Snow Melting Solutions

Improve efficiency, safety & reliability in residential & commercial systems

tekmar®

A WATTS Brand

Reliable, Efficient Snow Melting

Snow Melting Benefits

- *Offer safe building access to residents, customers, visitors, and employees*

- *Reduce potential liability*

- *Save time and eliminate strains caused by shoveling*

- *Melt snow in difficult to access and steep locations*

- *Prevent damage to pavers, concrete, and structures caused by snow clearing equipment*

- *Eliminate the use of harmful chemicals*

- *Ensure critical locations such as emergency entrances and ramps are free of snow and ice 24-hours a day*

Automatic or Manual Operation

Automatic operation offers the highest level of safety and convenience.

- *Fully automatic operation is enabled through the use of an in-slab Snow/Ice Sensor 090 or 094.*

- *Systems without an in-slab sensor can be updated to provide automatic start with timed stop operation using an aerial mounted Snow Sensor 095.*

- *Manual systems are started with a button press and timed or manually stopped.*

Automatic Start and Stop

Automatic Start / Time Stop

Manual Start

Choose Your Level of Control

Choose from 2 different product lines to suit your application needs. Performance and Designer series products offer distinct features and benefits to perfectly match your existing system or design requirements.

Performance Series

The Performance series offers the benefits of tekmarNet® communication to the operation of the hydronic and electric snow melting system. Benefits include remote start/stop, monitoring and adjustment through a Mobile App, Internet website or Home Automation system and the prioritization of up to 12 melting zones.
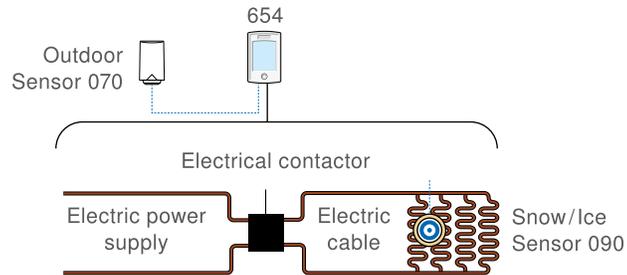
Designer Series

The Designer series communicates to commercial-grade building automation systems using BACnet® or Modbus® for start /stop, alert notification, remote monitoring and adjustment. Two automatic snow/ice sensors can be installed for greater detection coverage, reliability, and redundancy.

Performance Series

Single Zone Electric

The Snow Melting Control 654 operates an electric snow melting system using an electrical contactor. A Snow/Ice Sensor 090 is used to provide automatic start and stop operation.
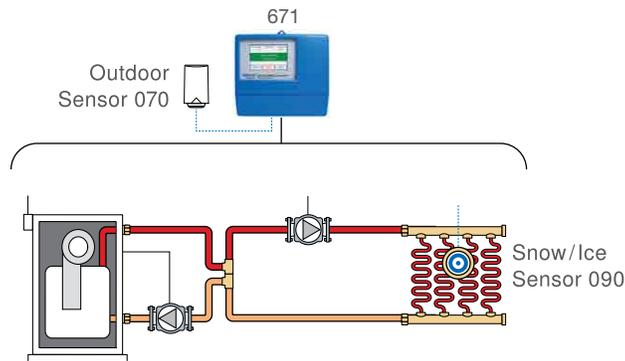
- *Automatic or manual start & stop*

654

Outdoor Sensor 070

Electrical contactor

Electric power supply

Electric cable

Snow/Ice Sensor 090

Single Zone Hydronic with On/Off Boiler

The WiFi Snow Melting Control 671 operates a hydronic snow melting system by cycling on and off a condensing boiler. A Snow/Ice Sensor 090 is used to provide automatic start and stop operation.
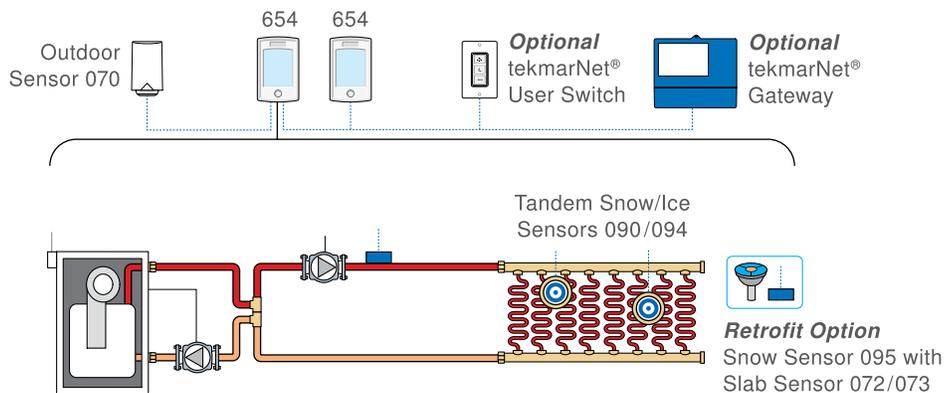
- *Watts® Home mobile app for remote monitoring and enable/disable*
- *Automatic or manual start & stop*

671

Outdoor Sensor 070

Snow/Ice Sensor 090

Single Zone Hydronic with Modulating Boiler

The Snow Melting Control 654 operates a hydronic snow melting system by modulating a condensing boiler. Two Snow/Ice Sensors work in tandem to improve detection of snow over a large melting area. The second 654 is required for tandem operation. A tekmarNet® Gateway and/or User Switch offers remote adjustment and monitoring capability.

- *Tandem Snow/Ice Detection*
- *Optional remote access via tekmarNet® communication*
- *Automatic start & stop or automatic start with timed stop*

Outdoor Sensor 070

654 **654**

Optional tekmarNet® User Switch

Optional tekmarNet® Gateway

Tandem Snow/Ice Sensors 090/094

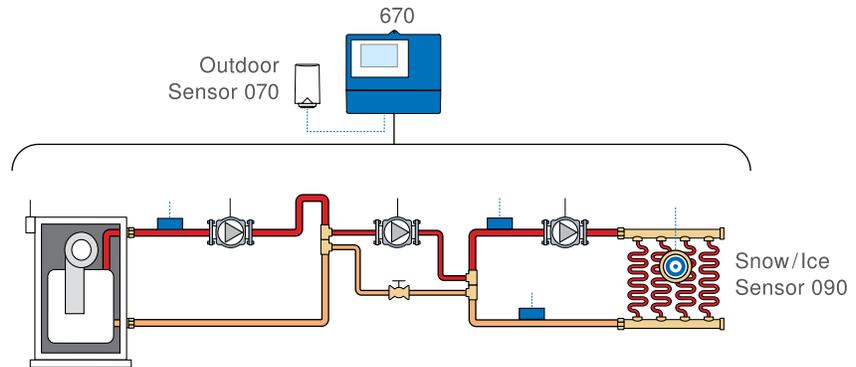*Retrofit Option* Snow Sensor 095 with Slab Sensor 072/073

Performance Series

Single Zone Hydronic with Mixing

The Snow Melting Control 670 operates a hydronic boiler and variable speed injection mixing pump to heat the slab to the melting temperature. The variable speed injection mixing protects the boiler from damage caused by cold return water temperatures. A Snow/Ice Sensor 090 enables automatic melting operation.

- *Watts® Home mobile app for remote monitoring and enable/disable*

- *Operation of one dedicated boiler*

- *4-20 mA, 0-10 V (dc), floating action or variable speed injection mixing options*
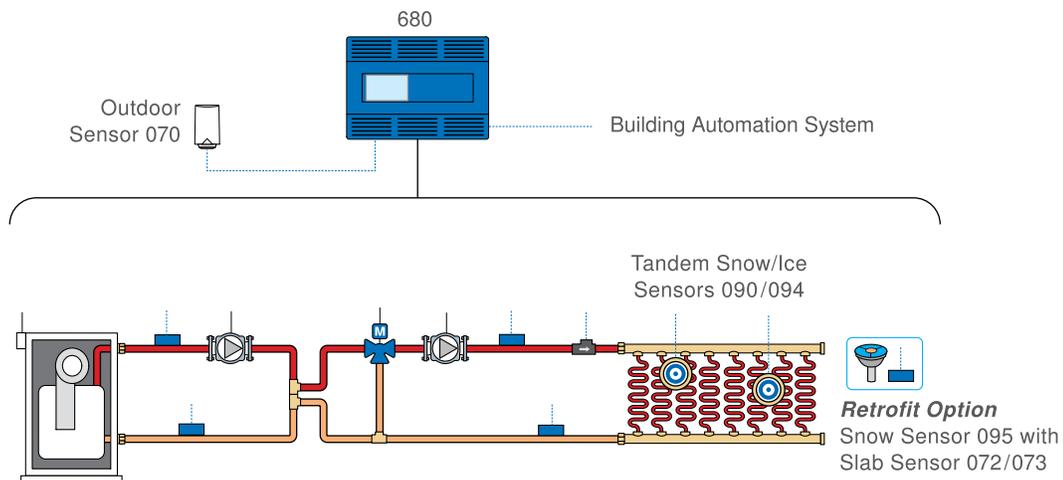
- *Automatic or manual start & stop*

670

Outdoor Sensor 070

Snow/Ice Sensor 090

Designer Series

Single Zone Hydronic with Boiler and Mixing

The Snow Melting Control 680 operates a hydronic boiler and mixing valve to heat the slab to the melting temperature. The mixing valve protects the boiler from damage caused by cold return temperatures. The control communicates with a building automation system using BACnet or Modbus for remote start/stop, monitoring, adjustment and alert notification.

- *BACnet or Modbus communication*

- *Energy Monitoring*

- *Tandem Snow/Ice Detection*

- *Automatic start & stop or automatic start with timed stop*

- *4-20 mA, 0-10 V (dc), floating action or variable speed injection mixing options*

680

Outdoor Sensor 070

Building Automation System

Tandem Snow/Ice Sensors 090/094

Retrofit Option
Snow Sensor 095 with Slab Sensor 072/073

Snow Melting

Controls & Snow / Ice Sensor

▶ Compare Snow Melting Controls

System Requirements	654	670	671	680	681
Heat Source Electric (E), Hydronic (H), Steam (S)	E/H/S	E/H/S	E/H/S	E/H/S	-
On / Off Boilers	●	●	●	●	-
Modulating Boilers	●	●	-	●	-
Number of Stages One or two on/off boiler stages	1	2	1	2	-
Mixing Operation Protect non-condensing boilers by controlling return water temperature	●	●	-	●	-
Floating Action Output Control for floating motor	-	●	-	●	-
Analog 4-20 mA or 0 - 10 V (dc) Options for control of valve actuators	●	●	-	●	-
Variable Speed Output Precise mixing injection using a standard wet-rotor circulator	-	●	-	●	-
Features & Benefits	654	670	671	680	681
Automatic Snow/Ice Detection	●	●	●	●	●
BACnet & Modbus Communication Remote monitoring & adjustment capability with BAS	-	-	-	●	-
BACnet MS/TP Communication Automatic start and stop & slab temperature status	-	-	-	-	●
Watts® Home mobile app Remote monitoring and enable/disable remotely using a mobile phone or tablet	-	●	-	-	-
tekmarNet® Communication Network communication allows for greater functionality — User Switch 480 or Gateway 482/486 enable/disable	●	●	-	-	-
tekmarNet® Communication — tekmarNet® System Control communication	●	●	-	-	-
Remote Enable Supports an external enable/disable signal	-	●	●	-	-
Melting and Idling Setpoint Control the melting surface temperature for efficient system operation * 681 provides only melting	●	●	●	●	●
Storm or Temporary Idle Timed slab pre-heat for anticipated snow fall	●	●	●	●	-
Automatic Storm Pre-heats the slab based on Internet weather snow fall forecast	-	●	-	-	-
Warm Weather Shut Down Avoid snow melt operation in warmer weather for energy savings	●	●	●	●	●
Cold Weather Cut Out Avoid snow melt operation in extremely cold weather for energy savings	●	●	●	●	●
Slab Outdoor Reset Vary the slab core temperature as the outdoor temperature changes	●	●	●	●	-
Slab Protection Control heat delivery to the slab to prevent cracking	●	●	-	●	-

Compare Snow Melting Controls

Features & Benefits (continued)	654	670	671	680	681
Programmable Schedule Scheduled snow melt operation for commercial applications	•	-	-	-	-
Snow Melt Zoning With Priority Supports zoning and the prioritization of zones	•	•	•	•	-
Number of Snow Melting Zones The maximum number of coordinated snow melt zones in a system	12**	12**	12**	N/A	-
Snow Melt Zone Tracking Automatic operation for multiple zones with a single Snow / Ice Sensor 090	•	•	•	-	-
EconoMelt Follow mechanical snow removal with a shortened melt cycle *Requires the Snow / Ice Sensor 090 or 094	•	•	•	•	-
Manual Start with Timer A manual enable with a timed disable can result in large energy savings	•	•	•	•	-
Compatible with Snow / Ice Sensor 090 or 094 Supports the installation of the in-slab, automatic Snow / Ice Sensor 090 or 094	•	•	•	•	•
Tandem Snow / Ice Detection Two Snow / Ice Sensor 090s or 094s in a single zone for added accuracy and redundancy	•	•	-	•	-
Compatible with Snow Sensor 095 Supports the installation of the aerial retrofit Snow Sensor 095	•	•	•	•	•
DIN Rail or Screw Mounting	-	-	-	-	•

* Requires additional 654 for Tandem operation
** Requires one control per zone

Compare Snow Melting Accessories

Features & Benefits	090	094	095	072	073
Automatic Start & Stop Start the system when snow or ice is detected and stop the system when the slab is dry	•	•	-	-	-
Automatic Start & Timed Stop Start the system when snow is detected and stop the system when a melt time has expired	-	-	•	-	-
Slab Temperature Control Measure the slab core temperature to allow for Slab Protection and Slab Outdoor Reset	•	•	-	•	•
Wire Length Some sensors are available with different wire lengths	65 ft (20 m)	208 ft (63 m)	N/A	20 ft (6 m)	40 ft (12 m)

Snow/Ice Sensor 090 or 094 (in slab) with Sensor Socket 091

Snow Sensor 095 (aerial)

Slab Sensor 072 or 073

Better Design, Better Control, Better Systems.

At tekmar Control Systems, we believe the indoor comfort of a building depends on the performance of its heating, ventilating & air conditioning (HVAC) system. That's why tekmar offers affordable control solutions designed to produce the best in comfort, efficiency & system performance.

Our focus on innovation to add greater value to our products & services allows us to pioneer technologies & anticipate the needs of tomorrow. We stand by our products & offer in-depth technical support & training to ensure our customers are completely satisfied.

World Class Technical Support

Our local Representatives are knowledgeable experts in both HVAC controls & their operating mechanical systems. They offer assistance in system design, product selection & installation support. We're here when you need us most. To contact a Representative in your area, visit tekmarControls.com

Dependable Warranty

We strive to provide the highest quality products to our customers. In keeping with that goal, all of our products are 100% quality tested, & backed by the most dependable 3-year limited warranty in the industry.

We Offer the Complete Solution

• *A wide range of products to match the needs of today's systems*

• *Manufactured in a state-of-the-art Canadian facility*

• *A network of experienced & knowledgeable Representatives*

• *Training & technical tools available to support your success*

• *Dedicated staff focused on innovation & customer service*

For more information regarding tekmar products, visit
tekmarControls.com

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