





Water Security Levels of Protection

New buildings are at risk of water escape due to poor workmanship or product failures. Implementing an IoT based water security solution has never been easier and comes fully integrated into your smart building infrastructure.

This is a guide on how your water security system operates and the features provided by each solution.





Whole Building Monitoring & Shut-Off System

Protection Applicable During: Construction Post-Construction

Hardware & Product Solution:

1) A main shut-off valve is supplied to control main water supply from municipal system (Inst. by Div 15) for,

- i) Main residential tower
- ii) Retail / low pressure main (if applicable)
- iii) Temporary water supply during construction (if applicable)
- iv) Irrigation or grey water systems (if applicable)

2) Flow meter or bulk meter to monitor the incoming water supply

3) Flood sensor inside the water meter / equipment room

Features & Automation (Protection):

If any of the flood sensors (wired or wireless) within the building are triggered by water escape,

i) the main valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

If water flow exceeds defined flow rate limit (i.e., 6 LPM) or runs continuously outside construction hours,

i) the main valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

If water pressure operates outside the limits set in by engineer/manufacture of equipment (low suction / high pressure), i) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) ii) ULC call centre will be notified

Main water valve can,

i) Be remotely turned on and off via dashboard

ii) Be autonomously exercised to ensure proper operation

iii) Can check in with internal position relay to verify valve position feedback

iv) Can be set up to close automatically on triggered event or schedule (i.e., at 5pm water turns of, 5am water turns on)

Building Areas Monitored & Protected by Above Solution:

1) Entire Premise



Domestic Zone Monitoring & Shut-Off System

Protection Applicable During: Construction Post-Construction

Hardware & Product Solution:

1) 3 main shut-off values are supplied to control water supply to domestic water "zones" (Inst. by Div 15) for,
i) the engineered zone (i.e., 10 storeys) of the building

2) Pressure sensor before and after the "Pressure Reducing Valve Station" to measure high/low pressure

3) Flood sensor inside the equipment room to measure water escape in the mech room

4) Temperature sensor on the hot water supply & return to measure temperature

5) Flow meter on the domestic hot water return to measure velocity

Features & Automation (Protection):

If any of the flood sensors (wired or wireless) within the building are triggered by water escape,

i) the main valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

If water pressure/temperature exceeds defined engineered limit (i.e., 49*C or 70 PSI),

i) the main valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

If water pressure operates outside the limits set in by engineer/manufacture of equipment (low suction / high pressure), i) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) ii) ULC call centre will be notified

Water valves can,

i) Be remotely turned on and off via dashboard

ii) Be autonomously exercised to ensure proper operation

iii) Can check in with internal position relay to verify valve position feedback

iv) Can be set up to close automatically on triggered event or schedule (i.e., at 5pm water turns of, 5am water turns on)

Building Areas Monitored & Protected by Above Solution:

1) Entire Premise
2) Zones of Building
3) Sub-Mechanical Rooms (i.e., PRV closets)
4) Mechanical Penthouse/Boiler Room



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HVAC Make-Up Water Supply for Closed Loop

Protection Applicable During: Construction Post-Construction

Hardware & Product Solution:

1) 1 main shut-off value is supplied to control water supply to HVAC refill (Inst. by Div 15) for,
i) the entire closed-loop hydronic heating or cooling system

2) Pressure sensor before and after the Pressure Regulator to measure high/low & system pressure

3) Flood sensor inside the equipment room to measure water escape in the mech room (MPH)

4) Flow meter on the make-up water supply to measure flow rate & consumption

Features & Automation (Protection):

If water flow exceeds defined flow rate limit (i.e., 1 LPM) or runs continuously (Algo),

i) the main valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

If any of the flood sensors (wired or wireless) within the building are triggered by water escape,

i) the closed loop feed valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

If water pressure exceeds defined engineered system limit or has a sudden system pressure drop,

i) the closed loop feed valve can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

Water valves can,

i) Be remotely turned on and off via dashboard

ii) Be autonomously exercised to ensure proper operation

iii) Can check in with internal position relay to verify valve position feedback

iv) Can be set up to close automatically on triggered event or schedule (i.e., at 5pm water turns of, 5am water turns on)

Building Areas Monitored & Protected by Above Solution:

1) Entire Premise
2) Zones of Building
3) Sub-Mechanical Rooms (i.e., PRV closets)
4) Mechanical Penthouse/Boiler Room

5) Closed-loop hydronic systems



In-Suite Riser Monitoring & Shut-Off (HVAC or Domestic) w/ In-Suite Flood Sensors

Protection Applicable During: Construction Post-Construction

Hardware & Product Solution:

Main shut-off valves are supplied to control water supply "riser" (Inst. by Div 15) for,
i) Domestic water system
ii) Hydronic water system

2) Flood sensor (wired or wireless) inside suite run nearby Domestic and/or HVAC riser

Features & Automation (Protection):

If any of the flood sensors (wired or wireless) along the riser are triggered by water escape,

i) the riser valves can automatically turn off

ii) an alert will be sent by text/email to applicable users (Property Manager, General Contractor, Developer, etc) iii) ULC call centre will be notified

Water valves can,

i) Be remotely turned on and off via dashboard

ii) Be autonomously exercised to ensure proper operation

iii) Can check in with internal position relay to verify valve position feedback

iv) Can be set up to close automatically on triggered event or schedule (i.e., at 5pm water turns of, 5am water turns on)

Wireless flood sensors can,

i) Can detect water escape and alert / trigger automatic valve

ii Report their battery life

iii) Report their status

iv) Can communicate with any nearby receiver in mesh network

Wired floor sensors can,

i) Can detect water escape and alert / trigger automatic valve

ii) Can communicate with reed device in network

Building Areas Monitored & Protected by Above Solution:

1) Entire Premise
2) Zones of Building
3) Sub-Mechanical Rooms (i.e., PRV closets)
4) Mechanical Penthouse/Boiler Room
5) Closed-loop hydronic systems
6) In-suite (specific alert)

