



SDC35

Super DigitroniK Single Loop Controller

The DigitroniK SDC35 is a digital indicating controller featuring multiple input types and a PID control system using the new "RationalLOOP" and "Just-FITTER" algorithms.

Up to two control outputs (depending on the exact model) can be used, which are selectable from relay, voltage pulse, continuous voltage, and current output.



DIGITAL CONTROLLERS

Specifications

PV input	Type	Selectable from multiple input types: thermocouple, RTD, DC current and DC voltage					
	Sampling cycle	0.1 s					
Indication	Indication method	4-digit, 7-segment LED. (PV: Upper green display, SP: Lower orange display)					
	Indication accuracy	±0.1% FS ± 1 digit. In the negative area of the thermocouple, the accuracy is ±0.2% FS ± 1 digit (at an ambient temperature of 23 ± 2°C)					
Control output	Model No. Segment II	R0	R1	V0	VC	VD	VV
	Control output 1	Relay	Motor drive relay	Voltage pulse (for SSR drive)	Voltage pulse (for SSR drive)	Voltage pulse (for SSR drive)	Voltage pulse (for SSR drive)
	Control output 2	-	-	-	Current	Continuous voltage	Voltage pulse (for SSR drive)
	Model No. Segment II	C0	CC	CD	D0	DD	
	Control output 1	Current	Current	Current	Continuous voltage	Continuous voltage	
	Control output 2	-	Current	Continuous voltage	-	Continuous voltage	
	Control action	ON/OFF control, Time proportional PID, Current proportional PID					
	No. of PID groups	Max. 8					
	PID auto-tuning	Automatic PID value setting by limit cycle method. However, one of the following 3 control characteristics can be selected: • Standard • Quick disturbance response • Less up-down fluctuation					
	Remote switch input	No. of inputs	Max. 4				
Event	No. of outputs	2 to 3 (according to the model)					
	Type	PV high limit, PV low limit, PV high/low limit, Deviation high limit, Deviation low limit, Deviation high/low limit, etc.					
Communications		RS-485					
Current transformer inputs		2 (option)					
General	Power	AC model: 100 to 240Vac 50/60Hz DC model: 24Vac 50/60Hz / 24Vdc					
	Power consumption	AC model: 12VA max. DC model: 12VA max. (24Vac), 8W max. (24Vdc)					
	Mass	Approx. 250g (including socket)					

Accessories (sold separately)

Model No.	Description
SLP-C35J50	Smart Loader software with user's manual and loader cable
SLP-C35J51	Smart Loader software without user's manual and loader cable
QN206A	Current transformer (5.8mm dia.)
QN212A	Current transformer (12mm dia.)
81446915-001	Hard cover
81441121-001	Soft cover
81446912-001	Terminal cover
81409654-001	Mounting bracket

Selection Guide I II III IV V VI VII Example: C35TR0UA1000

Segment	Model No. selection	Description						
I	Basic No.	C35T	↓	↓	Single loop controller			
	Control output				Output 1	Output 2	Remarks	
		R0	○	○	Relay	-	-	
		R1	○	-	Motor drive relay	-	w/MFB	
		V0	○	○	Voltage pulse (for SSR drive)	-	-	
		VC	○	○	Voltage pulse (for SSR drive)	Current	-	
		VD	○	○	Voltage pulse (for SSR drive)	Continuous voltage (note 1)	-	
		VV	○	○	Voltage pulse (for SSR drive)	Voltage pulse (for SSR drive)	-	
		C0	○	○	Current	-	-	
		CC	○	○	Current	Current	-	
		CD	○	○	Current	Continuous voltage (note 1)	-	
		D0	○	○	Continuous voltage (note 1)	-	-	
		DD	○	○	Continuous voltage (note 1)	Continuous voltage (note 1)	-	
		III	PV input	U	○	○	Universal (full multi) input	
IV	Power	A	○	-	100 to 240Vac 50/60Hz			
		D	○	-	24Vac 50/60Hz, 24 to 48Vdc			
V	Option 1				EV (digital outputs)	Auxiliary output		
		1	○	○	3	-		
		2	○	○	3	Current		
		3	○	○	3	Voltage		
		4	○	-	2 independent outputs	-		
		5	○	-	2 independent outputs	Current		
		6	○	-	2 independent outputs	Voltage		
VI	Option 2				2 CT inputs (note 2)	Digital inputs (DI)	RSP	RS-485 communications
		0	○	○	-	-	-	-
		1	○	○	○	4	-	-
		2	○	○	○	4	-	○
		3	○	○	○	2	○	-
		4	○	○	○	2	○	○
VII	Option 3	00	○	○	None			
		D0	○	○	With test data			
		T0	○	○	Tropicalization			
		K0	○	○	Antisulfidization			
		B0	○	○	Tropicalization + test data			
		L0	○	○	Antisulfidization + test data			
		Y0	○	○	With traceability certification			

• A circle (○) denotes availability.

Notes: 1. Selectable from 1-5V, 0-5V and 0-10V.

2. Current transformer input is not available if R1 control output is selected.

Input Types and Ranges

Range code	Input type	Range (°C)
1	K	-200 to +1200
2		0 to 1200
3		0.0 to 800.0
4		0.0 to 600.0
5		0.0 to 400.0
6		-200.0 to +400.0
7		-200.0 to +200.0
8	J	0 to 1200
9		0.0 to 800.0
10		0.0 to 600.0
11		-200.0 to +400.0
12	E	0.0 to 800.0
13		0.0 to 600.0
14	T	-200.0 to +400.0
15	R	0 to 1600
16	S	0 to 1600

Range code	Input type	Range (°C)
17	B	0 to 1800
18	N	0 to 1300
19	PL II	0 to 1300
20	Wre5-26	0 to 1400
21		0 to 2300
22	Ni-NiMo	0 to 1300
23	PR40-20	0 to 1900
24	DIN U	-200.0 to +400.0
25	DIN L	-100.0 to +800.0
26	Golden iron chromel	0.0 to 360.0K (K: Kelvin)
41	Pt100	-200.0 to +500.0
42	JPt100	-200.0 to +500.0
43	Pt100	-200.0 to +200.0
44	JPt100	-200.0 to +200.0
45	Pt100	-100.0 to +300.0
46	JPt100	-100.0 to +300.0

Range code	Input type	Range (°C)
47	Pt100	-100.0 to +200.0
48	JPt100	-100.0 to +200.0
49	Pt100	-100.0 to +150.0
50	JPt100	-100.0 to +150.0
51	Pt100	-50.0 to +200.0
52	JPt100	-50.0 to +200.0
53	Pt100	-50.0 to +100.0
54	JPt100	-50.0 to +100.0
55	Pt100	-60.0 to +40.0
56	JPt100	-60.0 to +40.0
57	Pt100	-40.0 to +60.0
58	JPt100	-40.0 to +60.0
59	Pt100	-10.00 to +60.00
60	JPt100	-10.00 to +60.00
61	Pt100	0.0 to 100.0
62	JPt100	0.0 to 100.0

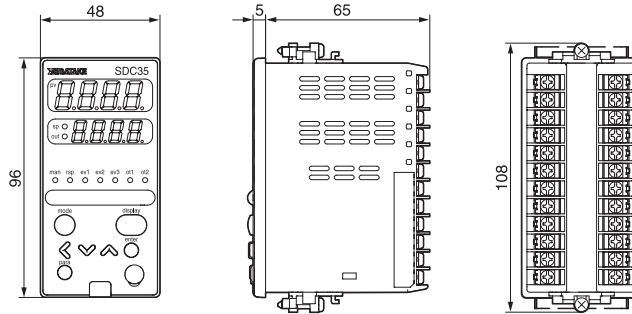
Range code	Input type	Range (°C)
63	Pt100	0.0 to 200.0
64	JPt100	0.0 to 200.0
65	Pt100	0.0 to 300.0
66	JPt100	0.0 to 300.0
67	Pt100	0.0 to 500.0
68	JPt100	0.0 to 500.0
81	0 to 10mV	Scaling range is -1999 to +9999. Decimal point position changeable.
82	-10 to +10mV	
83	0 to 100mV	
84	0 to 1V	
86	1 to 5V	
87	0 to 5V	
88	0 to 10V	
89	0 to 20mA	
90	4 to 20mA	

• °F display is selectable.

Dimensions

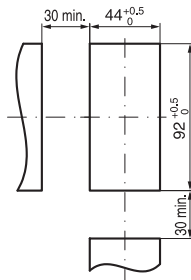
(Unit: mm)

• SDC35

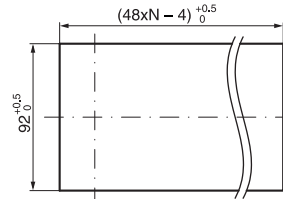


• Panel cutout

Individual mounting



Side-by-side mounting



(N: number of units installed)