

Johnson Controls is powering the safe return to work

Solutions to power your buildings for a safe and efficient reopening post-COVID-19

As organizations embark on a journey to a “new normal,” facilities need to consider how best to reduce the transmission of disease among employees and building occupants, maintain healthy business operations, and strive to provide a safe work environment.

In the coming new post-COVID-19 world, as buildings prepare to re-open, facilities managers need to think about how best to protect occupants from disease, how to maintain robust and healthy business operations, and how to supply the safest work environment possible.

We have the global experience, national workforce and facility expertise to quickly deploy building solutions to help keep communities safe and healthy. We can help ensure buildings are prepared to welcome back employees, visitors and customers.

Johnson Controls can provide guidance on stimulus funding and financing options. These can help you preserve valuable cash and improve the safety of your facility in these difficult times.

We will continue to work to guidelines from the Centers for Disease Control and Prevention, and the guidelines of the World Health Organization, to prepare workplaces for the safe return of building occupants.

Footprint across Asia-Pacific

- There are 22 manufacturing sites in APAC.
- Our team has more than 21,000 experts in 300 branches.
- We have 10 R&D centers in the area.
- We have world-class vendor partners with experts in air-cleaning technologies that are effective against COVID-19.
- Johnson Controls is recognized by local governments as a provider of essential products, services, and personnel.
- We were on the front lines in Wuhan installing systems in eight days.
- Johnson Controls has been in the aftermath of countless natural disasters, economic downturns, and human disease outbreaks over more than 130 years, so we have the experience and capabilities to help.

The power behind **your mission**



Solutions and capabilities to support the reopening of buildings

Enhancing occupant safety, comfort and wellness while increasing your facility's productivity and efficiency

Solution Portfolio

Johnson Controls is powering clean, safe and adaptive environments with solutions that help you meet the requirements of the "new norm".



Safety and security

- Temperature screening
- Video surveillance
- Contactless access control



Health and wellness

- Clean air
- Air quality monitoring



Social distancing

- Social distance monitoring
- Contact tracing
- Space management



Sustainability

- Remote operation
- Energy optimization
- Condition-based maintenance

Safety and security

Control entry access and continuous monitoring of public spaces.

Temperature screening

Your employees and visitors trust you to keep them safe from the moment they enter the building.

- Smarter: advanced FR engine to ensure only forehead temperature can be detected. Non-false readings.
- More accurate: high accuracy with a margin of $\pm 0.3^{\circ}\text{C}$ with a blackbody calibration device.
- Faster: up to 30 faces scanned simultaneously to avoid crowd density increases in the detection area.
- More flexible: various mounting options to fit diverse user scenarios.
- More interactive: built-in sound-light alarm and customizable voice alarm

Tyco Illustra Insight camera uses facial recognition to control access, eliminating access control cards and physical contact with door reader.

Contactless access control

Insightful movement of people in buildings, places and spaces:

- Contactless access control
- Secure communications
- Twin cameras
- Two-way audio intercom
- Designed for SIP integration
- Intuitive visual and multi-language audio feedback

Video surveillance

Powered by Tyco AI to enhance the best in class video surveillance and access control solutions:

- Enhanced facial detection including an anti-spoofing liveness solution that eliminates the risk of card pass-back or spoofing via a photographic image
- The system can also be configured to identify and alert security to tailgating, restrict access to a group if a user does not possess the correct credentials, or deny access altogether

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Health and wellness

Reduce contaminants and restore indoor air quality to improve the health, comfort and productivity of occupants.

Clean air

Active ionization technology air purification system

- Microbial and pathogen reduction
- Particle decay
- VOC and odor reduction
- Energy conservation
- Reduced capital expenses on new installations

Ultraviolet light

- Disinfects by passing air through ultraviolet light (UV-C)
- UV-C penetrates the cell wall of microorganisms and alters the DNA structure, making them non-viable and unable to reproduce or infect
- No significant impact to static pressure

High-efficiency (H Class) filters

- Pleated type filter that has been proven 99.97 percent efficient in trapping particles 0.3 microns and larger
- Can be incorporated into central HVAC systems or used as standalone units
- Easy implementation

Social distancing

Minimize contact, maintain safe distancing and trace contacts to contain spread.

Location Based Services for contact tracing and risk assessment

Social distance monitoring

- Real-time alerts to highlight potential social distancing issues
- Identifies social distancing hot spots that are difficult to observe
- Lobby capacity monitoring and alerting

Targeted areas for decontamination

- Identifies locations, duration and time of use by any employee that tests positive for COVID-19
- Intensity of use reporting to drive dynamic cleaning schedules

Lone worker

- Detection of unintended lone working
- Duress support

Contact tracing

- Displays employees at highest risk of contracting the virus
- Reports time and duration of encounters between people
- Detects employees at highest risk of visiting spaces the infected person previously visited

Quick and easy installation

- Rapid and low-cost deployment
- Wire-free installation utilizing the existing Wi-Fi network

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Companion App empowers smart spaces in the building to enable enhanced data visibility, productivity and safety

Mobile application

- Comfort: Control space, lighting and temperature
- Calendar: Manage and sync your schedule and bookings
- Activity: Record hours
- Contacts: Stay in touch
- Navigate: Find spaces
- Help desk: Raise tickets
- Reserve: hot desks or meeting rooms
- Announcements: Stay informed
- SOS: Call emergency number or report incident

Admin portal

- Map people to their spaces, integrate systems, create smart space scenarios and manage rights

Outcomes

- Actively manage workspace allocation to enable social distancing
- Manage occupant density in meeting rooms
- Enable employees to report sanitization issues and other facility requests
- Communicate safety procedures, floor plans for space availability and visitor guidelines

Safety

- Enhanced safety utilizing social distancing methodology for room/desk booking

Efficiency

- Employees will work efficiently, and will be aware of current updates and the location of amenities in the office area

Resilience

- Companion is designed to help employees reach out to teams when needed in an emergency

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Video-based AI platform for safe distancing alerts in public space

Social distancing

- Calculates in real-time density per lane, and the distance between people standing or sitting next to each other
- Generates alerts and alarms for violation

Face covering detection

- Detects people wearing a face covering
- Generates alarms for any violation

Limiting Occupancy & Improve Hygiene

- In large areas assures a safe number of people congregated on the basis of square footage
- Generate real-time alarm when value goes beyond the limit - also alert staff to sanitize a populated area

Sustainability

Minimize physical proximity of operating staff, reduce operating costs, and improve uptime of critical equipment.

Johnson Controls Enterprise Management (JEM) platform leverages technology to remotely monitor facilities, improve asset life and reduce operating costs

Remote operation

- Command and Control feature enables the user to control the set points, schedules, or command the equipment directly from the cloud. It gives the user the ability to control multiple BAS systems from one single view for any location across the world.

Maintenance management

- Fault Detection and Diagnostics (FDD) rules help to predict maintenance needs and optimize maintenance schedules. Dashboards display information on work orders, service reports, and maintenance KPIs.

Indoor Air Quality

- JEM displays space information, including thermal equipment, CO2, Humidity Heat Maps, and the Top Deviations from set points. CO2 values can be tracked using fitted sensors.

Energy analysis and energy prediction

- AI-based Energy Prediction Model (EPM) predicts energy consumption and demand of a building.
- Provides the most advanced analytics using FDD, dashboards and KPI tracking.

When you partner with Johnson Controls, we treat your mission as our own. We put our deep expertise, leading technology and world-class products to work for you, never resting until you achieve your goals.

Learn more when you visit us at www.johnsoncontrols.com.

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