



SDC40A

DigitroniK Digital Indicating Controller

The SDC40A is a compact (96×96mm) digital indicating controller that accepts 4 types of input: thermocouple, resistance temperature detector, DC voltage and DC current.

Configuration can be done easily using a PC.



DIGITAL CONTROLLERS

Specifications

General	Memory backup	Semiconductor nonvolatile memory
	Power	100 to 240Vac, 50/60Hz, 24Vdc
	Power consumption	30VA max.
	Ambient temperature	0 to 50°C
	Ambient humidity	10 to 90% RH (no condensation allowed)
PV input (PV1)	Mass	Approx. 750g
	Type	Multirange: thermocouple, RTD, DC voltage/current
	Sampling cycle	0.1s
	Accuracy	±0.1% FS
PV2	Bias	-1000 to +1000U (U: industrial unit)
	Type	4–20mA, 1–5Vdc
Indication & setting	PV, SP indication	5-digit, 7-segment LED
	Function indication	2-digit, 7-segment LED
	Bar LED	Motor opening, OK indication, events 4 to 8, or RSW 1 to 12 monitoring
	No. of setpoints	1 to 8 selectable
	Range	Selectable
Control output	Setpoint limit	Lower: -19999 to upper limit Upper: Lower limit to 26000
	No. of PID sets	8 (models 3D/AK/5K/9K/BK — 4 sets for cooling, 4 sets for heating)
Remote switch input (RSW)	PID auto-tuning	Automatic setting of PID value by limit cycle method and neural/fuzzy/smart method (no auto-tuning for 3D/AK/5K/9K/BK)
	Output limiter (%)	Lower: -10 to upper limit Upper: Lower limit to 110
	MV changing rate limiter	0.1 to 10.0% (every 100ms)
	Control action	Direct/reverse selectable
	SP ramp	0 to 26000U (U: industrial unit) Unit: U/h, 0.1U/h, U/min, 0.1U/min
Event output (EV)	No. of inputs	4 or 12 (option for both)
	Function	NOP, RUN/READY, AUTO/MANUAL, REMOTE/LOCAL, AT start/stop, direct/reverse, SP selection (PID group No. interlock), Fixed MV value output, LSP shift, Analog input 2 ratio number selection, Computer backup system 1 and 2
	Type	Dry contact open collector transistor
Auxiliary output (AUX)	No. of outputs	2 (standard), or 3 to 8 (optional)
	Type	PV, dev., dev. , MV, RSP, motor feedback, alarm, control loop diagnostics
Communications	Control mode	ON/OFF SPST relay contact
	Output	1 or 2 (1 for 2G/3D/AK/5K/9K/BK)
Communications	Type	PV, SP, dev., RSP, MV, motor feedback
	Output	4–20mA, load resistance: 680Ω max.
Communications		RS-485

Accessories (sold separately)

Part No.	Description
SLP-C4AJ20	Smart Loader Package (software)
81446083-001	Hard dustproof cover
81466087-001	Soft dustproof cover
81446084-001	Terminal cover

Selection Guide I II III IV V VI VII Example: C40A0D0AS000D0

Segment	Model No. selection	Description	
I	Basic No.	C40A	
	II	Control output	0D ○ ○ – – Digital indicating controller
			6D ○ ○ – – Relay output (ON/OFF or time proportional)
			2G – – ○ ○ Voltage output (with current calibration action functions, ON/OFF or time proportional)
			5G ○ ○ – – Position proportional output
			3D – – ○ ○ Current output (4–20mA)
			AK – – ○ ○ Heat-cool output, relay output + relay output
			5K – – ○ ○ Heat-cool output, relay output + current output
			9K – – ○ ○ Heat-cool output, relay output + voltage output
			BK – – ○ ○ Heat-cool output, current output + voltage output
III		Function	0 ○ ○ ○ ○ Standard model
		1 ○ ○ ○ ○ Remote SP function model	
		2 ○ ○ ○ ○ Internal cascade function model	
IV	Power	AS ○ ○ ○ ○ 100 to 240Vac 50/60Hz	
		DS ○ ○ ○ ○ 24Vdc	
V	Option 1	00 ○ – ○ – Standard model with additional event outputs (2 SPST relay contacts)	
		01 – ○ – ○ With 4 remote switching inputs	
		02 ○ – ○ – With 1 added SPDT relay contact event output	
		03 – ○ – ○ With 4 remote switching inputs + 1 added SPDT relay contact event output	
		04 – ○ – ○ With 4 remote switching inputs + 1 auxiliary output	
		05 ○ – ○ – With 1 added event output + 1 auxiliary output	
		06 – ○ – ○ With 4 remote switching inputs + 1 added SPDT relay contact event output + 1 auxiliary output	
		07 – ○ – – With 4 remote switching inputs + 2 auxiliary outputs	
		08 ○ – – – With 1 added event output + 2 auxiliary outputs	
		09 – ○ – – With 4 remote switching inputs + 1 added SPDT relay contact event output + 2 auxiliary outputs	
VI	Option 2	0 ○ ○ ○ ○ None. (If option 1 is not designated, 0 will be selected automatically.)	
		1 – ○ – ○ With 8 added remote switching inputs + 5 added event outputs (open collector output)	
		2 – ○ – ○ With 8 added remote switching inputs + 5 added event outputs (open collector output) + RS-485 communications	
		3 – ○ – ○ With 8 added remote switching inputs + 5 added event outputs (open collector output) + RS-232C communications	
VII	Option 3	00 ○ ○ ○ ○ None	
		T0 ○ ○ ○ ○ Tropicalization	
		K0 ○ ○ ○ ○ Antisulfidization	
		D0 ○ ○ ○ ○ With test data	
		B0 ○ ○ ○ ○ Tropicalization + test data	
		L0 ○ ○ ○ ○ Antisulfidization + test data	
		Y0 ○ ○ ○ ○ With traceability certification	

• A circle (○) denotes availability.

Input Types and Ranges

Range code	Input type	Range (°C)
0	K (CA)	0.0 to 1200.0
1		0.0 to 800.0
2		0.0 to 400.0
3		-200.0 to +1200.0
4		-200.0 to +300.0
5		-200.0 to +200.0
6	E (CRC)	0.0 to 800.0
7	J (IC)	0.0 to 800.0
8	T (CC)	-200.0 to +300.0
9	B (PR30-6)	0.0 to 1800.0

Range code	Input type	Range (°C)
10	R (PR13)	0.0 to 1600.0
11	S (PR10)	0.0 to 1600.0
12	W (WR5-26)	0.0 to 2300.0
13		0.0 to 1400.0
14	PR40-20	0.0 to 1900.0
15	Ni-Ni-Mo	0.0 to 1300.0
16	N	0.0 to 1300.0
17	PL II	0.0 to 1300.0
18	DIN U	-200.0 to +400.0
19	DIN L	-200.0 to +800.0

Range code	Input type	Range (°C)
20	Gold iron-chromel	0.0 to 300.0K (K: Kelvin)
32	JIS '89 Pt100 (IEC Pt100Ω)	-200.0 to +500.0
33		-200.0 to +200.0
34		-100.0 to +150.0
35		-50.0 to +200.0
36		-60.00 to +40.00
37		-40.00 to +60.00
38		0.0 to 500.0
39		0.0 to 300.0
40		0.00 to 100.00

Range code	Input type	Range (°C)
48	JIS '89 JPt100	-200.0 to +500.0
49		-200.0 to +200.0
50		-100.0 to +150.0
51		-50.0 to +200.0
52		-60.00 to +40.00
53		-40.00 to +60.00
54		0.0 to 500.0
55		0.0 to 300.0
56		0.00 to 100.00

Range code	Input type	Range (programmable)
64	4 to 20mA	-19999 to +26000
65	0 to 20mA	
66	0 to 10mV	

Range code	Input type	Range (programmable)
67	-10 to +10mV	-19999 to +26000
68	0 to 100mV	
69	0 to 1V	

Range code	Input type	Range (programmable)
70	-1 to +1V	-19999 to +26000
71	1 to 5V	
72	0 to 5V	

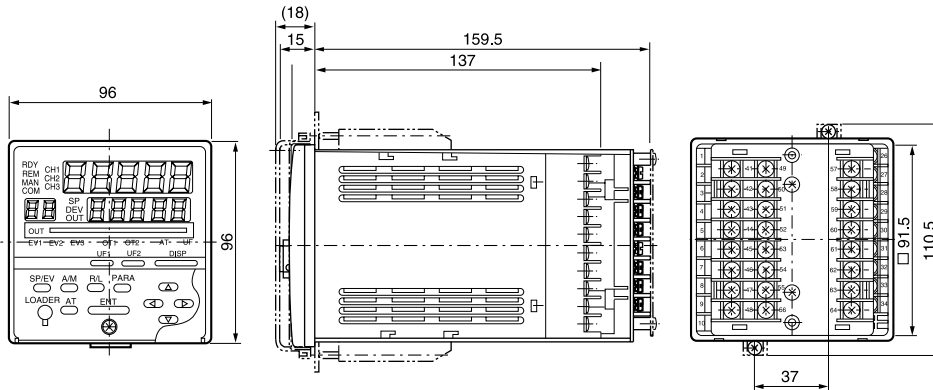
Range code	Input type	Range (programmable)
73	0 to 10V	-19999 to +26000

* °F display is selectable.

Dimensions

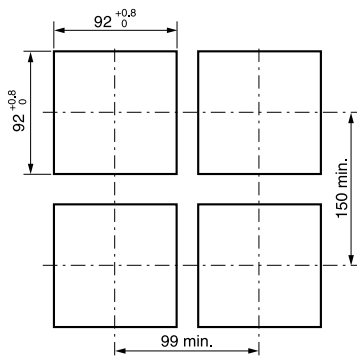
(Unit: mm)

• SDC40A

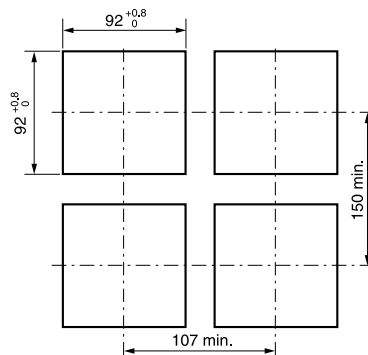


• Panel cutout

Individual standard mounting or with soft dustproof cover



Individual mounting with hard dustproof cover



Side-by-side mounting

