

Digital Controller

SHIMADEN

SR90 Series

BASIC FEATURES

- Multi-input and multi-range performance
- Large 20mm bright display (SR93)
- Readable from a distance and in a low light area
- 2-output heating and cooling control available
- RS232C or RS485 Interface available
- Dust and splash proof front panel equivalent to IP66
- A wide selection of additional functions (optional) is available to suit various needs.





ITEM CODE								SPECIFICATIONS					
SERIES	SR91-							MPU-Based Auto-Tuning PID Digital Controller, DIN H48 x W48 x D110mm					
		8	8 Multi input					Thermocouple: B, R, S, K, E, J, T, N, PLII, Wre5-26 {U, L (DIN 43710)} R.T.D.: Pt100Ω /JPt100Ω Voltage: -10~10, 0~20, 0~50, 10~50, 0~100mV DC For voltage and current input: Scaling Possible					
INPUT		4						Current (mA): 0~20, 4~20mA DC Receiving impedance: 250 Ω	Range: -1999~9999 Span: 10~5000				
		6						Voltage (V): -1~1, 0~1, 0~2, 0~5, 1~5, 0~10V DC	Note: Inverse scaling is not possible				
Y-								Contact: 1a, Contact capacity: 240V AC 2.5A/resistive load Proportional cycle: 1~120 sec.					
CONTROL OUTPUT (Current: $4\sim20\text{mA}$ DC Load resistance: 600Ω max.					
CONTRO	(1)	P-					SSR drive voltage: 12V1.5V DC/30mA max. Proportional cycle: 1~120 sec.						
	V-	V-				Voltage: 0~10V DC Load current: 2mA max.							
DOWED 0	NIDDI V			90-				100~240V AC10%, 50/60Hz					
POWER S	SUPPLY			08-				24V AC/DC10%, 50/60Hz					
EVENE O		D-10			0			None					
EVENTO	UTPUT (O	PHO	N)		1			Contact output (2a) Ev1, Ev2: 240V AC 1A/resistive load					
						N		None					
						Y		Contact: 1a, Contact capacity: 240V AC 2.5A/resistive load Proportional cycle: 1~120 sec.					
		ntrol output (2)					Current: 4~20mA DC Load resistance: 600 Ω max.						
						ontro		SSR drive voltage: 121.5V DC/30mA max. Proportional cycle: 1~120 sec.					
OPTION		V						Voltage: 0~10V DC Load current: 2mA max.					
	L.	Heater break alarm 2						Current setting range: 0.1~30.0A (with CT 30/	Note: Avaialble only when control output (1)				
								Current setting range: 0.1~50.0A (with CT 50/	is Y or P and when event output is selected.				
						3		Voltage: 0~10mV DC, Output resistance: 10 Ω					
	A	Analog output 4 6						Current: 4~20mA DC, Load resistance: 300 Ω max.					
								Voltage: 0~10V DC, Load current: 2mA max.					
	C	Communication						RS-485					
	Se	Set value bias 8				В		1 point (setting range: -1999~5000), Non-voltage contact or Open collector input Open collector input rating: approx. 5V/1mA max.					
DEMARKS							0	Without					
REMARKS 9							9	With (Please consult before ordering.)					
lotor													

- Note:

 When you purchase a two-output type controller and use it in a one output capacity, larger overshooting or undershooting may ha a result of integral operation.
- The cause of the above-mentioned problem is that the positional relationship between the proportional band (PB) and the set val of a one-output type controller differs from that of a two-output type.

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Digital Controller

SHIMADEN

■ SR90 Series

ORDERING INFORMATION SR92

- Multi-input and multi-range performance
- Large 20mm bright display (SR3)
- Dust and splash proof front panel NEMA4X / IP66

ORDERING INFORMATION

ITEM CODE									SPECIFICATIONS				
SERIES SR92-									MPU-Based Auto-Tuning PID Digital Controller, DIN H72 x W72 x D110mm				
									Thermocouple: B, R, S, K, E, J, T, N, PLII, Wre5-26 (U, L (DIN 43710))				
		١.,							R.T.D.: Pt100 Ω /JPt100 Ω				
	8	Multi input							Voltage (mV): -10~10, 0~10, 0~20,	For voltage and current input			
INDUT									0~50, 10~50, 0~100mV DC	Scaling Possible			
INPUT	4								Current (mA): 0~20, 4~20mA DC	Range: -1999~9999 Span: 10~5000			
	4								Receiving impedance: 250Ω				
	6								Voltage (V): -1~1, 0~1, 0~2, 0~5, 1~5,	Note: Inverse scaling			
	О								0~10V DC Input resistance: 500kΩ min.	is not possible.			
		Y-							Contact: 1a, Contact capacity: 240V AC 2A/resistive load				
		-							Proportional cycle: 1~120 sec.				
		I-							Current: 4~20mA DC				
CONTROL OUTPUT	(1)							Load resistance: 600Ω max.					
SSITINGE GOTFOT	(')	P-	P-					SSR drive voltage: 12V±1.5V DC/30mA max.					
								Proportional cycle: 1~120 sec.					
		V-	Voltage: 0~10V						Voltage: 0~10V DC	e: 0~10V DC			
									Load current: 2mA max.				
			N-						None				
			Y-						Contact: 1a, Contact capacity: 240V AC 2A/resistive load				
									Proportional cycle: 1~120 sec.				
CONTROL OUTPUT	(2)		I-	i-					Current: 4~20mA DC				
(OPTION)	. ,								Load resistance: 600Ω max. (RA when shipped) SSR drive voltage: 12V±1.5V DC/30mA max.				
			P-	P-					Proportional cycle: 1~120 sec.				
							Voltage: 0~10V DC						
			V-						Load current: 2mA max.				
				90-					100V~240V AC±10%, 50/60Hz				
POWER SUPPLY				08-					24V AC/DC±10%, 50/60Hz				
					0				None				
					_				Event output (2a) Ev1, Ev2				
EVENIT OUTDUIT			1						Contact capacity: 240V AC 1A/resistive load				
EVENT OUTPUT/ HEATER BREAK ALA	ARM	I (OI	PTION) 2						Event output (Ev1) + Heater break alarm (with CT30A)	Note: Available only when control output (1)			
					3				Event output (Ev1) + Heater break alarm (with CT50A)	is Y or P is selected.			
						0			None	1			
ANALOG OUTDUT (C	\DT'	ONI				3			Voltage: 0~10mV DC, Output resistance: 10Ω				
ANALOG OUTPUT (C	/F 11	UN)	,			4			Current: 4~20mA DC, Load resistance: 300Ω max.				
						6			Voltage: 0~10V DC, Load current: 2mA max.				
COMMUNICATION OR SV BIAS (OPTION) 0 5 7 8									None				
							_		RS-485				
							7		RS-232C				
							8		1 point (setting range: -1999~5000), Non-voltage contact or Open collector				
									input Open collector input rating: approx. 5V/1mA max.				
REMARKS								0	Without				
9								9	With (Please consult before ordering.)				

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[•] When you purchase a two-output type controller and use it in a one output capacity, larger overshooting or undershooting may happen as a result of integral operation. Therefore, we recommend you to choose a one-output type.

• A result of integral operation. Therefore, we recommend you to choose a one-output type.

[•] The cause of the above-mentioned problem is that the positional relationship between the proportional band (PB) and the set value (SV) of a one-output type controller differs from that of a two-output type.



Digital Controller

SHIMADEN

■ SR90 Series

ORDERING INFORMATION SR93 / SR94

ITEM			CC	DDE				SPECIFICATIONS					
OFFICE	SR93-							MPU-Based Auto-Tuning PID Digital Controller, DIN H96 x W96 x D110mm					
SERIES SR94-								MPU-Based Auto-Tuning PID Digital Controller, DIN H96 × W48 × D110mm					
	<u> </u>							Thermocouple: B, R, S, K, E, J, T, N, PLII, Wre5-26 (U, L (DIN 43710))					
		8	N. 1	ılti inn	+			R.T.D.: Pt100Ω / JPt100Ω					
			Multi input					Voltage: -10~10, 0~10, 0~20,	For vo	oltage and current input:			
INPUT								0~50, 10~50, 0~100mV DC	g Possible				
		4						Current (mA): 0~20, 4~20mA DC Range: -1999~9999					
		•						Receiving impedance: 250Ω Span: 10~5000					
		6						Voltage (V): -1~1, 0~1, 0~2, 0~5, 0~10V DC	Note: Inverse scaling				
								Load resistance: 600Ω max. is not possible					
Y-								Contact: 1a, Contact capacity: 240V AC 2A/resistive load					
							Proportional cycle: 1~120 sec.						
			I-					Current: 4~20mA DC					
CONTROL	OUTPUT	r (1)					Load resistance: 600Ω max.						
30.111101		(1)	P-					SSR drive voltage: 12V ± 1.5V DC/30mA max.					
								Proportional cycle: 1~120 sec.					
			V-					Voltage: 0~10V DC					
								Load current: 2mA max.					
				N-				None					
				Y-				Contact: 1a, Contact capacity: 240V AC 2A/resistive load					
				-				Proportional cycle: 1~120 sec.					
CONTRO	LOUTPU	T (2)		I- I				Current: 4~20mA DC					
(OPTION)		. (-)		_				Load resistance: 600Ω max.					
,				P-				SSR drive voltage: 12V ± 1.5V DC/30mA max.					
								Proportional cycle: 1~120 sec. Voltage: 0~10V DC					
				V-				Load current: 2mA max.					
					00			Load current: 2mA max. 100~240V AQ±10%, 50/60Hz					
POWER S	SUPPLY			_	90- 08-			24V AC/DC±10%, 50/60Hz					
								None					
					(,		Event output (2a) Ev1, Ev2					
					-								
EVENT O					-			Contact capacity: 240V AC 1A/resistive load					
HEATER I	BREAK A	LAR	RM (OPTION) 2			2		Event output (Ev1) + Heater break alarm (with C					
										when control output (1)			
					(3		Event output (Ev1) + Heater break alarm (with CT50A) is Y or P is		is Y or P is selected.			
00								None					
		30						Voltage: 0~10mV DC, Output resistance: 10Ω					
	An	Analog output					_	Current: 4~20mA DC, Load resistance: 300Ω max.					
							_	Voltage: 0~10V DC, Load current: 2mA max.					
				/= :				point (setting range: -1999~5000), Non-voltage contact or Open collector input					
	Set	t valu	ie bia	as (S \	/ bias	08		Open collector input rating: approx. 5V/1mA max.					
OPTION		Analog output + Set value bias (S V bias) 68						Voltage: 0~10mV DC, Output resistance: 10Ω SV bias 1 point Current: 4~20mA DC, Load resistance: 300Ω max. SV bias 1 point					
_													
	Set												
								Voltage: 0~10V DC, Load current: 2mA max.					
								SV bias 1 point					
Communication 05						05		RS-485					
07						07		RS-232C					
REMARKS							0	Without					
NEWANKS							9	With (Please consult before ordering.)					
							-	· · · · · · · · · · · · · · · · · · ·					

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