



THYRISTOR-TYPE SINGLE-PHASE POWER REGULATOR

TRV1-M/V Series



We Create from Sensor to System.

TOHO ELECTRONICS INC.

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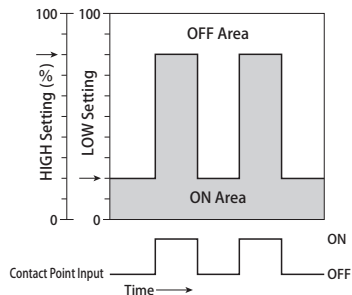
Thyristor-type Single-phase Power Regulator

※ In the case of C1 and S1 inputs, the control system of the regulator corresponds to both two-position and proportional types.

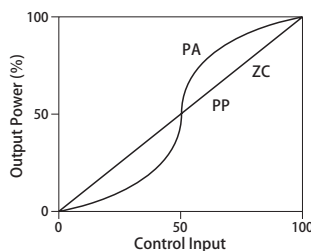
Function Characteristic Diagram

HIGH (Maximum)/LOW (Minimum) Output characteristic of setting and contact point input

(Sample Setting of HIGH = 80% and LOW = 20%)

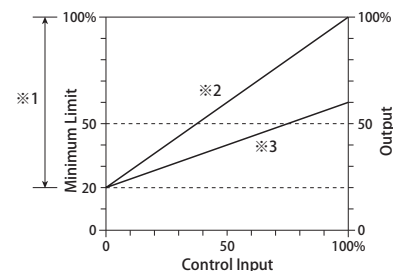


Output Characteristic per Control Mode



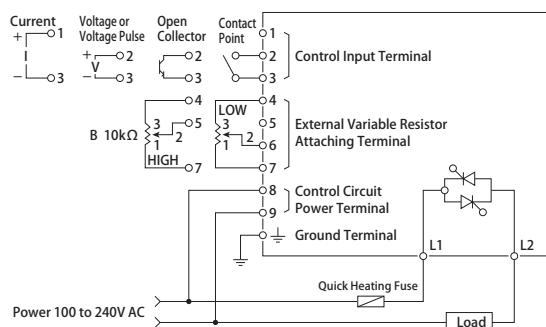
ZC Zero Cross Switching Cycle Arithmetic: Straight Line
PP Phase Control Voltage Square: Almost Straight Line
PA Phase Control Angle: S Curve
Provided that the load is a fixed-resistance load

Characteristic of maximum limit (pitch) and minimum limit settings



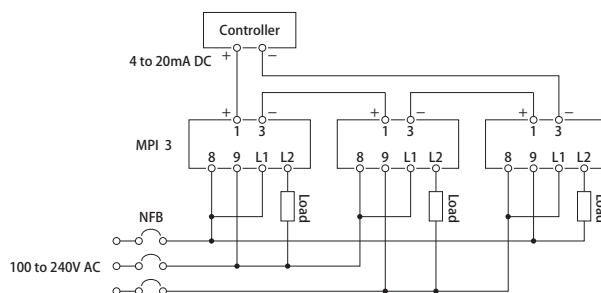
※1 Setting range of HIGH SET (pitch) at the minimum limit setting of 20%
※2 Output characteristic at HIGH SET (pitch) setting of 100%
※3 Output characteristic at HIGH SET (pitch) setting of 50%

Example of standard wiring



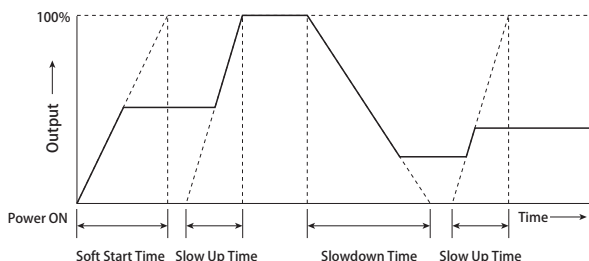
Maximum (HIGH) and minimum (LOW) settings can be made through key operation even if the variable resistor is not externally attached.

Example in which three TRV1s are interlocked with one controller

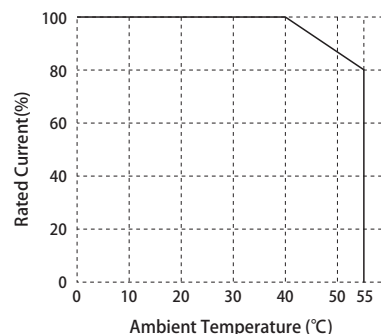


Soft Start/Slow Up/Slowdown Function

This is a function that limits the sudden change of output against the load and changes the output gradually upon sudden change of control input and setting.
Soft start/slow up/slowdown time will be set against the output between 0% and 100%.



Ambient Temperature Characteristic Diagram



The approximate internal heat value of TRV1 is shown below. Please check and be careful with spacing and environment conditions upon installation. Please consider heat dissipation and ventilation as well.

Current Capacity	20A	30A	50A	70A	100A
Heat Value	24W	40W	56W	79W	109W

List of Models for Selection

Control Input Current Capacity
TRV1 — —

Control Input	M	Multi	4 to 20mA DC	Input Resistance Approx. 100Ω
	V	Voltage	0 to 10V DC	Input Resistance Approx. 370kΩ
Current Capacity	020	20A		
	030	30A		
	050	50A		
	070	70A		
	100	100A		

List of Part Codes

Item	Code	Specifications
Fuse Holder	HT4017	Corresponds to 20 to 70A
	HT5723	Corresponds to 100A
Quick-blow Fuse	250GH-32	Corresponds to main unit 20A (32A)
	250GH-40	Corresponds to main unit 30A (40A)
	250GH-63	Corresponds to main unit 50A (63A)
	250GH-100	Corresponds to main unit 70A (100A)
	350GH-125	Corresponds to main unit 100A (125A)
Set of External Variable Resistor (Variable Resistor + Scale Plate + Knob)	021	For maximum limit (pitch) or minimum limit setting per set

