

# Single Loop Controller | SDC25



\* For our cUL certification status, contact our sales representatives.

The SDC25 Single Loop Controller is a digital indicating controller featuring multi-range inputs and a PID control system using the new "RationalLOOP PID" (Ra-PID) and "Just-FITTER" algorithms.

Up to 2 control outputs are available (depending on the model), selectable from relay contact, voltage pulse, and current. Compatible with the Smart Loader Package, which facilitates setup and monitoring.



### Specifications

PV input	Input type	Multi-range of inputs—thermocouple, resistance thermometer detector, DC current, and DC voltage					
	Sampling cycle	0.3 s					
Indication	Indication method	4-digit, 7-segment LED (PV: upper green display, SP: lower orange display)					
	Indication accuracy	±0.3% FS ±1 digit In the negative area of the thermocouple, the accuracy is ±0.6% FS±1 digit (at an ambient temperature of 23 ± 2 °C)					
Control/output	Code	R0	V0	VC	VV	C0	CC
	First control output	Relay	Voltage pulse (for SSR drive)	Voltage pulse (for SSR drive)	Voltage pulse (for SSR drive)	Current	Current
	Second control output	—	—	Current	Voltage pulse (for SSR drive)	—	Current
	Control action	ON/OFF control, time proportional PID, current proportional PID					
	Number of PID groups	Max. 4 groups					
	PID auto-tuning	Automatic PID value setting by limit cycle method (Selectable from: standard control characteristic, control characteristic with quick disturbance response, and control characteristic with less up/down fluctuations)					
External switch input	Number of inputs	Max. 4					
	Function	Up to 4 kinds of setting value (SP) options, PID group selection, RUN/READY selection, AUTO/MANUAL selection, etc.					
Event	Number of outputs	2 to 3 (depending on the model)					
	Event type	PV high limit, PV low limit, PV high/low limit, deviation high limit, deviation low limit, deviation high/low limit, etc.					
Communication specification	RS-485						
Current transformer input	Number of inputs	2 (option)					
General specifications	Rated power supply voltage	AC power supply model: 100 to 240 Vac 50/60 Hz DC power supply model: 24 Vac 50/60Hz, 24 Vdc					
	Power consumption	AC power supply model: Max. 12 VA DC power supply model: Max. 12 VA (24 Vac), Max. 8 W (24 Vdc)					
	Weight	Approx. 250 g (including mounting bracket)					

### Input list

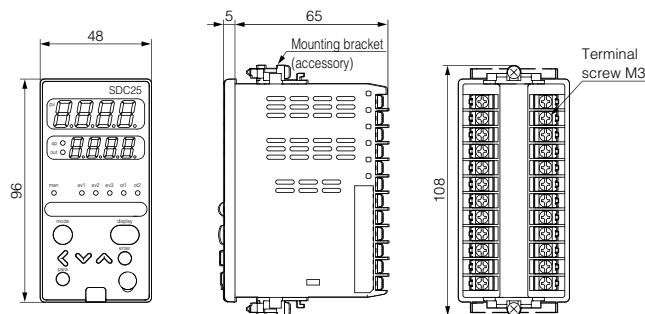
Input type	Symbol
Thermocouple	K, J, E, T, R, S, B, N, PL II,
	WRe5-26, Ni-Mo-Ni, PR40-20,
	DIN U, DIN L, Chromel/Gold-iron
Resistance thermometer detector	JIS Pt100, JIS JPt100
DC current/voltage	4 to 20 mA, 0 to 20 mA
	0 to 5 V, 1 to 5 V, 0 to 10 mV
	0 to 100 mV, -10 to +10 mV
	0 to 1 V, 0 to 10 V

### Standards for input sensor

Thermocouple	K, J, E, T, R, S, B, N: JIS C 1602-1995 PL II: material from Engelhard Industries (ITS90) WRe5-26: ASTM E988-96 (Reapproved 2002) Ni-Mo-Ni: ASTM E1751-00 PR40-20: material from Johnson Matthey DIN U, DIN L: DIN 43710-1985 Chromel/Gold-iron: material from Hayashi Denko
Resistance thermometer detector	Pt100: JIS C 1604-1997 JPt100: JIS C 1604-1989

### External dimensions

(Unit: mm)



1 DIGITAL CONTROLLERS  
2 RECORDERS, INDICATORS  
3 CONVERTERS  
4 FLAME SAFEGUARD SYSTEM  
5 ACTUATORS  
6 SENSORS  
7 GAS FLOW MEASUREMENT AND CONTROL PRODUCTS

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## Model No. configuration

Ex.: C25TR0UA1000

Basic model No.	Control output	PV input	Power supply	Option 1	Option 2	Addition	Description
C25T							Single Loop Controller
							Control output 1
							Control output 2
		R0					Relay
		V0					Voltage pulse output (for SSR drive)
		VC					Voltage pulse output (for SSR drive)
		VV					Voltage pulse output (for SSR drive)
		C0					Current
		CC					Current
			U				Universal
				A			100 to 240 Vac 50/60 Hz
				D			24 Vdc/24 Vac, 50/60 Hz
					1		Event relay outputs: 3
					2		Event relay outputs: 3 + auxiliary output (current output)
					4*1		Event relay outputs: 2 (independent contact)
				5*1		Event relay outputs: 2 (independent contact) + auxiliary output (current output)	
					0	None	
					1*2	Current transformer inputs: 2 + digital inputs: 4	
					2*2	Current transformer inputs: 2 + digital inputs: 4 + RS-485 communication	
					00	None	
					D0	Inspection certificate	
					Y0	Supports traceability certification	

Order this product by specifying a model No. beginning with C25\*\*.

\*1. Cannot be selected for the DC model.

\*2. Current transformer sold separately.

### Optional parts (sold separately)

Name	Model No.
Smart Loader Package	SLP-C35J50
Smart Loader Package without user's manual and loader cable	SLP-C35J51
Current transformer (5.8 mm-hole diameter)	QN206A
Current transformer (12 mm-hole diameter)	QN212A
Dedicated hard cover	81446915-001
Dedicated soft cover	81441121-001
Dedicated terminal cover	81446912-001
Mounting bracket (supplied with the product)	81409654-001

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