

Zone and Bypass Damper Controllers Catalog Page

Description

The Zone Damper (ZEC310) and Bypass Damper (BYP200) Controllers are components of the Verasys® zoning system. The Zone and Bypass Damper Controllers run a pre-engineered HVAC zoning application, and provide the inputs and outputs required for this application. These controllers ship factory-configured for field installation on a zone or bypass damper assembly.

The Zone and Bypass Damper Controllers include advanced operating modes and multiple features that ensure occupant comfort. The zone damper uses a carbon dioxide (CO₂) demand controlled ventilation (DCV) mode to regulate CO₂ levels within a zone. This occurs when fresh air enters the zone during occupied times. The controller can switch from occupied mode to standby mode based on the presence of local activity, due to the Occupancy sensing capability. Standby mode maximizes energy savings by using setpoints that are higher than the occupied cooling setpoint and lower than occupied heating setpoints.

Refer to the *Verasys System Product Bulletin (LIT-12012342)* for important product application information.

Zone Damper Controller



Bypass Damper Controller



Note: The Zone and Bypass Damper Controllers are available as standalone products or with round damper assemblies.

Repair Parts

If either the Zone or Bypass Damper Controllers fail to operate within their specifications, replace the unit. For a replacement unit, contact your nearest authorized representative.

Selection Charts

Zone and Bypass Damper Controllers (Part 1 of 2)

Code Number	Description
LC-ZEC310-0	Field-installed zone controller, no damper
LC-BYP200-0	Field-installed bypass damper controller, no damper
RZV06Z	6 in. Round Zone Damper LC-ZEC310-0 Controller
RZV07Z	7 in. Round Zone Damper LC-ZEC310-0 Controller
RZV08Z	8 in. Round Zone Damper LC-ZEC310-0 Controller
RZV09Z	9 in. Round Zone Damper LC-ZEC310-0 Controller
RZV10Z	10 in. Round Zone Damper LC-ZEC310-0 Controller
RZV11Z	11 in. Round Zone Damper LC-ZEC310-0 Controller
RZV12Z	12 in. Round Zone Damper LC-ZEC310-0 Controller
RZV13Z	13 in. Round Zone Damper LC-ZEC310-0 Controller
RZV14Z	14 in. Round Zone Damper LC-ZEC310-0 Controller
RZV15Z	15 in. Round Zone Damper LC-ZEC310-0 Controller
RZV16Z	16 in. Round Zone Damper LC-ZEC310-0 Controller
RZV17Z	17 in. Round Zone Damper LC-ZEC310-0 Controller
RZV18Z	18 in. Round Zone Damper LC-ZEC310-0 Controller
RZV06Y	6 in. Round Bypass Damper LC-BYP200-0 Controller
RZV07Y	7 in. Round Bypass Damper LC-BYP200-0 Controller
RZV08Y	8 in. Round Bypass Damper LC-BYP200-0 Controller
RZV09Y	9 in. Round Bypass Damper LC-BYP200-0 Controller
RZV10Y	10 in. Round Bypass Damper LC-BYP200-0 Controller
RZV11Y	11 in. Round Bypass Damper LC-BYP200-0 Controller
RZV12Y	12 in. Round Bypass Damper LC-BYP200-0 Controller
RZV13Y	13 in. Round Bypass Damper LC-BYP200-0 Controller
RZV14Y	14 in. Round Bypass Damper LC-BYP200-0 Controller
RZV15Y	15 in. Round Bypass Damper LC-BYP200-0 Controller
RZV16Y	16 in. Round Bypass Damper LC-BYP200-0 Controller

Zone and Bypass Damper Controllers Catalog Page (Continued)

Zone and Bypass Damper Controllers (Continued) (Part 2 of 2)

Code Number	Description
RZV17Y	17 in. Round Bypass Damper LC-BYP200-0 Controller
RZV18Y	18 in. Round Bypass Damper LC-BYP200-0 Controller

Zone Controller Accessories (Order Separately)

Code Number	Description
Zone Temperature Sensors (Hard-wired)	
TE-68NT-0N00S	Wall temperature sensor, 1000 ohm, nickel with temperature occupancy button
TE-68NT-1N00S	Wall temperature sensor, 1000 ohm, nickel with warmer and cooler (W/C) adjustment and temperature occupancy pushbutton
Zone CO₂ Sensor	
NS-BCN7004-0	BACnet® network CO ₂ sensor designed to function directly with Johnson Controls® BACnet MS/TP digital controllers, in an 80 mm x 120 mm (3 in. x 4.5 in.) enclosure with terminal block and modular jack wiring connections. Only addresses 212 to 214 are supported
Second Zone Damper Actuator¹	
M9106-GGA-2	6 N-m torque non-spring return damper actuator
Network Sensors for Zone Temperature	
NS-BTB7003-0	Network sensor, 120 mm x 80 mm, JCI logo, local setpoint, terminals
NS-BTB7003-2	Network sensor, 120 mm x 80 mm, no logo, local setpoint, terminals
NS-BTN7003-0	Network sensor, 120 mm x 80 mm, no logo, no setpoint, terminals
NS-BTN7003-2	Network sensor, 120 mm x 80 mm, no logo, no setpoint, terminals
NS-BTP7002-0	Network sensor, 120 mm x 80 mm, JCI logo, W/C adjustment, terminals
NS-BTP7002-2	Network sensor, 120 mm x 80 mm, no logo, W/C adjustment, terminals
Occupancy Lighting Switch	
NS-BCN7004	Occupancy sensing light switch for control of indoor incandescent and fluorescent lights
RIBU1C	Enclosed relay for OLS-2100-1 sensor

1. You must purchase the actuator and add it to a damper without a ZEC310 Controller.

Bypass Controller Accessories (Order Separately)

Code Number	Description
DPT2640-005D	264 Series Low Differential Pressure Transducer to measure differential air pressure. The transducer senses static pressure and converts this pressure difference to a proportional analog output. Accuracy +/- 5% with a 0-5 VDC range. Units are available in voltage or currents.
FTG18A-600R ¹	Duct static pressure probe kit: 4 in. flanged sensing tube, two barbed fittings, two No. 10 screws, and o-gasket.
M9106-GGA-2	6 N-m torque non-spring return damper actuator

1. The duct static pressure probe is field-installed and required for use with the bypass controller.

Technical Specifications

Zone and Bypass Damper Controllers	
Product Code Number	LC-ZEC310-0: Field installed, Zone Damper Controller LC-BYP200-0: Field installed Bypass Damper Controller RZVxxY: Round Bypass Damper with LC-BYP200-0 Controller RZVxxZ: Round Zone Damper with LC-ZEC310-0 Controller Note: xx represents the diameter in inches. Available in 6" to 18" 1 inch increments.
Power Supply Requirement	24 VAC (nominal, 20 VAC minimum/30 VAC maximum), 50 to 60 Hz, Class 2 power supply (North America) or Safety Extra-Low Voltage (SELV) (Europe)
Power Consumption	10 VA (not including external load) VA ratings do not include any power supplied to the peripheral devices connected to Binary Outputs (BOs) or Configurable Outputs (COs), which can consume up to 12 VA for each BO or CO, for a possible total consumption of an additional 60 VA (maximum).
Ambient Conditions	Ambient Operating Conditions: 0°C to 50°C (32°F to 122°F) Ambient Storage Conditions: -40°C to 70°C (-40°F to 158°F)
Processor	RX630 32-bit Renesas® microcontroller
Memory	1 MB flash memory and 512 KB Random Access Memory (RAM)
Input and Output Capabilities	1 - Universal Input: Defined as 0–10 VDC, 4–20 mA, 0–600k Ohm, or Binary Dry Contact 3 - Binary Outputs: Defined as 24 VAC Triac (internal power source) 2 - Configurable Outputs: Defined as 0–10 VDC or 24 VAC Triac BO

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products. © 2018 Johnson Controls. www.johnsoncontrols.com

Zone and Bypass Damper Controllers Catalog Page (Continued)

Technical Specifications

Controller Dimensions (Height x Width x Depth)	165 mm x 125 mm x 73 mm (6.5 in. x 4.92 in. x 2.9 in.)
Damper Construction	The RZV damper is based on the Johnson Controls RZ-2000 series dampers. The damper is constructed with 20-gauge G90 galvanized sheet steel. The blades on the 6 in. - 8 in. models use 16-gauge sheet steel. The 9 in. - 18 in. models use 12-gauge sheet steel. The shaft on the 6 in. - 8 in. models are 5/16 in diameter. The 9 in. - 18 in. models use a 1/2 diameter shaft. The damper comes with a closed-cell polyurethane seal tape foam to seal leakage. Rotate the damper counter clockwise to close the damper.
Differential Pressure Transducer (BYP200 Only)	Range: 1.5 in. - 1.5 in. W.C. Performance Characteristics: Accuracy $\pm 1.3\%$ Full Span Maximum (± 0.39 in. W.C.) Typical accuracy at zero (null) pressure is $\pm .02\%$ full scale
Controller Shipping Weight	0.65 kg (1.45 lb)
Damper with Controller Shipping Weight (approx)	8 in = 1.82 kg (3.9 lb) 12 in = 4.13 kg (9.0 lb) 16 in = 6.85 kg (15.0 lb)
Compliance	United States: UL Listed, File E107041, CCN PAZX, UL 916, Energy Management Equipment FCC Compliant to CFR47, Part 15, Subpart B, Class A Canada: UL Listed, File E107041, CCN PAZX7, CAN/CSA C22.2 No. 205, Signal Equipment Industry Canada Compliant, ICES-003