ECON-ZIP-EM

ZIP Economizer™ Energy Module

5 YEAR WARRANTY

Technical Data

Power Supply	24 VAC ± 20%, 50/60Hz, Class 2 power source
Power Consumption Rating*	1.5 VA (ECON-ZIP-EM), 5.5 VA (ECON-ZIP-BASE + ECON-ZIP-EM)
Connectors	1/4" male spade connectors
Environmental	RoHS, Conformally Coated
Indoor Fan Speed Selection	100'000 cycles @ inrush current of 3A, normal current 1.5A
Exhaust Fan Selection	100'000 cycles @ inrush current of 3A, normal current 1.5A
Supported CO2 Sensor	0-10 VDC, Sensor auto-detection
Auxiliary Input - Purge Contact	On/Off - 24 VAC, 50/60HZ - Current Load min 10mA
Auxiliary Input - Remote Potentiometer	2-10VDC
Humidity	5 to 95% RH non-condensing
Housing	NEMA 1
Housing Material	UL94-5VA
Ambient Temperature Range	-40°F to +158°F (-40°C to +70°C)
Storage Temperature Range	-40°F to +176°F (-40°C to +80°C)
Agency Listing	cULus acc. to UL873, CAN/CSA C22.2, No. 24-93

*The power consumption is for the control only and does not include connected loads such as actuator, compressors, fans, and sensors. For transformer sizing, the power consumption of these attached components must be included.

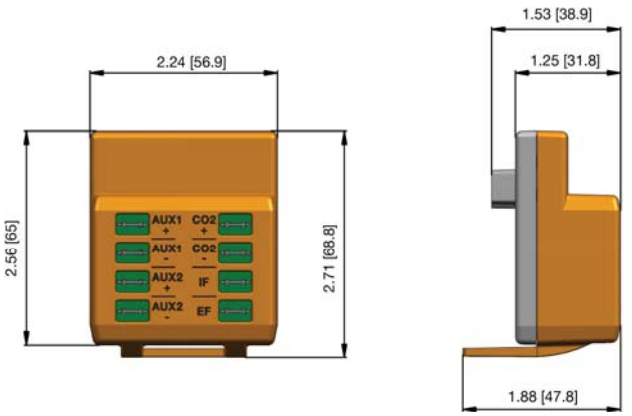
Product Features

The ZIP Economizer™ Energy Module provides additional I/Os to offer higher control functionalities that will save energy and will meet new and future minimum code requirements. The Energy Module is needed for CO2 sensors, Indoor Fan, 2 Speed Fan, Exhaust Fan, Remote Potentiometer for Damper Positioning, as well as purge control. The auto-detection and plug and play capability offers quick set up.

Application

The ZIP Economizer™ Energy Module offers demand control ventilation for high occupancy areas. (A third party CO2 sensor required). Pre-occupancy purge input for VOC removal (requires thermostat with purge contact). Power exhaust for building pressure control (requires power exhaust fan) Remote damper override (requires remote potentiometer installed). 2 speed fan control (requires supply fan to be equipped with multi speed fan or VFD).

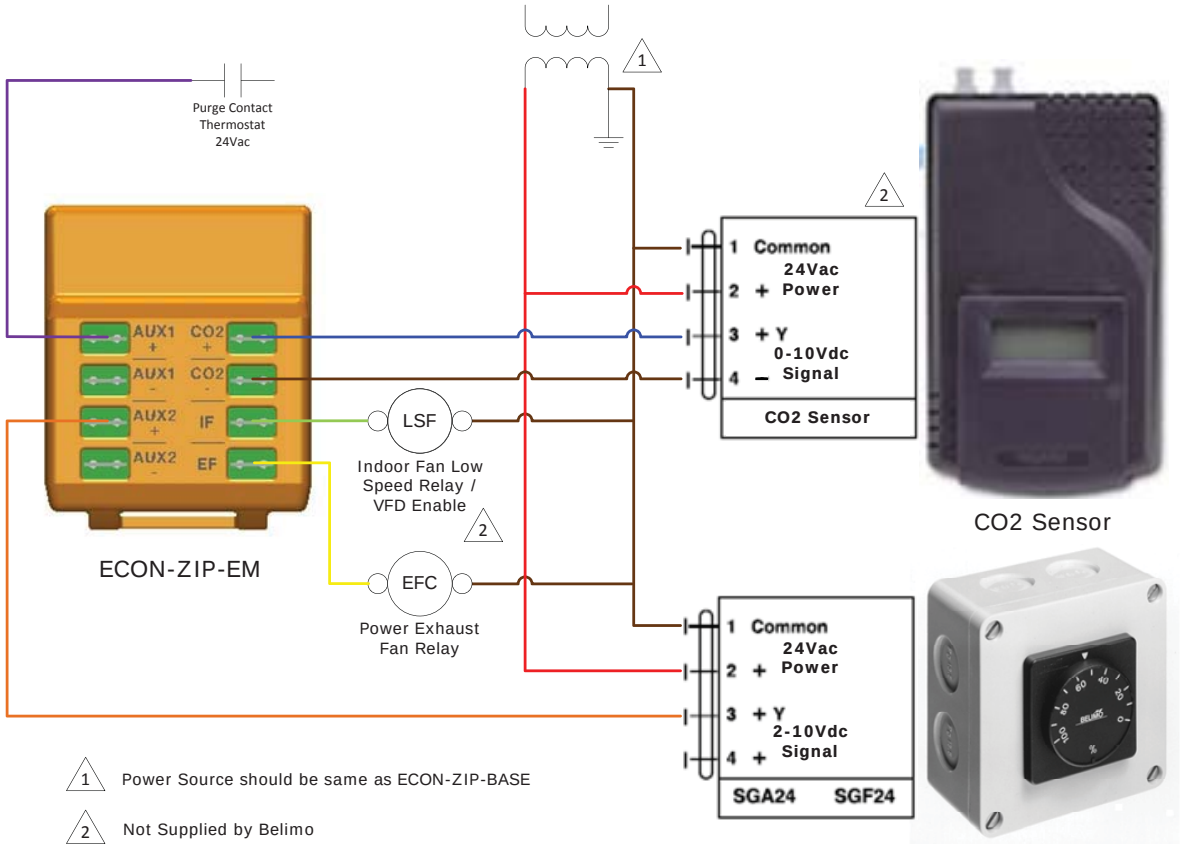
Dimensions (Inches [mm])



I/O Specifications

Type	Name	Description	Electrical Specification
Input	CO2 ±	CO2 sensor input	0-10 VDC (0-2000 ppm) Sensor auto-detection
Output	IF	Indoor fan low speed enable	100'000 cycles @ inrush current of 3A, normal current 1.5A Impedance for Auto detection @24 V: <600 Ohm @ 60Hz <800 Ohm @ 50Hz
Output	EF	Exhaust fan enable	100'000 cycles @ inrush current of 3A, normal current 1.5A Impedance for Auto detection @ 24 V: <600 Ohm @ 60Hz <800 Ohm @ 50Hz
Input	AUX1 ±	Auxiliary input Purge contact input	On/Off, 24 VAC, 50/60 Hz Current load min. 10mA
Input	AUX2 ±	Auxiliary input Remote Potentiometer Input	2-10 VDC

Wiring Diagram



1 Power Source should be same as ECON-ZIP-BASE

2 Not Supplied by Belimo

3 Sold Separately by Belimo

4 If the RTU has a 2 speed fan (IF wired), then W1 on the ECON-ZIP-BASE needs to be wired as well, since the fan shall not run in part load when heating.