



DigitroniK Digital Indicating Controller SDC20

The SDC20 is a compact digital indicating controller with multi-range and PID auto-tuning systems for various inputs.

The controller enhances process visibility using remote switch input, control parameters, and local set points, which can be easily set using the smart handy loader (SHL 100).



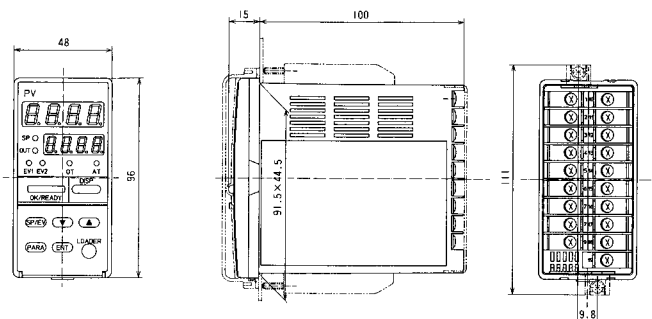
Specifications

General	Memory backup	Semiconductor non-volatile memory
	Power supply voltage	85 to 264Vac, 50/60Hz, or 24Vdc ± 5%
	Power consumption	16VA max.
	Ambient temperature	0 to 50°C
	Ambient humidity	10 to 90%RH (no condensation allowed)
PV Input	Type	Universal range: Thermocouple, RTD, DC, Voltage/Current
	Sampling cycle	0.5s
	Bias	-100 to +100U (U: industrial unit)
	Weight	Approx. 400g
Indication & Setting	PV, SP indication	4-digit, 7-segment LED
	OK lamp	Control deviation value indicated by greenbelt
	No. of setpoints	1 to 2 points selectable
	Range	Selectable
	Indication accuracy	± 0.3%FS ± 1 digit, (not specified for B in 0-260°C range)
	Setting method	Local setting, directly changeable
Control Output	No. of PID sets	2
	PID auto-tuning	Automatic setting of PID value by limit cycle method
	Output limiter %	Lower: 0 to upper limit (-10 to upper limit for 5G) Upper: Lower limit to 100 (lower limit to 110 for 5G)
	Control action	Direct/reverse selectable
	SP ramp	0 to 999.9/min or 0 to 9999/min
Remote Switch (RSW) Input	No. of inputs	1
	Function	LSP selection (PID group No. interlock), READY/RUN changeover, timer start, and timer non-operation
	Type	Dry contact open collector transistor, OFF voltage: 5V ± 1V ON current: 5mA ± 2mA
Event (EV) Output	No. of outputs	1 or 2
	Type	PV, SP, DEV, DEV , Alarm, Timer, Heater burnout (HB)
Auxiliary (AUX) Output	No. of outputs	1
	Type	PV, SP and OUT (one type selectable)
Communications	Output	4 to 20mA, load resistance: 600Ω max.
		RS-485, RS-232C
Auxiliary Parts (order separately)	QN206A	Current transformer (5.8mm dia hole)
	QN212A	Current transformer (12mm dia hole)
	81446082-001	Hard dust-proof cover
	81446086-001	Soft dust-proof cover
	81446088-001	Terminal cover

Selection Guide

Table	Selection	Description
I Basic Model No.	C20	Digital indicating controller
II Control output	0D	Time proportional PID: Relay contact 250Vac, 5A resistive load
	6D	Time proportional PID: Voltage 22.5Vdc ± 10%
	5G	Continuous proportional PID (4 to 20mA, 600Ω max. resistive load)
III Power supply	A0	85 to 264Vac, 50/60Hz (Yamatake model)
	E0	85 to 264Vac, 50/60Hz (Honeywell model)
	AZ	85 to 264Vac, 50/60Hz (Yamatake model for additional RT50 input)
	D0	24Vdc ± 5%
IV Option (1)	DZ	24Vdc ± 5% (Yamatake model for additional RT50 input)
		RSW input
		EV1 output
		EV2 output
		H.B. alarm
		AUX output
		RS-485
		RS-232C
	00	
	01	
	02	
03		
04		
05		
06		
07		
08		
09		
10		
V Option (2)	01	Not available

Dimensions (unit : mm)



DigitroniK Digital Indicating Controller SDC21



The SDC20 is a compact digital indicating controller with multi-range and PID auto-tuning systems for various inputs.

The controller enhances process visibility using remote switch input, control parameters, and local set points, which can be easily set using the smart handy loader (SHL 100).

Specifications

General	Memory backup	Semiconductor non-volatile memory	
	Power supply voltage	85 to 264Vac, 50/60Hz, or 24Vdc \pm 5%	
	Power consumption	18Va max.	
	Ambient temperature	0 to 50°C	
	Ambient humidity	10 to 90%RH (no condensation allowed)	
PV Input	Type	Universal range: Thermocouple, RTD, DC, Voltage/Current	
	Sampling cycle	0.5s	
	Bias	-100 to +100U (U: industrial unit)	
Indication & Setting	PV, SP indication	4-digit, 7-segment LED	
	OK lamp	Control deviation value indicated by greenbelt	
	No. of setpoints	1 to 2 points selectable	
	Range	Selectable	
	Indication accuracy	\pm 0.3%FS \pm 1 digit, (not specified for B in 0-260°C range)	
	Setting method	Local setting, directly changeable	
Control Output	No. of PID sets	2	
	PID auto-tuning	Automatic setting of PID value by limit cycle method	
	Output limiter %	Lower: 0 to upper limit (-10 to upper limit for 5G) Upper: Lower limit to 100 (lower limit to 110 for 5G)	
	Control action	Direct/reverse selectable	
	SP ramp	0 to 999.9/min or 0 to 9999/min	
Remote Switch (RSW) Input	No. of inputs	1	
	Function	LSP selection (PID group No. interlock), READY/RUN changeover, timer start, and timer non-operation	
	Type	Dry contact open collector transistor, OFF voltage: 5V \pm 1V ON current: 5mA \pm 2mA	
Event (EV) Output	No. of outputs	1, 2 or 3	
	Type	PV, SP, DEV, DEV , Alarm, Timer, Heater burnout (HB)	
	Control mode	ON/OFF SPST relay contact	
Auxiliary (AUX) Output	No. of outputs	1	
	Type	PV, SP and OUT (one type selectable)	
Communications	Output	4 to 20mAdc, load resistance: 600 Ω max.	
		RS-485, RS-232C	
	Auxiliary Parts (order separately)	QN206A	Current transformer (5.8mm dia hole)
		QN212A	Current transformer (12mm dia hole)
		81446083-001	Hard dust-proof cover
	81446087-001	Soft dust-proof cover	
	81446084-001	Terminal cover	

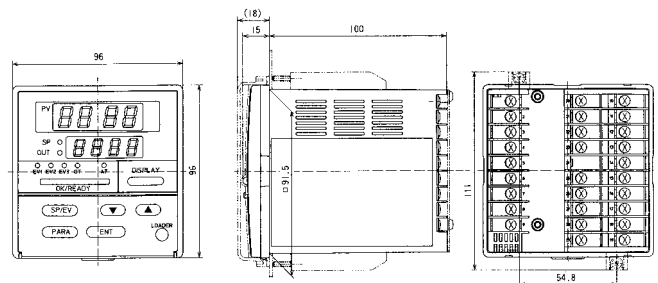
Selection Guide

I II III IV V Example: C210DA00001

Table	Selection										Description								
I	Basic Model No.	C21	↓	↓	↓	↓	↓	↓	↓	↓	↓	Digital indicating controller							
II	Control output	0D	O	-	-	O	-	-	-	-	-	Time proportional PID: Relay contact 250Vac, 5A resistive load							
		6D	-	O	-	-	O	-	-	-	-	Time proportional PID: Voltage 22.5Vdc \pm 10%							
		5G	-	-	O	-	-	-	O	-	-	Continuous proportional PID (4 to 20mAdc, 600 Ω max. resistive load)							
III	Power supply	A0	O	O	O	-	-	-	-	-	-	85 to 264Vac, 50/60Hz (Yamatake model)							
		AZ	-	-	-	O	O	O	-	-	-	85 to 264Vac, 50/60Hz (Yamatake model for additional RT50 input)							
		D0	O	O	O	-	-	-	-	-	-	24Vdc \pm 5%							
		DZ	-	-	-	O	O	O	-	-	-	24Vdc \pm 5% (Yamatake model for additional RT50 input)							
IV	Option (1)											RSW input	EV1 output	EV2 output	H.B. alarm	AUX output	RS-485	RS-232C	
		00	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		01	O	O	O	O	O	O	-	-	-	-	-	-	-	-	-	-	-
		02	O	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-
		03	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		04	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		05	O	O	O	-	O	-	-	-	-	-	-	-	-	-	-	-	-
		06	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		07	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		08	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09	O	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
V	Option (2)	01	O	O	O	O	O	O	O	O	O	Not available							

*"H.B." is not provided for 5G model.

Dimensions (unit : mm)



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