SDC31

DigitroniK
Digital Indicating Controller

CONTROLLERS

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.

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
	Ambient humidity	10 to 90%RH (no condensation allowed)
	Weight	Approx. 500g
PV input	Type	Multirange: Thermocouple, RTD, DC voltage/current
	Sampling cycle	0.2s
	Bias	-1999 to +9999U (U: industrial unit)
Indication &	PV, SP indication	4-digit, 7-segment LED
Setting	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
	Setting method	Local setting (standard), Remote setting (optional, remote/local changeable)
Control	No. of PID sets	8
Output	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
	SP ramp	0 to 9999/min, 0 to 999.9/min, 0 to 9999/h, or 0 to 999.9/h
Remote	No. of inputs	1 or 4
Switch (RSW)	Function	LSP selection (PID group No. interlock), READY/RUN changeover, AUTO/MANUAL, LOCAL/REMOTE, auto-tuning start/stop, direct/reverse and timer start
Input	Type	Dry contact open collector transistor, OFF voltage: 5V ± 1V ON current: 5mA ± 2mA
Event (EV)	No. of outputs	1 or 2 (common)
Output	Type	PV, SP, DEV, |DEV|, MV, Motor feed back, Alarm, Timer, Control loop diagnostics, Estimated motor control mode
	Control mode	ON/OFF SPST relay contact
Auxiliary	No. of outputs	1
(AUX) Output	Type	PV, SP, RSP, RSP before bias, OUT, Motor opening (one type selectable)
	Output	4 to 20mAdc, load resistance: 750Ω max.
Remote	Type	4 to 20mAdc or 1 to 5Vdc
Setpoint (RSP)	Bias	-1999 to +9999U
Communications		RS-485

Selection Guide I II III IV V   Example: **C310DA000100**

Table	Selection						Description
I	Basic Model No.	**C31**	↓	↓	↓	↓	Digital indicating controller
II	Control output	**0D**	○	–	○	–	Time proportional PID : Relay contact 250Vac, 5A resistive load
		6D	–	○	○	–	Time proportional PID: Voltage 22.5Vdc ± 15%
		5G	○	–	–	○	Continuous proportional PID (4 to 20mAdc, 570Ω max. resistive load)
		2G	○	–	–	○	Position proportional PID (M/M drive relay contact, 250Vac)
III	Power supply	**A0**	○	○	–	–	85 to 264Vac, 50/60Hz
		D0	○	○	–	–	24Vdc ± 5%

Table	Selection						EV1	EV2	AUX	RSP 4-20mA	RSW 4 units	RS-485
IV	Option (1)											
		001	○	○	–	○	○	○	–	–	–	–
		005	○	○	–	○	○	○	○	–	○	–
		045	○	○	○	–	○	○	○	–	○	○
		405	○	–	–	○	○	○	○	○	○	–
V	Option (2)	**00**	○	○	○	○	Not available					
		D0	○	○	○	○	With test data					
		T0	○	○	○	○	Tropicalization					

Optional Devices

Model No.	Description
SLP-C30J20	PC loader (From Ver 1.1.1)
81446083-001	Hard dust-proof cover
81466087-001	Soft dust-proof cover
81446084-001	Terminal cover

Dimensions   (unit:mm)