

DCP31

DigitroniK

Digital Control Programmer

The DCP31 is a high-functon programmable controller supporting up to 19 program patterns to which thermocouple, resistance temperature detector (RTD), DC voltage and DC currents can be applied as input signals.

The DCP31 supports extensive digital I/O functons, including 3 event outputs, 5 times event outputs (optional) and 12 external switch inputs.



CONTROLLERS

Specifications

General	Memory backup	RAM backed up by lithium battery
	Power supply voltage	90 to 264Vac, 50/60Hz
	Power consumption	25VA max.
	Ambient temperature	0 to 50°C
	Ambient humidity	10 to 90%RH (no condensation allowed)
Program Pattern	No. of programs	19
	No. of segments	30/program
PV input	No. of channels	1
	Type	Thermocouple, RTD, DC voltage, DC current multi-range
	Sampling cycle	0.1s
	Bias	-1000 to +1000 U (U: industrial unit)
	Indicator	2 or 4-digit, 7-segment LED (green or orange)
Setting	Profile display	6 orange LED's
Control	Control mode	Program or constant value control
Output	PID auto-tuning	Automatic setting of PID value by limit cycle system + neural/fuzzy (2 degrees of freedom PID) & smart system
	No. of PID sets	8 (for program operation) + 1 (for constant value operation) (heat/cool: 4 + 1 respectively)
	MV limit %	Lower: -10.0 to upper limit Upper: Lower limit to 110.0
	MV change limit	0.0 to 10.0% / 0.1s
	Event (EV) Output	No. of outputs
Remote Switch (RSW) Input	Type	Event: PV, DEV, DEV , SP, MV, MFB and control status events, Time event: Time and segment No. events
	Function	Fixed: RUN, HOLD RESET, ADV, program No. Variable: FAST, PV start, AT, AUTO/MANUAL, G.Soak cancel, direct/reverse action
Auxiliary (AUX) Output	No. of outputs	Max. 2 (1 for 2G and heat/cool models)
	Type	PV, SP, DEV, MV MFB
Communications	Output	4 to 20mAdc, load resistance: 680Ω max.
	Type	RS-485
	Auxiliary Parts (order separately)	81446083-001 Hard dust-proof cover
	80446087-001 Soft dust-proof cover	
81446084-001 Terminal cover		
81446431-001 Lithium battery		

Selection Guide

Table	Selection			Description			
I	Basic Model No.	P31A	↓ ↓	Digital indicating programmer			
II	Control output	0D	○	–	Time proportional PID or ON/OFF (relay contact)		
		2G	–	○	Position proportional PID (M/M drive relay contact)		
		5G	○	–	Continuous proportional PID (4 to 20mAdc) (changeable to 6D)		
		6D	○	–	Time proportional PID or ON/OFF (voltage) (changeable to 5G)		
		3D	–	○	Heat-cool, Time proportional PID or ON/OFF (relay contact)		
		5K	–	○	Heat-cool, Continuous proportional PID (4 to 20mAdc)		
III	Function	0	○	○	1 input channel		
IV	Power	AS	○	○	90 to 264Vac 50/60Hz		
V	Auxiliary output	01	○	○	1 output		
		02	○	–	2 outputs		
VI	Option (1)				External switch input	Time event	Communication
		1	○	○	12 inputs	5 events	-
		2	○	○	12 inputs	5 events	RS-485
VII	Option (2)	D0	○	○	With test data		
		T0	○	○	Tropicalization		

Dimensions (unit:mm)

