*Smart*Exhaust™

Bath Fan/Light Switch with Ventilation Control & Delay Timer

The SmartExhaust™ Bath Fan/Light Switch is a simple and efficient solution for achieving adequate bathroom ventilation and meeting exhaust ventilation requirements. The SmartExhaust™ is designed to replace the bathroom fan and light switches with one smart controller and features programmable settings for running the exhaust fan as much or as little as you want, automatically.

Toggle (Part # SE1-W)

Rocker (Part # SED-S)

Features & Benefits

- Earn LEED and ENERGY STAR points for enhanced exhaust ventilation*
- Makes standard bath fans ASHRAE 62.2 compliant*
- Smart microprocessor provides precise, user-controlled ventilation
- Works with most incandescent, CFL, and LED lights**
- Optional light and fan timeout after 60 mins (Rocker style only)
- Available in toggle and rocker models in a variety of colors

*When used with ASHRAE 62.2 compliant fans
**Rocker style not compatible with all LED bulbs. Dimmable LED bulb recommended

Product Details

The SmartExhaust™ is a bath fan and light switch* that also serves as a ventilation controller and fan delay timer. This product provides whole house exhaust ventilation. (*Wiring the SmartExhaust™ to operate a light is optional)

With other fan and light switches, the time that someone is occupying the bathroom does not always provide sufficient run time for the fan to eliminate bathroom humidity or contaminants. Using the SmartExhaust™ ***Ventilation*** and ***Delay*** settings, the fan can be set to run on a timer so that adequate ventilation can be met even after someone exits the bathroom.

Using the ***Ventilation*** setting, the user is able to set the number of minutes per hour that the bathroom exhaust fan should run to achieve desired/required ventilation. Using the ***Delay*** setting, the user is able to set the number of minutes the fan should run after the SmartExhaust™ switch has been turned off. When the switch is turned off, the fan continues to run for the set delay time.

By combining the fan switch with the light switch, the SmartExhaust™ also becomes an occupancy sensor.

Specifications

Light: 450 Watts @ 120 VAC (Blue Wire)
Fan: 150 Watts @ 120 VAC (Red Wire)
Operation: 120 VAC 60hz ± 10% (Red Wire)
2.5" Minimum wall box recommended
Cover plate not included, use any standard switch plate

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Configuring Ventilation Time

To properly set the VENTILATION time on your SmartExhaust™ you will need to know the code required CFM (Cubic Feet Per Minute) for your home and the Fan CFM. Follow this simple equation to calculate the VENTILATION min/hr.

Code Required Ventilation in CFM / Fan CFM	=	Hour Fraction		
Hour Fraction	×	60 Minutes	=	Ventilation Settings in minutes

CFM = Cubic Feet Per Minute

Example

A Normal Hour of Operation with No Occupancy

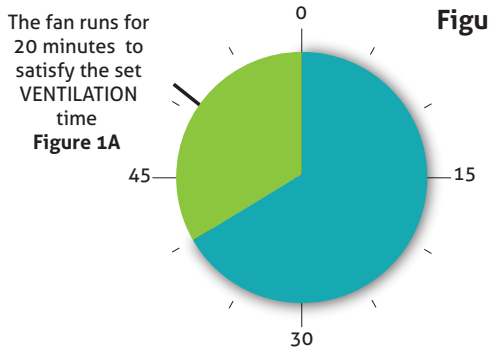


Figure 1

A Normal Hour of Operation with 5 Minutes of Occupancy and 10 Minute Fan Delay (Total Ventilation Set to 20 Min.)

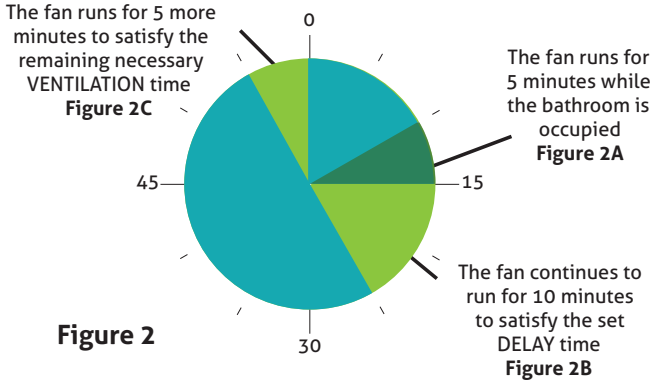


Figure 2

The user wants to VENTILATE the bathroom for 20 minutes every hour with a 10 minute fan DELAY

Figure 1

- The VENTILATION dial is set to 20 min/hr.
- The SmartExhaust™'s microprocessor performs the following equation to determine when to run the fan to meet the VENTILATION setting, based on 1 hour (60 mins).

  60 MINS - VENTILATION SETTING = START VENT TIME

  60 MINS - 20 MINS = 40 MINS

- The SmartExhaust™ will turn on 40 minutes into the hour and run for 20 minutes. (Figure 1A)

Figure 2

- The DELAY dial is set to 10 min/hour
- Someone uses the bathroom for 5 minutes and manually turns the SmartExhaust™ on. The microprocessor logs this 5 minutes of use. (Figure 2A)
- The occupant exits the bathroom, turning the switch off, and the SmartExhaust™ continues to run the fan for the 10 minutes of DELAY run time. (Figure 2B)

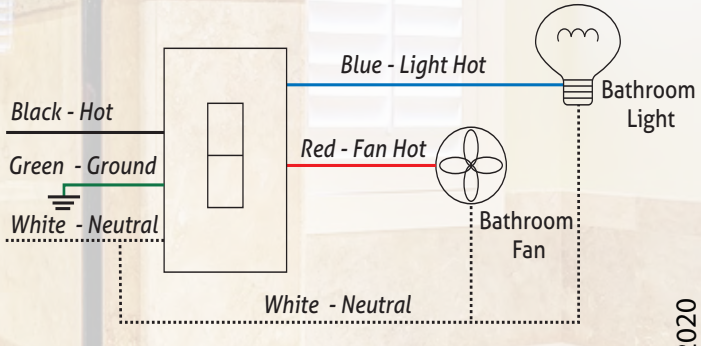
  5 MINS OF MANUAL USE + 10 MINS OF DELAY TIME = 15 MINUTES OF VENTILATION

- 15 minutes will be subtracted from the total required 20 minutes of VENTILATION time. 55 minutes into the hour, the fan will turn on and run for the 5 additional minutes needed to complete the required ventilation. (Figure 2C)

Part No:	Description:
SE1-W	SmartExhaust™ Toggle - White
SE1-A	SmartExhaust™ Toggle - Almond
SED-S	SmartExhaust™ Rocker (Includes White Rocker)
SEDR-A	Almond Rocker Replacement
SEDR-BL	Black Rocker Replacement
SEDR-BR	Brown Rocker Replacement
SEDR-I	Ivory Rocker Replacement

This product may be covered by one or more of the following patents and patents pending: 8,185,244

Wiring Diagram



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