

# SDC31

DigitroniK

## Digital Indicating Controller

The SDC31 is a compact (96mm×96mm) digital indicating controller offering standard PID control, advanced neural/fuzzy PID, multi-range inputs including thermocouple, resistance temperature detector (RTD), DC voltage and DC current inputs.

Remote switch input, control parameters and local set points can be set using a PC loader.



CONTROLLERS

### Specifications

General	Memory backup	Semiconductor non-volatile memory
	Power supply voltage	85 to 264Vac, 50/60Hz, or 24Vdc ± 5%
	Power consumption	18VA max.
	Ambient temperature	0 to 50°C
PV input	Ambient humidity	10 to 90%RH (no condensation allowed)
	Weight	Approx. 500g
	Type	Multirange: Thermocouple, RTD, DC voltage/current
	Sampling cycle	0.2s
Indication & Setting	Bias	-1999 to +9999U (U: industrial unit)
	PV, SP indication	4-digit, 7-segment LED
	OK lamp	Control deviation value indicated by greenbelt
	No. of setpoints	1 to 8 points selectable
	Range	Selectable
	Indication accuracy	± 0.2%FS ± 1 digit (not specified for B in 0-260°C range) ± 0.3%FS ± 1 digit for 0-10mV input
Control Output	Setting method	Local setting (standard), Remote setting (optional, remote/local changeable)
	No. of PID sets	8
	PID auto-tuning	Automatic setting of PID value by limit cycle method and neural/fuzzy/smart method
	Output limiter %	Lower: 0 to upper limit Upper: Lower limit to 100
	Control action	Direct/reverse selectable
Remote Switch (RSW) Input	SP ramp	0 to 9999/min, 0 to 999.9/min, 0 to 9999/h, or 0 to 999.9/h
	No. of inputs	1 or 4
	Function	LSP selection (PID group No. interlock), READY/RUN changeover, AUTO/MANUAL, LOCAL/REMOTE, auto-tuning start/stop, direct/reverse and timer start
Event (EV) Output	Type	Dry contact open collector transistor, OFF voltage: 5V ± 1V ON current: 5mA ± 2mA
	No. of outputs	1 or 2 (common)
	Type	PV, SP, DEV,  DEV , MV, Motor feed back, Alarm, Timer, Control loop diagnostics, Estimated motor control mode
Auxiliary (AUX) Output	Control mode	ON/OFF SPST relay contact
	No. of outputs	1
Remote Setpoint (RSP)	Type	PV, SP, RSP, RSP before bias, OUT, Motor opening (one type selectable)
	Output	4 to 20mA, load resistance: 750Ω max.
Communications	Type	4 to 20mA or 1 to 5Vdc
	Bias	-1999 to +9999U
Auxiliary (order separately)	81446083-001	Hard dust-proof cover
	81446087-001	Soft dust-proof cover
	81446084-001	Terminal cover

### Selection Guide

Table	Basic Model No.	Selection					Description					
		C31	↓	↓	↓	↓						
II	Control output	0D	○	-	○	-	Digital indicating controller					
		6D	-	○	○	-	Time proportional PID : Relay contact 250Vac, 5A resistive load					
		5G	○	-	-	○	Time proportional PID: Voltage 22.5Vdc ± 15%					
		2G	○	-	-	○	Continuous proportional PID (4 to 20mA, 570Ω max. resistive load)					
		D0	○	○	-	-	Position proportional PID (M/M drive relay contact, 250Vac)					
III	Power supply	A0	○	○	-	-	85 to 264Vac, 50/60Hz					
		D0	○	○	-	-	24Vdc ± 5%					
IV	Option (1)						EV1	EV2	AUX	RSP	RSW	RS-
		001	○	○	-	○	○	-	-	-	-	-
		005	○	○	-	○	○	○	-	-	○	-
		045	○	○	-	○	○	○	-	-	○	○
		405	○	-	-	○	○	○	○	○	○	-
V	Option (2)	00	○	○	○	○	Not available					
		D0	○	○	○	○	With test data					
		T0	○	○	○	○	Tropicalization					

### Dimensions (unit:mm)

