ~ 70 ℃ (dew condensation not allowed)
	Vibration resistance	10 Hz ~ 55 Hz 19.6 m/s² 3 axis 6 directions 2 h
	Shock resistance	196 m/s² 3 axes 3 times to each of 6 directions
	Case material	SPC
	Installation	Fixing by screws
	Weight	approx. 1000 g