

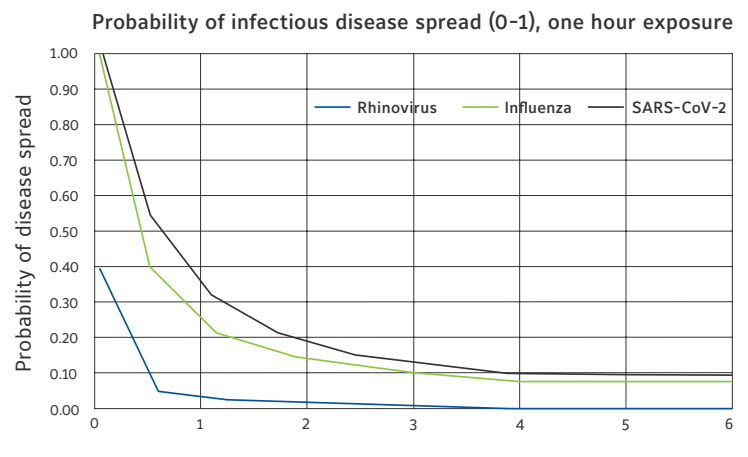
# Flexible Controls



## Buildings and the COVID-19 Pandemic

The COVID-19 pandemic is placing new demands on buildings. Under normal conditions, HVAC systems are operated to provide occupant comfort, health, and safety in an energy-efficient manner. Moving forward, buildings also need to minimize the potential spread of infectious disease under both normal and emergency conditions.

- Viral pandemics, severe weather, and other emergencies are increasing the need for buildings to be flexible in their uses and operations.
- Improving facility health, safety, and flexibility may require infrastructure capital investments and incur increased operating costs.
- Economic stimulus funding provided through the CARES Act, and performance-based contracting, can help reduce the upfront cost of modernizing critical facility infrastructure.
- Industry organizations such as ASHRAE, CMS, and NFPA are providing guidance to help building owners modify building systems and adjust operations to meet new COVID-related requirements



<sup>1</sup>Riley EC, Murphy G, Riley RL. Airborne spread of measles in a suburban elementary school. *American Journal of Epidemiology* (1978).



## How Johnson Controls can help

Flexible Controls is a web-based technology solution that provides an integrated user interface and standard control sequences to optimize facility operations under normal and emergency conditions.

### How do we do this?

- Utilizing pre-configured building control sequences optimized for normal, pandemic and other emergency building operations
- Implementing ASHRAE guidelines for building operations under pandemic conditions
- Providing a simple, integrated user interface for on-site and remote building system monitoring and control with the ability to quickly change building operating modes
- Maintaining energy-efficient operations under “new normal” and emergency conditions
- Using performance-based contracting models or service agreements to fund infrastructure investments through energy and operational savings
- Helping identify economic stimulus or other incentives to reduce the cost of infrastructure improvements

## Ways to optimize your facility

Facility operations are optimized under a variety of conditions using the following pre-configured control sequences:

- **Increase outdoor air** up to 100 percent if equipment allows. Several options are available if equipment is not able to provide increased ventilation including:
  - Discharge air temperature setpoint adjustment based on outdoor temperature
  - Outdoor airflow adjustment during periods of inadequate mechanical heating or cooling capacity
- **Flush room air during unoccupied mode** to ensure three room air changes are completed before and after occupancy. Terminal units are opened to ensure adequate airflow to each zone.
- **Implement Demand Control Ventilation** to efficiently and safely ventilate zones with large occupancy variations during normal and emergency conditions.
- **Maintain room humidity** between 40 and 60 percent RH
- **Shut down cross-contamination** in equipment such as heat recovery wheels.
- **Monitor outdoor air pollution** and minimize air intake when outdoor air is unhealthy.
- **React to an outdoor air quality emergency** by closing air supplies and exhausts when outdoor air conditions pose a critical health risk (e.g. industrial accident, chemical spill etc.).
- **Maintain room air pressure differentials** to provide a safe space to isolate or quarantine symptomatic or COVID-infected building occupants.

Johnson Controls understands your need to modernize critical building systems to adapt to new requirements and operating conditions. Being able to quickly change your facility operations to improve safety and resiliency reduces your organization's risk and builds confidence in your ability to protect occupants under a variety of conditions.

Improving efficiency and space utilization also reduces costs, improves organizational productivity, and increases the value of facility assets. Finally, utilizing available incentives and guaranteed performance-based contracting and service solutions frees up capital for critical non-facility related investments and expenses.

**Contact your local Johnson Controls representative for further information.**

© 2020 Johnson Controls. All Rights Reserved.