



**YOUNG REGULATOR CO.**

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**MODEL SDTF**

Rectangular Opposed Blade Damper  
 2 Position, Power Open or Close – Spring Return

**APPLICATION AND DESIGN**

The Young Regulator Model SDTF is a motorized rectangular opposed blade damper constructed of an extruded aluminum frame and blades, stainless steel slide, and a Belimo TF spring return motor, available in 24V (standard) or 120V (optional). Applications include zone control, outside air, exhaust air vents, although they may be used to control air in any system duct. It can be made to power open and spring return closed, or power close and spring return open.

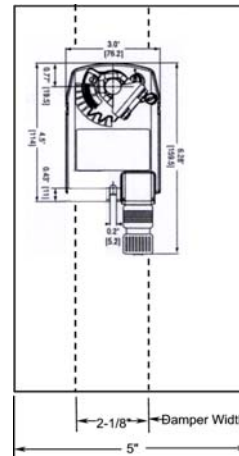
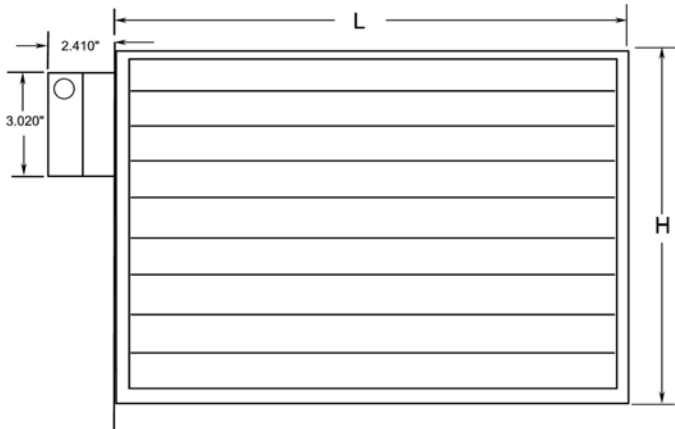
SIZE INFORMATION	
Damper Frame is approx. 1/8" undersized	
Minimum	3" x 3"
Maximum	24" x 24" Bottom Mount to 36" x 24"
Mounting Plate	5" wide x damper height

OPTIONS	
120V Actuator	Thermostats
Aux Switch (XX-S)	Transformers
	PC / SO

RATINGS	
Pressure	1" W.C.
Velocity	1500 FPM
Temperature	0° to 120° F

STANDARD CONSTRUCTION	
Frame	.050 Aluminum extrusion with reinforcing channels
Blade	.050 Aluminum extrusions with reinforcing channels
Shaft	
Slide	Stainless Steel
Bushing	Individual synthetic blade bushings

ACTUATOR MODEL	24 VAC +/- 20%	120 VAC +/- 10%	230 VAC +/- 10%	V/A rating	Wattage running (holding)	Motor Drive	Spring Return
TF24	•			5	2.5 (1.3)	<75	<25
TF24-S US	•			5	2.5 (1.3)	<75	<25
TF120		•	•	5	2.5 (1.3)	<75	<25
TF120-S		•	•	5	2.5 (1.3)	<75	<25



QUANTITY	WIDTH	HEIGHT	VOLTS	POWERED	
<b>PROJECT</b>				<b>LOCATION</b>	
<b>CONTRACTOR</b>				<b>DESIGN SPECIFIER</b>	

# TF... Series

18 in-lb [2Nm], Approximate. 4.5 square feet of damper



	Power Supply			Power consumption		Running time	
	24 VAC +/- 20%	120 VAC +/- 10%	230 VAC +/- 10%	VA rating	Wattage running (holding)	Motor Drive	Spring Return
<b>Airside Products</b>							
<b>Spring Return</b>							
<b>ON/OFF</b>							
TF24 US	●			5	2.5 (1.3)	<75	<25
TF24-S US	●			5	2.5 (1.3)	<75	<25
TF120 US		●	●	5	2.5 (1.3)	<75	<25
TF120-S US		●	●	5	2.5 (1.3)	<75	<25

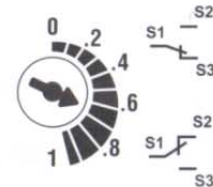
Please refer to the appropriate product literature for detailed installation information.

## Reference

- Mounting Methods Guide
- Wiring Guide
- Damper Application Guide

## Auxiliary Switches

The ...-S model actuators are equipped with an adjustable auxiliary switch used to indicate damper position or to interface additional controls or equipment. Switching positions can be set over the full 0 to 95° rotation simply by setting a switch on the actuator.

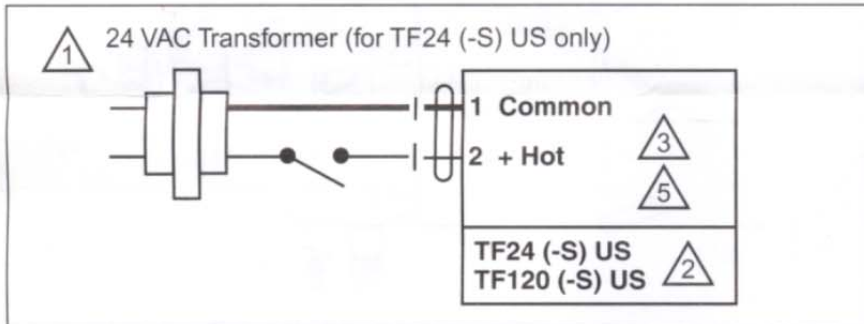


1. Set desired switch position. (Example 60%)
2. As the actuator rotates, the switch indicator moves from .6 (60%) toward 0 (0%).

### Switch Rating

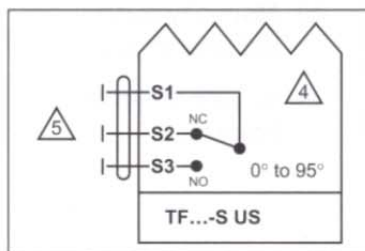
Voltage	250 VAC
Resistive load	3 A
Inductive load	0.5 A

## Wiring Diagrams



On-off wiring for TF24 (-S) US and TF120 (-S) US

Auxiliary switch of TF...-S US



## Notes:

- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 Actuator may also be powered by 24 VDC.
- 4 For end position indication, interlock control, fan startup, etc., TF...-S US incorporates one built-in auxiliary switch: 1 x SPDT, 3A (0.5A) @250 VAC, UL listed, adjustable 0° to 95°.
- 5 Meets cULus requirements without the need of an electrical ground connection.