



Young Regulator Co.

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Submit 3151-IF 9/2019

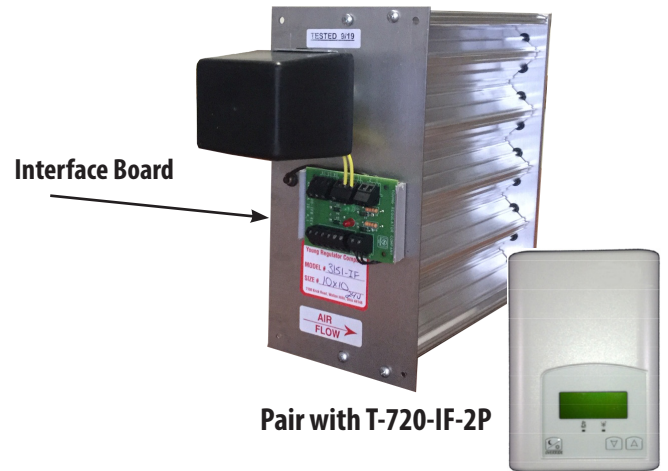
Model 3151-IF Opposed Blade Damper 24VAC Power Open Spring Return w/ Interface Board

Application and Design

The Young Regulator Model 3151 is a motorized, rectangular, opposed-blade damper. It is constructed of an extruded aluminum frame, stainless steel slide, and a 24VAC spring return motor. Applications include zone control, outside air, exhaust air vents, although they may be used to control air in any system. Standard Configuration is power open and spring closed, but can also be made to power close and spring return open.

The 3151-IF features a direct drive, stall type actuator with a hysteresis synchronous motor designed for long life with a "lost motion" drive to protect the gear train from closing shock.

The 3151-IF includes our Interface Board that simplifies field wiring. (See back)



Standard Construction	
Frame	.050 Aluminum Extrusion with Reinforcing Channels
Blade	.050 Aluminum Extrusion with Reinforcing Channels
Shaft	Integral 5/16" Steel
Slide	Stainless Steel
Blade Bushings	Individual Nylon
Configuration Information	
Actual Size	Damper is 1/8" undersize both high and wide
Frame Width	2 1/8" wide
Blade Width	1.438" Contained within the frame
Power Stroke	Power Open / Spring Closed - standard
Min/Max Size	4" x 4" to 24" x 18" 36" x 14" Bottom Mount
Thermostat	T-720-IF-2P

Ratings	
Pressure	0.5 InWC
Velocity	700 FPM
Temperature	0° to 120° F
This is not a low-Leak Damper. Estimated Closed Leakage 5% to 7%	
Synchronous Anti-Backlash Motor	
Volts / Watts / VA	24VAC / 6 Watts / 10VA
Amp	.45 Amp
Timing	30 Sec. Powered - 8 Sec. Spring Return
Torque	65 In. Oz. Average
UL Listed	
Options	
Transformer	24/120 VAC, 24/240 VAC
Power Stroke	Optional Power Closed / Spring Open
End Switch	available
Higher Torque	Use SDTF if you require higher torque

Quantity	Width	Height (motor side)	Notes
Project		Location	
Contractor		Design Specifier	



Interface Board Engineering Specifications

The interface board for the T720-IF-2P thermostat is provided to simplify the installation of the thermostat and damper assembly. The 3151-IF features the supply temperature sensor pre-installed in the damper and the connections are pre-wired to the primary actuator and sensor at the factory. Field connections consist of the transformer and thermostat wiring. For convenience, an extra terminal block is provided for installation of slave damper(s).

Sequence of Operation:

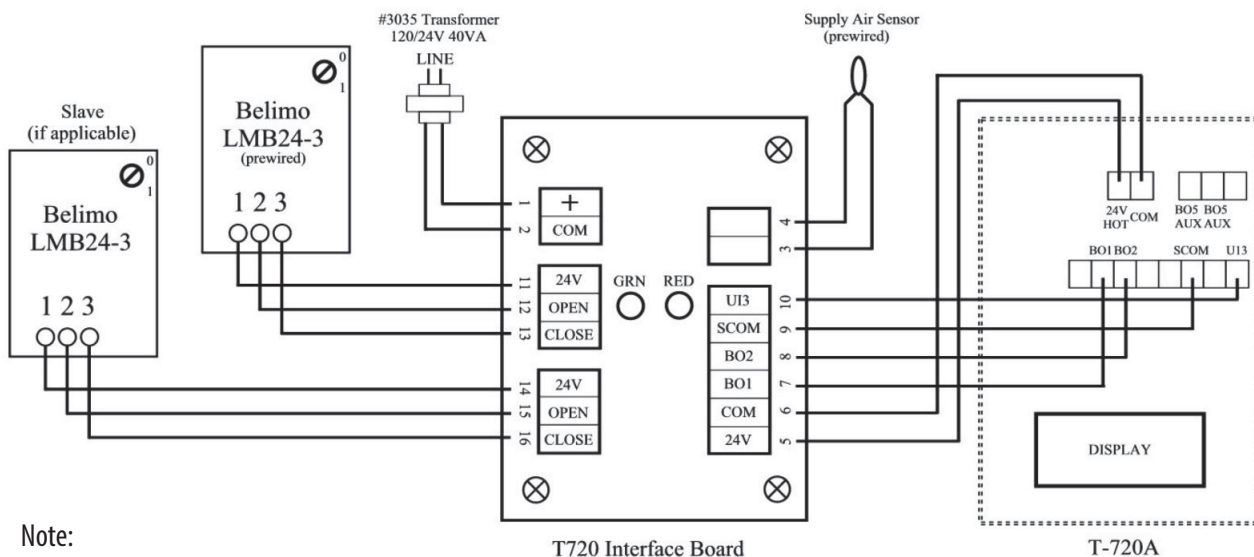
The supply temperature sensor (duct stat) determines if warm or cold air is available in the supply. (72°F Decision Pt.) This information is shown on the thermostat by displaying 'Heating mode' or 'Cooling mode'. As the thermostat works to control the space temperature to the set-point, the damper will open, close, or modulate as needed.

Interface Board Wiring

LED Codes
 The Interface Board features a GREEN and a RED LED. When lit

- The GREEN LED indicates the damper is opening
- When BOTH lights are NOT lit, the thermostat is satisfied and the damper is closed.

System Wiring Diagram



Note:
 Young Regulator recommends the use of 18 AWG thermostat wire