



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.



ORDERING INFORMATION SR91

ITEM	CODE		SPECIFICATIONS		
SERIES	SR91-		MPU-Based Auto-Tuning PID Digital Controller, DIN H48 x W48 x D110mm		
INPUT		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, 0~10, 0~20, 0~50, 10~50, 0~100mV DC	
		4		Current (mA): 0~20, 4~20mA DC Receiving impedance: 250 Ω	
		6		Voltage (V): -1~1, 0~1, 0~2, 0~5, 1~5, 0~10V DC	
CONTROL OUTPUT (1)		Y-		Contact: 1a, Contact capacity: 240V AC 2.5A/resistive load Proportional cycle: 1~120 sec.	
		I-		Current: 4~20mA DC Load resistance: 600Ω max.	
		P-		SSR drive voltage: 12V1.5V DC/30mA max. Proportional cycle: 1~120 sec.	
		V-		Voltage: 0~10V DC Load current: 2mA max.	
POWER SUPPLY		90-		100~240V AC10%, 50/60Hz	
		08-		24V AC/DC10%, 50/60Hz	
EVENT OUTPUT (OPTION)		0		None	
		1		Contact output (2a) Ev1, Ev2: 240V AC 1A/resistive load	
OPTION			N	None	
			Y	Contact: 1a, Contact capacity: 240V AC 2.5A/resistive load Proportional cycle: 1~120 sec.	
			I	Current: 4~20mA DC Load resistance: 600 Ω max.	
			P	SSR drive voltage: 12V1.5V DC/30mA max. Proportional cycle: 1~120 sec.	
			V	Voltage: 0~10V DC Load current: 2mA max.	
		Heater break alarm	1	Current setting range: 0.1~30.0A (with CT 30A)	Note: Available only when control output (1) is Y or P and when event output is selected.
			2	Current setting range: 0.1~50.0A (with CT 50A)	
		Analog output	3	Voltage: 0~10mV DC, Output resistance: 10 Ω	
			4	Current: 4~20mA DC, Load resistance: 300 Ω max.	
			6	Voltage: 0~10V DC, Load current: 2mA max.	
Communication	5	RS-485			
Set value bias	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	With (Please consult before ordering.)		

Note:

- When you purchase a two-output type controller and use it in a one output capacity, larger overshooting or undershooting may have 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 val of a one-output type controller differs from that of a two-output type.



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
INPUT	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 (mV): -10~10, 0~10, 0~20, 0~50, 10~50, 0~100mV DC
	4	Current (mA): 0~20, 4~20mA DC Receiving impedance: 250Ω
	6	Voltage (V): -1~1, 0~1, 0~2, 0~5, 1~5, 0~10V DC Input resistance: 500kΩ min.
CONTROL OUTPUT (1)	Y-	Contact: 1a, Contact capacity: 240V AC 2A/resistive load Proportional cycle: 1~120 sec.
	I-	Current: 4~20mA DC Load resistance: 600Ω max.
	P-	SSR drive voltage: 12V±1.5V DC/30mA max. Proportional cycle: 1~120 sec.
	V-	Voltage: 0~10V DC Load current: 2mA max.
CONTROL OUTPUT (2) (OPTION)	N-	None
	Y-	Contact: 1a, Contact capacity: 240V AC 2A/resistive load Proportional cycle: 1~120 sec.
	I-	Current: 4~20mA DC Load resistance: 600Ω max. (RA when shipped)
	P-	SSR drive voltage: 12V±1.5V DC/30mA max. Proportional cycle: 1~120 sec.
	V-	Voltage: 0~10V DC Load current: 2mA max.
POWER SUPPLY	90-	100V~240V AC±10%, 50/60Hz
	08-	24V AC/DC±10%, 50/60Hz
EVENT OUTPUT/ HEATER BREAK ALARM (OPTION)	0	None
	1	Event output (2a) Ev1, Ev2 Contact capacity: 240V AC 1A/resistive load
	2	Event output (Ev1) + Heater break alarm (with CT30A)
	3	Event output (Ev1) + Heater break alarm (with CT50A)
ANALOG OUTPUT (OPTION)	0	None
	3	Voltage: 0~10mV DC, Output resistance: 10Ω
	4	Current: 4~20mA DC, Load resistance: 300Ω max.
	6	Voltage: 0~10V DC, Load current: 2mA max.
COMMUNICATION OR SV BIAS (OPTION)	0	None
	5	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	With (Please consult before ordering.)

Note:

- 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	CODE		SPECIFICATIONS	
SERIES	SR93-		MPU-Based Auto-Tuning PID Digital Controller, DIN H96 × W96 × D110mm	
	SR94-		MPU-Based Auto-Tuning PID Digital Controller, DIN H96 × W48 × D110mm	
INPUT	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, 0~10, 0~20, 0~50, 10~50, 0~100mV DC	
	4		Current (mA): 0~20, 4~20mA DC	For voltage and current input: Scaling Possible Range: -1999~9999 Span: 10~5000 Note: Inverse scaling is not possible
	6		Receiving impedance: 250Ω	
			Voltage (V): -1~1, 0~1, 0~2, 0~5, 0~10V DC Load resistance: 600Ω max.	
CONTROL OUTPUT (1)	Y-		Contact: 1a, Contact capacity: 240V AC 2A/resistive load Proportional cycle: 1~120 sec.	
	I-		Current: 4~20mA DC Load resistance: 600Ω max.	
	P-		SSR drive voltage: 12V ± 1.5V DC/30mA max. Proportional cycle: 1~120 sec.	
	V-		Voltage: 0~10V DC Load current: 2mA max.	
CONTROL OUTPUT (2) (OPTION)	N-		None	
	Y-		Contact: 1a, Contact capacity: 240V AC 2A/resistive load Proportional cycle: 1~120 sec.	
	I-		Current: 4~20mA DC Load resistance: 600Ω max.	
	P-		SSR drive voltage: 12V ± 1.5V DC/30mA max. Proportional cycle: 1~120 sec.	
	V-		Voltage: 0~10V DC Load current: 2mA max.	
POWER SUPPLY	90-		100~240V AC±10%, 50/60Hz	
	08-		24V AC/DC±10%, 50/60Hz	
EVENT OUTPUT/ HEATER BREAK ALARM (OPTION)	0		None	
	1		Event output (2a) Ev1, Ev2 Contact capacity: 240V AC 1A/resistive load	
	2		Event output (Ev1) + Heater break alarm (with CT30A)	Note: Available only when control output (1) is Y or P is selected.
	3		Event output (Ev1) + Heater break alarm (with CT50A)	
OPTION	Analog output	00	None	
		30	Voltage: 0~10mV DC, Output resistance: 10Ω	
		40	Current: 4~20mA DC, Load resistance: 300Ω max.	
		60	Voltage: 0~10V DC, Load current: 2mA max.	
	Set value bias (S V bias)	08	1 point (setting range: -1999~5000), Non-voltage contact or Open collector input Open collector input rating: approx. 5V/1mA max.	
		38	Voltage: 0~10mV DC, Output resistance: 10Ω SV bias 1 point	
	Analog output + Set value bias (S V bias)	48	Current: 4~20mA DC, Load resistance: 300Ω max. SV bias 1 point	
		68	Voltage: 0~10V DC, Load current: 2mA max. SV bias 1 point	
		05	RS-485	
Communication	07	RS-232C		
REMARKS	0	Without		
	9	With (Please consult before ordering.)		

Note:

- 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.
- 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.