

## DIGITAL CONTROLLER DC1010/1020/1030/1040 Series



### Features

- **Dual Display**

Two 4-digit displays with 7 LED segment, each configurable for PV and SP

- **Easy to Configure**

The user can define the indication of configuration steps for easy access to parameters.

- **Input & Output**

Accepts 12 types of TC inputs, 3 types of RTD inputs, 5 types of linear inputs (optional)

Supports relay, voltage pulse, linear and others as an output for various control application

- **Automatic/Manual Operation**

Manual control is enabled by pressing the A/M key. "MAN" LED flashes and the output value(%) is displayed on the lower display with output percentage indicated proportionately by 10 LEDs.

- **Various Extra Output Function (\*apart from main output)**

Duplex Output Mode (Heat/Cool) through 2 control processes

Auxiliary Output – PV, SP and MV retransmission

Alarm – Up to 3 alarm set (1/4 DIN), 17 alarm modes available

- **Program**

Programmable models have 2 available inter-link patterns, each with 8 segments

- **Highly Secure and Reliable**

A non-volatile memory based on EEPROM ensures data integrity during loss of power supply

- **Universal Power Supply**

Operates on any line voltage from 85Vac to 265Vac at 50/60Hz

- **Communication**

Optional RS-232 and RS-485 communication interface available

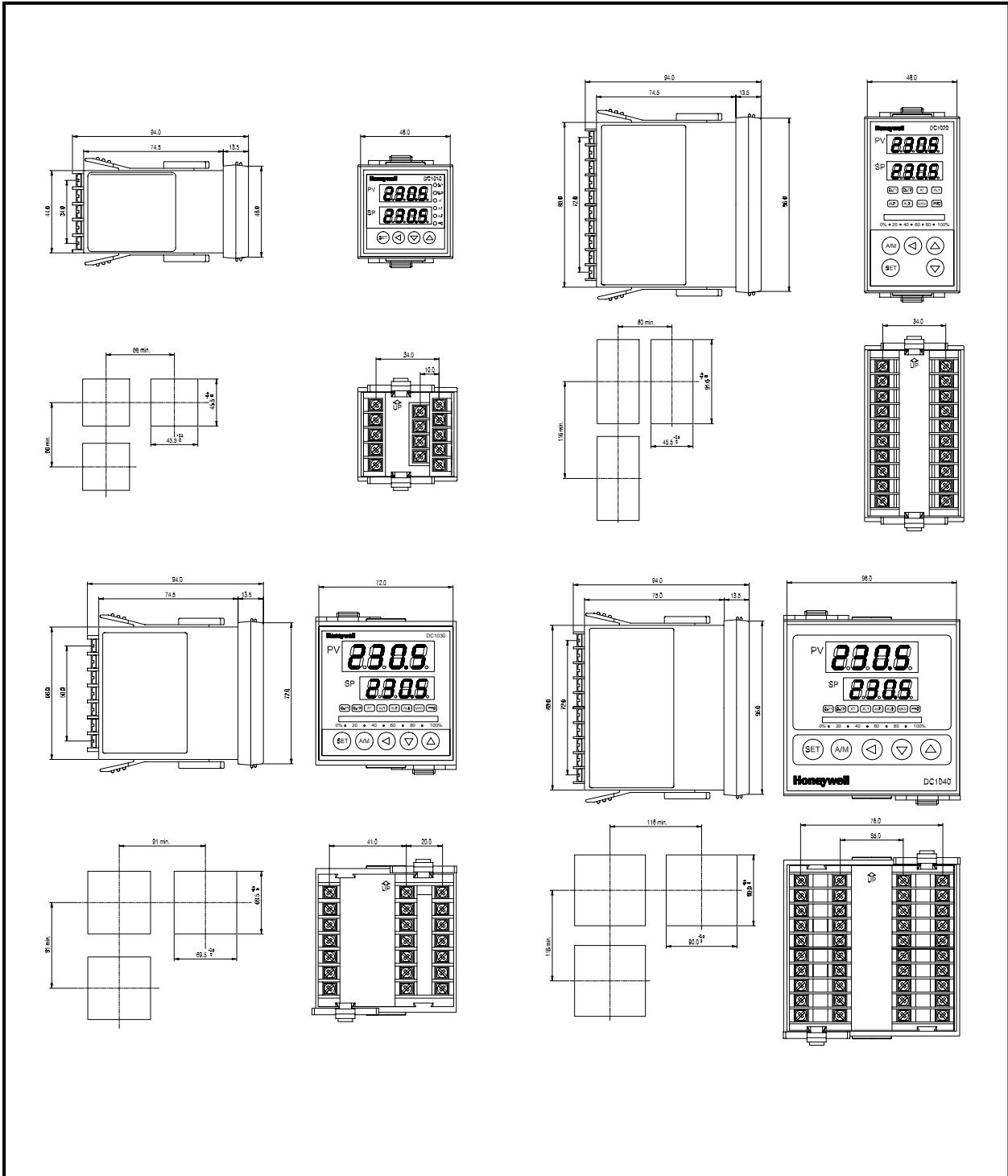
## SPECIFICATIONS

TECHNICAL DATA		
PV Input	Type of Input	TC ( K, J, R, S, B, E, N, T, W, PL II, U, L ) RTD ( Pt100Ω, JPt100Ω, JPt50Ω ) Linear ( -10~10mV, 0~10mV, 0~20mV, 0~50mV, 10~50mV )
	Input Sampling Time	500 ms
	Input Resolution	14 bit (each)
Indication	PV/SP Indication	4-digit , 7 segment display
	Constant Value Storage System	Non-volatile memory ( E <sup>2</sup> PROM )
	Indication Accuracy	± 0.5%FS
Control Mode	Proportional Band ( P )	0~200% ( On/Off action at P=0 )
	Integral Time ( I )	0~3600 sec ( PD action at I=0 )
	Derivative Time ( D )	0~900 sec ( PI action at D=0 )
	Cycle Time	0~150 sec ( 4~20mA→ 0, SSR→1, relay→10 )
	Dead Band Time	0~1000 sec ( dead time compensation)
Output	Relay Output	Contact, SPDT, 3A/240VAC
	Voltage Output	Voltage Pulse, 20VDC/20mA
	Linear Output	4~20mA, 0~5V, 0~10V, 1~5V, 2~10V
	Motor Control Output	Servo motor valve control ( open loop circuit )
	Others	1φ SSR, 3φ SSR, 1φ SCR, 3φ SCR
Alarm	Channel	3 channels ( optional )
	Mode	17 alarm mode available
	Timer	Flicker alarm, continued alarm, on delay timer alarm
Aux. Output	Output Signal	SP, PV, MV
	Type of Output	4~20mA, 0~20mA, 0~5V, 0~10V, 1~5V, 2~10V
2 <sup>nd</sup> Input (RSP)	Type of Input	4~20mA, 0~20mA, 0~5V, 0~10V, 1~5V, 2~10V
	Sampling Time	250 m
Program	Pattern/Segment	2 pattern/ 8 segment (each)
	Availability	Pattern link & repeat, program/segment end alarm
Communication	Type of Communication	RS-232, RS-485
General Specifications	Rated Power Supply Voltage & Frequency	AC 85~265V, 50/60Hz
	Power Consumption	4VA
	Ambient Temperature	-25°C~65°C
	Ambient Humidity	50~85% RH (no condensation)

INPUT ACTUATIONS		
TC	K	0.0~200.0, 400.0, 600.0, 800.0, 1000, 1200 °C
	J	0.0~200.0, 400.0, 600.0, 800.0, 1000, 1200 °C
	R	0.0~1600, 1769 °C
	S	0.0~1600, 1769 °C
	B	0.0~1820 °C
	E	0.0~800, 1000 °C
	N	0.0~1200, 1300 °C
	T	-199.9~400.0, 200.0 °C, 0.0~350.0 °C
	W	0.0~2000, 2320 °C
	PL II	0.0~1300, 1390 °C
	U	-199.9~600.0, 200.0 °C, 0.0~400.0 °C
	L	0.0~400.0, 800.0 °C
RTD	Pt100	-199.9~600.0, 400.0, 200.0 °C, 0.0~200.0, 400.0, 600.0 °C
	JPt100	-199.9~600.0, 400.0, 200.0 °C, 0.0~200.0, 400.0, 600.0 °C
	JPt50	-199.9~600.0, 400.0, 200.0 °C, 0.0~200.0, 400.0, 600.0 °C
Linear	AN1	-10~10mV
	AN2	0~10mV
	AN3	0~20mV
	AN4	0~50mV
	AN5	10~50mV

DIMENSION			
DC1010	Size (mm)	(W×H×D)	48.0×48.0×94.0
	Panel Cutout (mm)	(W×H)	45.5×45.5
DC1020	Size (mm)	(W×H×D)	48.0×96.0×94.0
	Panel Cutout (mm)	(W×H)	45.5×91.0
DC1030	Size (mm)	(W×H×D)	72.0×72.0×94.0
	Panel Cutout (mm)	(W×H)	69.5×69.5
DC1040	Size (mm)	(W×H×D)	96.0×96.0×94.0
	Panel Cutout (mm)	(W×H)	90.0×90.0

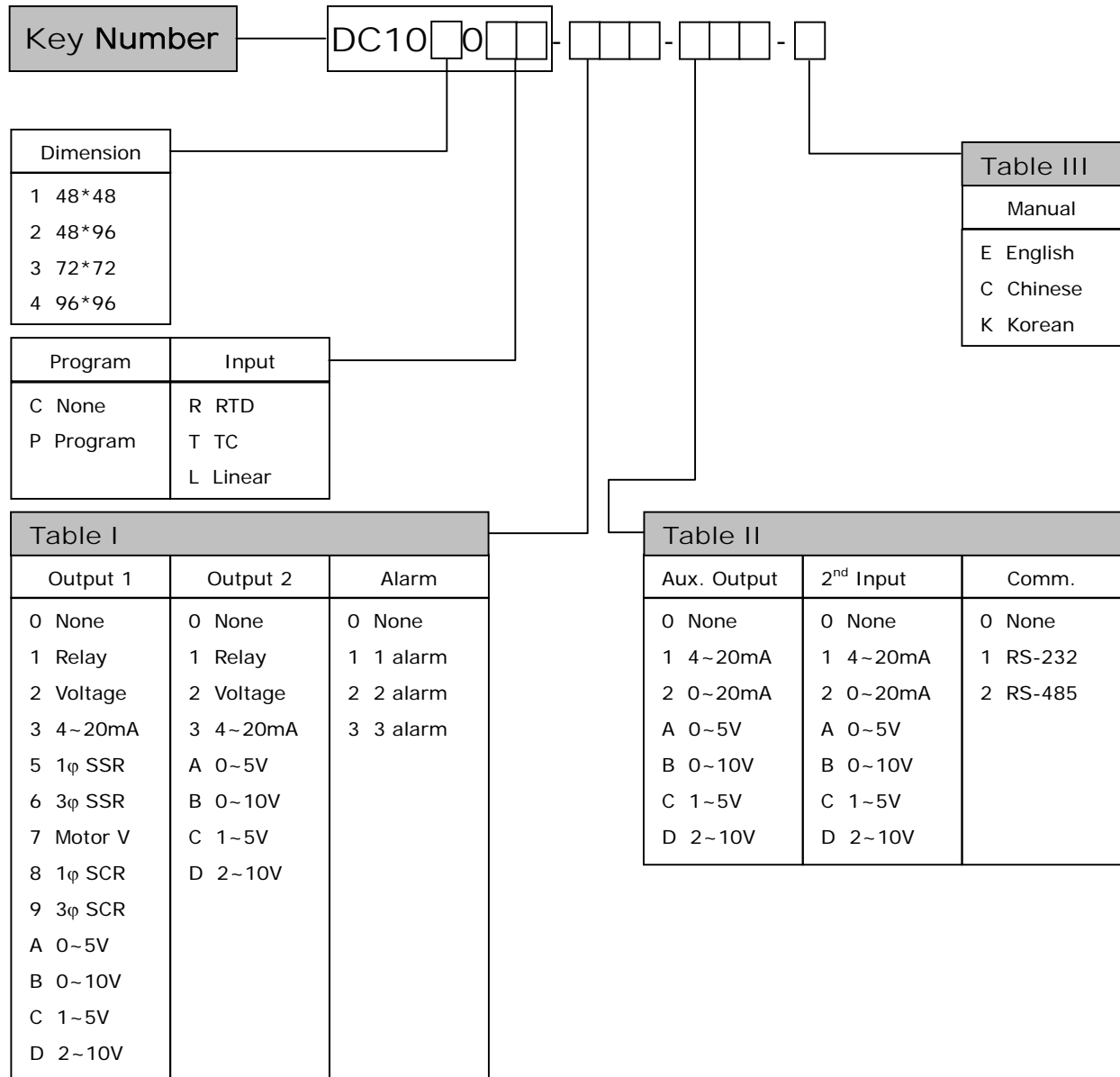
## External Dimensions



## MODEL SELECTION GUIDE

### INSTRUCTIONS

- Select the desired Key Number.
- Make one selection each from Tables I thru III.



Contents are subject to change without notice

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