DAIKIN

Sales and Engineering Data

ED 19107

Group: **WSHP**

Type: **Thermostats & Sensors**

Date: **July 2019**

Water Source Heat Pumps Products

Thermostats and Sensors Specifications, Data and Wiring

Contents

The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: **WSHP**
	Type: **Accessory**
	Date: **May 2019**

Non-Programmable Electronic Thermostat
2 Heat/2 Cool, Auto Changeover, Hardwired – P/N 910121746

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling and boilerless electric heat control, the non-programmable thermostat provides simple control capabilities. With alarm fault clearing, a timed override button and unit status LED, this thermostat provides an easy interface to the Micro-Tech III SmartSource controller for both automatic and manual changeover capabilities. It can be connected to the accessory remote temperature sensor.

Note: For complete installation, operation and maintenance information, refer to 910121746 Install Manual

Features

- Configurable
- 2-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible

Parts Diagram

Reset switch

Configuration switch

Right (fan) button

Down button

Up button

Specifications

Electrical rating:
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

Temperature control range: 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

System configurations: 2-stage heat, 2-stage cool

Timing: Anti-short Cycle: 4 minutes (bypass anti-short cycle delay by returning to OFF mode for 5 seconds)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **L** – Status input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan, **O** – Override/reset

Dimensions

Non-programmable electronic thermostat wiring

WSHP MicroTech III Controller Terminals TB1 and TB2

Notes: Includes thermostat and wall plate. Refer to 910121746 Install Manual.

When remote reset of a lockout condition is required at the wall thermostat, it will be necessary to utilize a conductor between terminal "O" on the wall thermostat to "TB1 terminal 4" on the MicroTech III unit controller (non-programmable stat only).

Accessory Remote Room Sensor (Part No. 107096010)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

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	Type: **Accessory**
	Date: **May 2019**

Programmable Electronic Thermostat
2 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910121748

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling and boilerless electric heat control, the Programmable thermostat provides simple control capabilities. With alarm fault clearing, a timed override button and unit status LED, this thermostat provides an easy interface to the MicroTech III SmartSource controller for both automatic and manual changeover capabilities. It can be connected to the accessory remote temperature sensor.
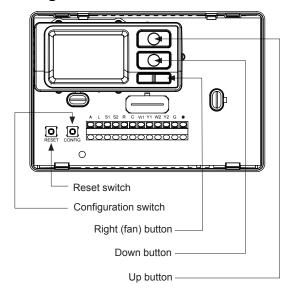
Note: *For complete installation, operation and maintenance information, refer to 910121748 Install Manual*

Features

- 7-Day, 5-2-Day or 5-1-1-Day Programmable
- Configurable
- 2-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible

Parts Diagram

Reset switch
Configuration switch
Right (fan) button
Down button
Up button

Specifications

Electrical rating:
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load
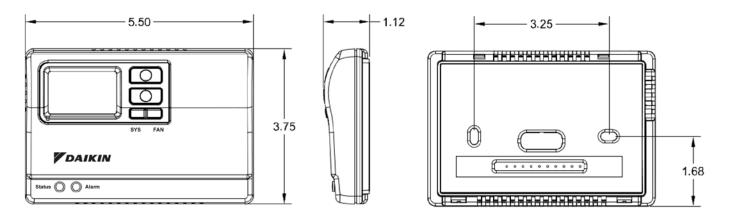
Temperature control range: 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

System configurations: 2-stage heat, 2-stage cool

Timing: Anti-short Cycle: 4 minutes (bypass anti-short cycle delay by returning to OFF mode for 5 seconds)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **L** – Status input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool,
W2 – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan, **O** – Override/reset

Dimensions

7-day programmable electronic thermostat wiring
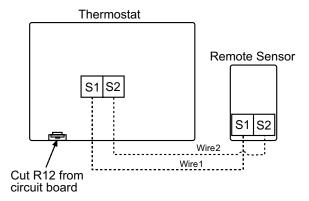
MicroTech III Unit Control Board
Low Voltage Terminal Strip (Circuit 1)

TB2

Terminal		Thermostat Terminals
24VAC Common	C	C
W3 - Heat 3	O	+R
Fan	G	W1
Cool 1	Y1	Y1
Cool 2	Y2	W2
Heat 1	W1	Y2
Heat 2	W2	G
Alarm Output	A	O
24VAC	R	

TB1

4 — Override / optional

Notes: *Includes thermostat and wall plate. Refer to 910121748 Install Manual*

Accessory Remote Room Sensor (Part No. 107096010)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Thermostat

Remote Sensor

S1 | S2

S1 | S2

Wire2

Wire1

Cut R12 from circuit board

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Group: **WSHP**

Type: **Accessory**

Date: **October 2017**

Programmable Electronic Thermostat
2 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193093

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling, high-low fan speed, and boilerless electric heat control. This programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to IO manual 910193093*

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Backup for Clock and Schedule
- 2-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Alarm Indicator
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display
- Remote Fault Reset
- Two Speed Fan Hi/Low

- Filter Life Alert
- Fan Schedule
- Sub-base Terminations
- User Coded Lockout

Specifications

Electrical rating:

- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stage or 9 for two stage units. Add two additional for optional remote sensor.
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

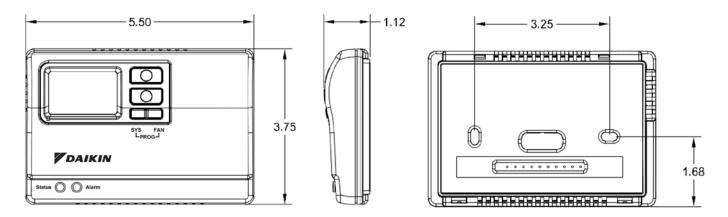**Temperature control range:** 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan, **G2 –** Fan high
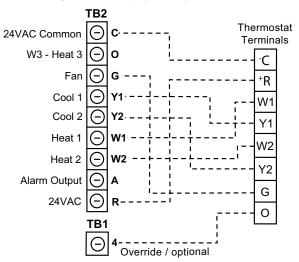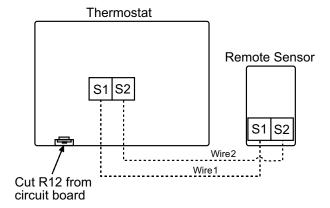
Dimensions

5.50

1.19

4.73

ALARM

3:00 PM
MODE COOL
FAN AUTO
SCHEDULE OFF

Wed

74°

COOL 74

Programmable touchscreen thermostat wiring

MicroTech III Controller Terminals TB2

R C G Y1 Y2 W1 W2 A

Terminal Strip

G2

RC RH C G Y1 Y2 W1 W2 A G2

Programmable Touch Screen

Notes: *Includes thermostat and wall plate Refer to IO manual 910193093*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

S1
S2

Wire 1   S1

Wire 2   SC

Remote Sensor (Optional)

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Group: **WSHP**

Type: **Accessory**

Date: **October 2017**

Programmable Electronic Thermostat
2 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193126

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling and boilerless electric heat control. This programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to IO manual 910193126*

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Backup for Clock and Schedule
- 2-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display
- Remote Fault Reset
- Filter Life Alert

- Fan Schedule
- Sub-base Terminations
- User Coded Lockout

Specifications

Electrical rating:

- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stage or 9 for two stage units. Add two additional for optional remote sensor.
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
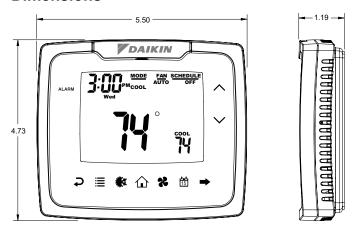- 3 amp maximum total load

Temperature control range: 55°F to 90°F (13°C to 32°C)
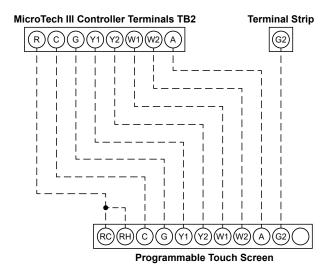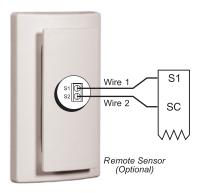**Accuracy:** ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan,

Dimensions

5.50

1.19

4.73

ALARM

3:00 PM COOL
Wed

MODE | FAN | SCHEDULE
COOL | AUTO | OFF

74°

COOL 74

Programmable touchscreen thermostat wiring

MicroTech III Controller Terminals TB2

R C G Y1 Y2 W1 W2 A

RC RH C G Y1 Y2 W1 W2 A ○ ○

Programmable Touch Screen

Notes: *Includes thermostat and wall plate Refer to IO manual 910193126*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

S1
S2

Wire 1

Wire 2

S1

SC

Remote Sensor (Optional)

Certified Drawing	Progmbl Tstat 910193127 Specs
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	Type: **Accessory**
	Date: **October 2017**

Programmable Electronic Thermostat
2 Heat/3 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193127

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 3-stage cooling and boilerless electric heat control. This programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to IO manual 910193127*

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Power for Clock and Schedule
- 2-Stage Heat/3-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Alarm Indicator
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display
- Remote Fault Reset (for 2-stage electric heater or 2-stage with electric heat
- Filter Life Alert

- Fan Schedule
- Sub-base Terminations
- User Coded Lockout

Specifications

Electrical rating:

- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stage or 9 for two stage units. Add two additional for optional remote sensor.
- 24 VAC (18-30 VAC)
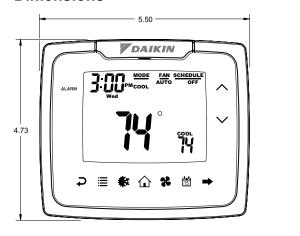- 1 amp maximum per terminal
- 3 amp maximum total load

Temperature control range: 55°F to 90°F (13°C to 32°C)
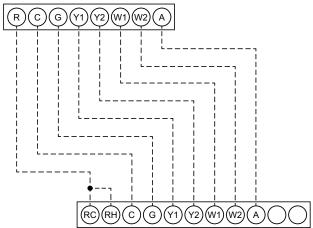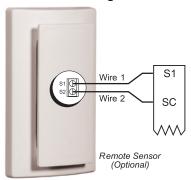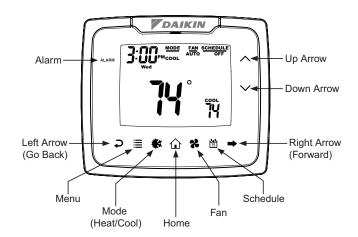**Accuracy:** ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y3** - 3rd stage cooling, **Y2** – 2nd stage cool, **G** – Fan

Dimensions

5.50

4.73

1.19

DAIKIN

ALARM 3:00 PM COOL MODE FAN AUTO SCHEDULE OFF

Wed

74°

COOL 74

Programmable touchscreen thermostat wiring

MicroTech III Controller Terminal TB2

R C G Y1 Y2 W1 W2 A

I/O Expansion Module TB1

1

RC RH C G Y2 Y3 W1 W2 A Y1

Programmable Touch Screen

Notes: *Includes thermostat and wall plate Refer to IO manual 910193127*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

S1
S2

Wire 1

Wire 2

S1

SC

Remote Sensor (Optional)

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Group: **WSHP**

Type: **Accessory**

Date: **October 2017**

Programmable Electronic Thermostat
3 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193128

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 3-stage heating, 2-stage cooling and boilerless electric heat control. This programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to IO manual 910193128*

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Power for Clock and Schedule
- 3-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Alarm Indicator
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display
- Remote Fault Reset (for 2-stage electric heater or 2-stage with electric heat
- Filter Life Alert

- Fan Schedule
- Sub-base Terminations
- User Coded Lockout

Specifications
Electrical rating:

- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stage or 9 for two stage units. Add two additional for optional remote sensor.
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

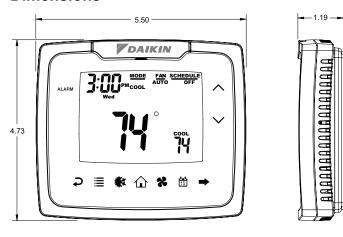**Temperature control range:** 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

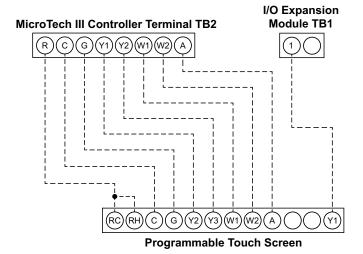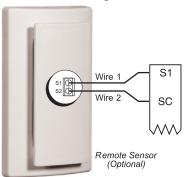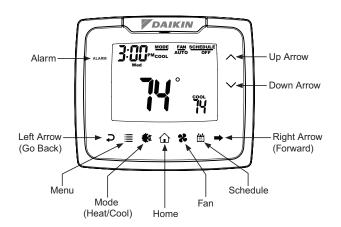**Backlight Operation:** 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **W3** - 3rd stage heat, **Y2** – 2nd stage cool, **G** – Fan

Dimensions

Programmable touchscreen thermostat wiring

MicroTech III Controller Terminals TB2

Programmable Touch Screen
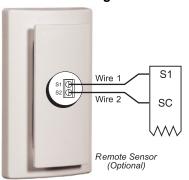
Notes: *Includes thermostat and wall plate Refer to IO manual 910193128*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Wire 1 — S1
Wire 2 — SC

Remote Sensor (Optional)

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	Type: **Accessory**
	Date: **October 2017**

Programmable Electronic Thermostat
2 Heat/2 Cool, 7-Day Programmable, Dehumidification, Auto Changeover, Hardwired – P/N 910193129

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling, dehumidification, and boilerless electric heat control. This programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III Smart-Source controller for both automatic and manual change-over capability, and can be connected to the accessory remote temperature sensor.

Note: For complete installation, operation and maintenance information, refer to IO manual 910193129

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Backup for Clock and Schedule
- 2-Stage Heat/2-Stage Cool Systems
- Smart Dehumidification or Simplified Dehumidification
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display

- Remote Fault Reset
- Filter Life Alert
- Fan Schedule
- Sub-base Terminations
- User Coded Lockout

Specifications

Electrical rating:

- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stage or 9 for two stage units. Add two additional for optional remote sensor.
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

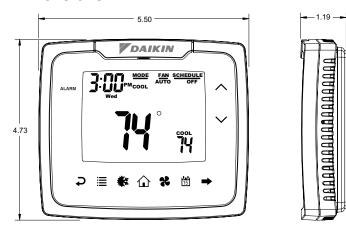**Temperature control range:** 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan, **DH** – Dehumidification
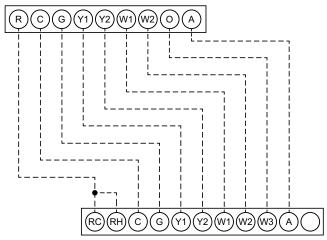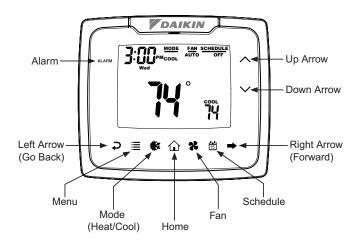
Dimensions

Programmable touchscreen thermostat wiring

MicroTech III Controller Terminals TB2

I/O Expansion Module TB1

R C G Y1 Y2 W1 W2 A   1

RC RH C G Y1 Y2 W1 W2 A DH

Programmable Touch Screen

Notes: *Includes thermostat and wall plate Refer to IO manual 910193129*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

S1
S2
Wire 1 — S1
Wire 2 — SC

Remote Sensor (Optional)

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Group: **WSHP**

Type: **Accessory**

Date: **October 2017**

Wi-Fi Programmable Electronic Thermostat
2 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193130

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling, high-low fan speed and boilerless electric heat control. This Wi-Fi programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: For complete installation, operation and maintenance information, refer to IO manual 910193130

Features

- 7-Day, 5-2-Day Day Programmable
- 2-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming via App
- Timed Override
- Time and Temperature Display
- Remote Fault Reset
- Two speed fan operation Hi/Low
- Filter Life Alert

- Fan Schedule
- Sub-base Terminations
- User Coded Lockout
- Android and IOS Apps
- Alarm reset
- Alerts change filter, fail to cool, fail to heat, high heat setpoint, high temperature, low cool setpoint, low temperature.
- Share control
- Indefinite thermostats per account
- Apply setting to all thermostat on account
- Vacation schedule

Specifications
Electrical rating:

- 24 VAC (18-30 VAC)
- Minimum wire size 22AWG
- Maximum length 200 feet

Number of wires: 7 for single stange, 9 for two stage. Add two additional for optional remote sensor.

- 1 amp maximum per terminal
- 3 amp maximum total load

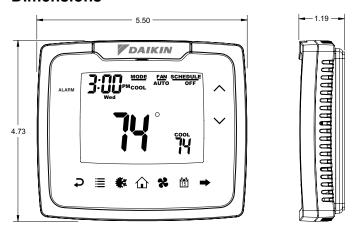**Temperature control range:** 45°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds
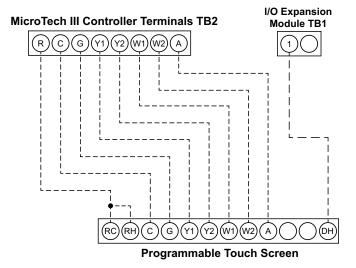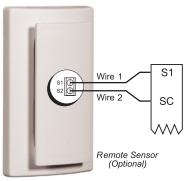
Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan, **G2** – Fan high,

Dimensions

Wi-Fi programmable touchscreen thermostat wiring

Programmable Touch Screen

Notes: *Includes thermostat and wall plate. Refer to IO manual 910193130*

Accessory Remote Room Sensor (Part No. 667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Remote Sensor (Optional)

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	Type: **Accessory**
	Date: **October 2017**

Wi-Fi Programmable Electronic Thermostat
2 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193131

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling and boilerless electric heat control. This Wi-Fi programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: For complete installation, operation and maintenance information, refer to IO manual 910193131.

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Power for Clock and Schedule
- 2-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display
- Remote Fault Reset

- Filter Life Alert
- Fan Schedule
- Sub-base Terminations
- User Coded Lockout
- Android and IOS Apps
- Alarm reset
- Alerts change filter, fail to cool, fail to heat, high heat setpoint, high temperature, low cool setpoint, low temperature
- Share control
- Indefinite thermostats per account
- Apply setting to all thermostat on account
- Vacation schedule

Specifications
Electrical rating:
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
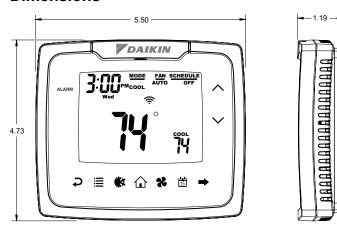- 3 amp maximum total load

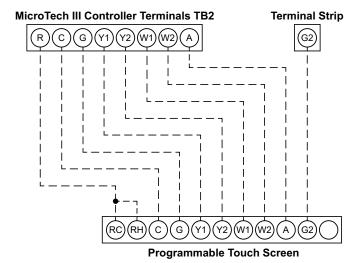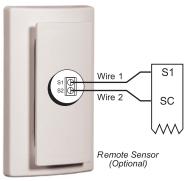**Temperature control range:** 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **G** – Fan,

Dimensions

Programmable touchscreen thermostat wiring

MicroTech III Controller Terminals TB2

Programmable Touch Screen

Notes: *Includes thermostat and wall plate Refer to IO manual 910193131.*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Remote Sensor (Optional)

The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: **WSHP**
	Type: **Accessory**
	Date: **October 2017**

Wi-Fi Programmable Electronic Thermostat
2 Heat/3 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193132

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 3-stage cooling for waterside economizer or simplified dehumidification and boilerless electric heat control. This Wi-Fi programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: For complete installation, operation and maintenance information, refer to IO manual 910193132

Features

- 7-Day, 5-2-Day Day Programmable
- 2-Stage Heat/3 -Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Alarm Indicator
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming via App
- Timed Override
- Time and Temperature Display
- Remote Fault Reset
- Filter Life Alert
- Fan Schedule

- Sub-base Terminations
- User Coded Lockout
- Android and IOS Apps
- Alarm reset
- Alerts change filter, fail to cool, fail to heat, high heat setpoint, high temperature, low cool setpoint, low temperature.
- Share control
- Indefinite thermostats per account
- Apply setting to all thermostat on account
- Vacation schedule

Specifications

Electrical rating:

- 24 VAC (18-30 VAC)
- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stange, 9 for two stage. Add two additional for optional remote sensor.
- 1 amp maximum per terminal
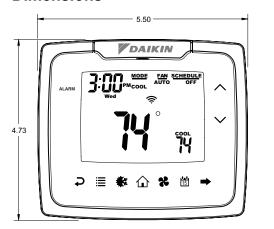- 3 amp maximum total load

Temperature control range: 45°F to 90°F (13°C to 32°C)
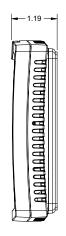**Accuracy:** ± 1°F (± 0.5°C)
Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **Y3 –** 3rd stage cooling **G** – Fan
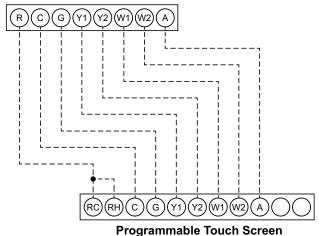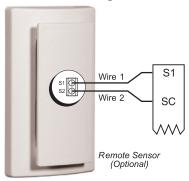
Dimensions

Wi-Fi programmable touchscreen thermostat wiring
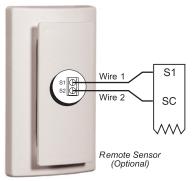
Notes: *Includes thermostat and wall plate. Refer to IO manual 910193132*

Accessory Remote Room Sensor (Part No. 667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Remote Sensor (Optional)

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	Type: **Accessory**
	Date: **October 2017**

Wi-Fi Programmable Electronic Thermostat
3 Heat/2 Cool, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193133

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 3-stage heating, 2-stage cooling for waterside economizer or simplified dehumidification and boilerless electric heat control. This Wi-Fi programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to IO manual 910193133*

Features
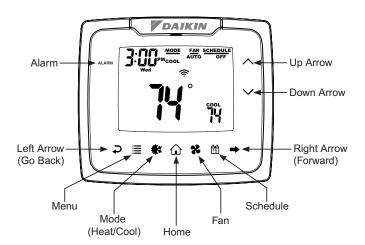
- 7-Day, 5-2-Day Day Programmable
- 3-Stage Heat/2-Stage Cool Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Alarm Indicator
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming via App
- Timed Override
- Time and Temperature Display
- Remote Fault Reset
- Two speed fan operation Hi/Low
- Filter Life Alert

- Fan Schedule
- Sub-base Terminations
- User Coded Lockout
- Android and IOS Apps
- Alarm reset
- Alerts change filter, fail to cool, fail to heat, high heat setpoint, high temperature, low cool setpoint, low temperature.
- Share control
- Indefinite thermostats per account
- Apply setting to all thermostat on account
- Vacation schedule

Specifications

Electrical rating:

- 24 VAC (18-30 VAC)
- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stange, 9 for two stage. Add two additional for optional remote sensor.
- 1 amp maximum per terminal
- 3 amp maximum total load

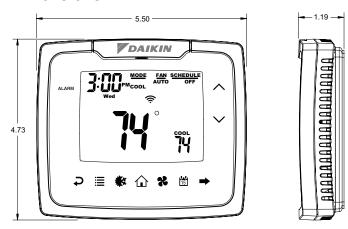**Temperature control range:** 45°F to 90°F (13°C to 32°C)
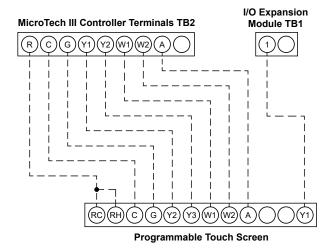**Accuracy:** ± 1°F (± 0.5°C)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **W3 –** 3rd stage heat, **G** – Fan

Dimensions

Wi-Fi programmable touchscreen thermostat wiring

MicroTech III Controller Terminals TB2

Programmable Touch Screen

Notes: *Includes thermostat and wall plate. Refer to IO manual 910193133*

Accessory Remote Room Sensor (Part No. 667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Remote Sensor (Optional)

Certified Drawing	Wi-Fi Progmbl Tstat 910193134 Specs
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: **WSHP**
	Type: **Accessory**
	Date: **October 2017**

Wi-Fi Programmable Electronic Thermostat
2 Heat/2 Cool, Dehumidification, 7-Day Programmable, Auto Changeover, Hardwired – P/N 910193134

For Use With Latest Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 2-stage heating, 2-stage cooling, dehumidification and boilerless electric heat control. This Wi-Fi programmable thermostat provides simple control capabilities, with alarm fault clearing, a timed override button and unit status LED. It easily interfaces to the MicroTech III SmartSource controller for both automatic and manual changeover capability, and can be connected to the accessory remote temperature sensor.

Note: For complete installation, operation and maintenance information, refer to IO manual 910193134

Features

- 7-Day, 5-2-Day Day Programmable
- Battery Power for Clock and Schedule
- 2-Stage Heat/2-Stage Cool, Dehumidification Systems
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Alarm Indicator
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible
- Intuitive Programming
- Timed Override
- Time and Temperature Display
- Remote Fault Reset (Use with HGRH dehumidification and humidistat)

- Filter Life Alert
- Fan Schedule
- Sub-base Terminations
- User Coded Lockout
- Android and IOS Apps
- Alarm reset
- Alerts change filter, fail to cool, fail to heat, high heat setpoint, high temperature, low cool setpoint, low temperature
- Share control
- Indefinite thermostats per account
- Apply setting to all thermostat on account
- Vacation schedule

Specifications

Electrical rating:

- Minimum wire size 22AWG
- Maximum length 200 feet
- **Number of wires:** 7 for single stage or 9 for two stage units. Add two additional for optional remote sensor.
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

Temperature control range: 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

System configurations: 2-stage heat, 2-stage cool

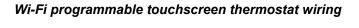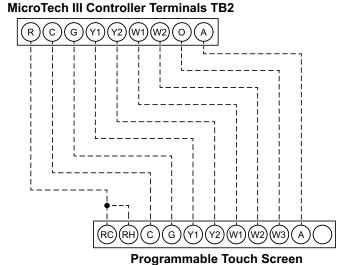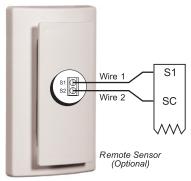**Timing:** Anti-short Cycle: 4 minutes (bypass anti-short cycle delay by returning to OFF mode for 5 seconds)

Backlight Operation: 10 seconds

Terminations: A – Alarm input, **S1 & S2** – (Accessory Remote or Outdoor Sensor), **R** – 24 VAC hot, **C** – 24 VAC common, **W1** – 1st stage heat, **Y1** – 1st stage cool, **W2** – 2nd stage heat, **Y2** – 2nd stage cool, **DH –** Dehumidification, **G** – Fan

Dimensions

Programmable touchscreen thermostat wiring
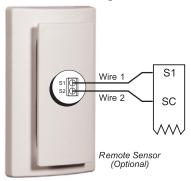
Notes: *Includes thermostat and wall plate Refer to IO manual 910193134*

Accessory Remote Room Sensor (Part No.667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Remote Sensor (Optional)

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	Type: **Accessory**
	Date: **April 2018**

Non-Programmable Electronic Thermostat Hardwired
1 Heat/1 Cool, Auto Changeover Fan Speed Control – P/N 668811201

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 1-stage heating, 1-stage cooling, the Non-Programmable thermostat provides simple control capabilities. With alarm fault clearing, a timed override button and unit status LED. This thermostat provides an easy interface to MicroTech III unit controls with automatic changeover capabilities and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to 668811201 Install Manual*

Features

- Configurable
- Single-Stage Heat/Cool Systems
- Single-Stage Heat Pump Systems
- Two Speed Fan Control
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Compatible with Gas, Oil, or Electric
- SimpleSet™ Field Programming
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible

- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible

Parts Diagram

Specifications

Electrical rating:
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

Temperature control range: 55°F to 90°F (13°C to 32°C)
Accuracy: ± 1°F (± 0.5°C)

System configurations: 1-stage heat, 1-stage cool
Timing: Anti-short Cycle: 4 minutes (bypass anti-short cycle delay by returning to OFF mode for 5 seconds)
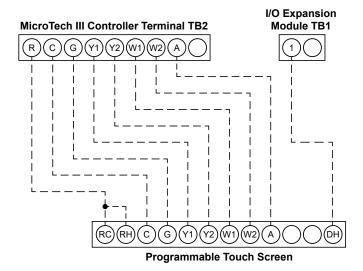**Backlight Operation:** 10 seconds

Terminations: S1 & S2 – (Accessory Remote or Outdoor Sensor), **Y** – 1st stage cool, $\frac{W}{O/B}$ – 1st stage heat, **G2** – High Fan, **G1** – Low Fan, **RC** – 24 VAC hot, **RH** – 24 VAC hot, **C** – 24 VAC common

Dimensions

Non-programmable electronic thermostat wiring

WSHP MicroTech III Controller Terminals TB1 and TB2

Notes: *Includes thermostat and wall plate. Refer to 668811201 Install Manual.*
*When remote reset of a lockout condition is required at the wall thermostat, it will be necessary to utilize a conductor between terminal "O" on the wall thermostat to "TB1 terminal 4" on the MicroTech III unit controller (non-programmable stat only).

Accessory Remote Room Sensor (Part No. 667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: **WSHP**
	Type: **Accessory**
	Date: **April 2018**

Programmable Electronic Thermostat Hardwired
1 Heat/1 Cool, Auto Changeover Fan Speed Control – P/N 668811301

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

For 1-stage heating, 1-stage cooling, the Programmable thermostat provides simple control capabilities. With alarm fault clearing, a timed override button and unit status LED. This thermostat provides an easy interface to MicroTech III unit controls with automatic changeover capabilities and can be connected to the accessory remote temperature sensor.

Note: *For complete installation, operation and maintenance information, refer to 668811301 Install Manual*
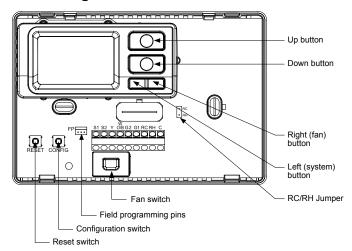
Parts Diagram

Specifications

Electrical rating:
- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

Temperature control range: 55°F to 90°F (13°C to 32°C)
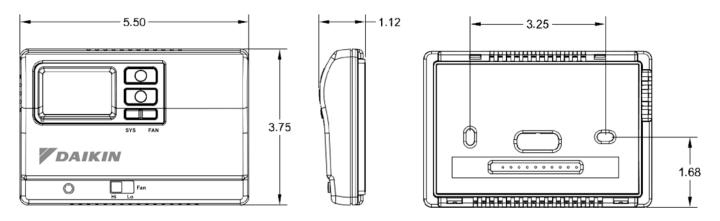**Accuracy:** ± 1°F (± 0.5°C)

System configurations: 1-stage heat, 1-stage cool

Timing: Anti-short Cycle: 4 minutes (bypass anti-short cycle delay by returning to OFF mode for 5 seconds)

Backlight Operation: 10 seconds

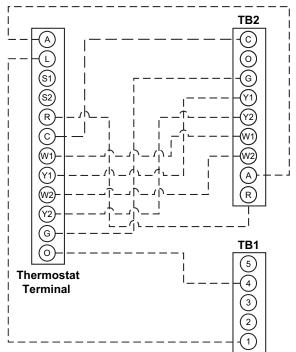**Terminations: S1 & S2** – (Accessory Remote or Outdoor Sensor), **Y** – 1st stage cool, $\frac{W}{O/B}$ – 1st stage heat, **G2** – High Fan, **G1** – Low Fan, **RC** – 24 VAC hot, **RH** – 24 VAC hot, **C** – 24 VAC common

Features

- 7-Day, 5-2-Day or 5-1-1-Day Programmable
- Configurable
- Single-Stage Heat/Cool Systems
- Single-Stage Heat Pump Systems
- Two-Speed Fan Speed Selection
- Large Display With Backlight
- Selectable Fahrenheit or Celsius
- Compatible with Gas, Oil, or Electric
- SimpleSet™ Field Programming
- Status Indicator Light
- Relay Outputs (minimum voltage drop in thermostat)
- Remote Sensor Compatible

Dimensions

Programmable electronic thermostat wiring

MicroTech III Controller Terminals TB2

R C G Y1 Y2 W1 W2 A

Terminal Strip

G2

RC RH C G Y1 Y2 W1 W2 A G2

Programmable Thermostat Terminals

Notes: *Includes thermostat and wall plate. Refer to 668811301 Install Manual.*

Accessory Remote Room Sensor (Part No. 667720401)

The remote indoor temperature sensor provides the ability to measure room temperature remote from the thermostat location.

Optional remote sensor wiring

Thermostat

S1 S2

Remote Sensor

S1 S2

Wire2

Wire1

Cut R12 from circuit board

The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: **WSHP**
	Type: **Accessory**
	Date: **November 2017**

Basic Sensor – P/N 910152149

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Basic Sensor

Overview

This sensor is used in conjunction with the MicroTech III equipped units. The sensor has a status indication and override/reset button.

Note: *For complete installation, operation and maintenance information, refer to IM 1238 Install Manual*

Sensor

Temperature ....10K-2 Thermistor, ±0.36ºF (±0.2ºC)

Sensor controls

Override/Reset ....1 button to request timed occupancy override and reset alarms.
Inputs:......................(1), Controller alarm & system status, 5VDC max.
Outputs:
Temperature ....(4), Analog thermistor resistance.
Termination:.............3 Terminals, 16 to 22 AWG.
Mounting:.................Standard 2" × 4" J-Box or Drywall

Basic Sensor Details

LED Status Indicator   Override/Reset

Enclosure material

ABS Plastic, UL94V-0.

Ambient

32º to 122ºF (0º to 50ºC), 0 to 95%RH, Non-condensing.

Agency

Restriction of the use of certain Hazardous Substances (RoHS).

Wiring

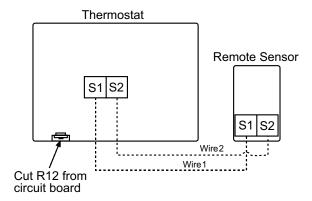Daikin recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Tests show that fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines.

Number of wires: 3

Sensor Circuit Board

Basic Sensor Wiring

**MicroTech III Controller
Terminals TB1**

**Basic Sensor
(Part No. 910152149)**

Terminal descriptions

1............Status Indicator Input from the MicoTech III Unit Controller. (5VDC).

4............Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2).

5............Ground or Neutral* (AC requires separate shielded wire). Common Reference for All Signal Terminals.

The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	**Group: WSHP**
	Type: **Accessory**
	Date: **February 2020**

Cool/Warm Adjustable Sensor – P/N 910171464

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Cool/Warm Adjust Sensor

Cool/Warm Adjust Sensor Details

LED Status Indicator   Override/Reset

Overview

This sensor is used in conjunction with the MicroTech III equipped units. The sensor has a status indication temperature adjust and override/reset button.

Note: *For complete installation, operation and mainte-nance information, refer to IM 1238 Install Manual*

Sensor

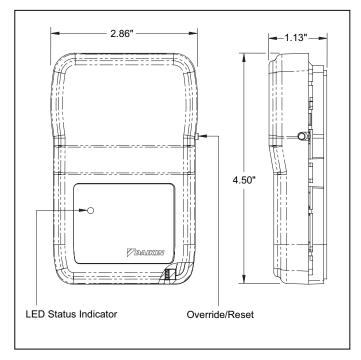Temperature ....10K-2 Thermistor, ±0.36ºF (±0.2ºC)

Sensor controls

Setpoint ....Slider
Override/Reset ....1 button to request timed occupancy override and reset alarms.
Inputs:......................(1), Controller alarm & system status, 5VDC max.
Outputs:
Setpoint ....(3), Analog, 0 to 5 VDC.
Temperature ....(4), Analog thermistor resistance.
Termination: ....4 Terminals, 16 to 22 AWG.
Mounting:.................Standard 2" × 4" J-Box or Drywall
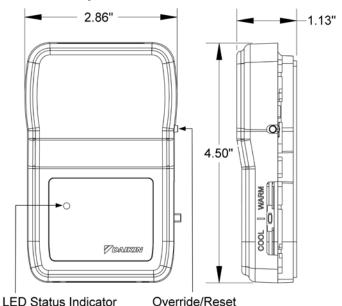
Enclosure material

ABS Plastic, UL94V-0.

Ambient

32º to 122ºF (0º to 50ºC), 0 to 95%RH, Non-condensing.

Agency

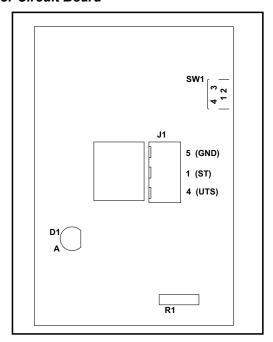Restriction of the use of certain Hazardous Substances (RoHS).

Wiring

Daikin recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Tests show that fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines.
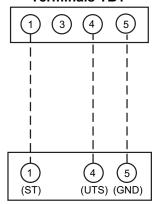
Number of wires: 4

Sensor Circuit Board

Terminal descriptions

Four conductors are required for the basic sensor with cool to warm 910171464.

1............Status Indicator Input from the MicoTech III Unit Controller. (5VDC).

3............Output Signal, Setpoint Adjust from 55º to 95˚F (default) or ±5º Configurable. (0 to 5VDC) See Setpoint Analog Range Tolerances.

4............Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2).

5............Ground or Neutral* (AC requires separate shielded wire). Common Reference for All Signal Terminals.

⚠ **CAUTION**
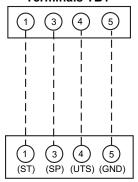
The AC power wiring at terminals [R] & [5] should be run in a separate twisted shielded pair to avoid fluctuating and inaccurate signal levels induced into the other sensor signal wires. This sensor AC power can be run in the same conduit with the sensor signal wire as long as it's run in twisted, shielded pair and terminated properly.

Setpoint analog range tolerance

Setpoint Analog Tolerance			
55° to 95°F Scale	**-3° to +3°F Scale (Enfinity)**	**-5° to +5°F Scale (SmartSource)**	**Terminal 3 Analog Output**
@ 55°F (min.)	@-3°F (min.)	@ -5°F (min.)	0.0 to 0.10 vdc
@65°F	@-1.5°F	@-2.5°F	1.3 to 1.42 vdc
@75°F	@0°F	@0°F	2.12 to 2.2 vdc
@85°F	@+1.5°F	@+2.5°F	2.58 to 2.63 vdc
@95°F (max.)	@+3°F (max.)	@+5°F (max.)	3.0 to 4.0 vdc

Cool/Warm Adjustable Sensor Wiring

**MicroTech III Controller
Terminals TB1**

**Cool/Warm Adjustable Sensor
(Part No. 910171464)**

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	Type: **Accessory**
	Date: **May 2016**

Digitally Adjustable Display Sensor – P/N 910152147

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Digitally adjustable display sensor

Overview

The display sensor is used in conjunction with the MicroTech III equipped units. The sensor has a digital display for Temperature, Occupancy, Alarm, Setpoint and Status indication. Controls include four buttons for Setpoint, Occupied/Unoccupied Request, and Override Reset.

Note: For complete installation, operation and maintenance information, refer to IM 1237-x Install Manual

Supply voltage

AC Hot..............(R) 7 to 28VAC, 24VAC nominal, 0.17VA
GND/Neutral ....(5) Sensor common reference ground.

Sensor

Temperature ....10K-2 Thermistor, ±0.36ºF (±0.2ºC)

Display

LCD
Overall size......2.04"W × 1.33"H.
Main Digits.......±999.9 Digits @0.6"H
Resolution........0.5 displayed value, 0.1 for offset adjust
Main Value........Temp, Humidity & Setpoint, toggling every 5 sec.
Eng. Units........ºF, ºC, %RH.
Occupied Icon: Hollow = Unoccupied, Solid = Occupied.

Sensor controls

Setpoint ....2 Up/Down buttons
Occupied ....1 button to check and request change in Occupancy Status.
Override/Reset ....1 button to request timed occupancy override and reset alarms.
Inputs:......................(1), Controller alarm & system status, 5VDC max.
Outputs:
Unoccupied......(U), Unoccupied = Digital low to ground (Same ground as power source), 100mA @5VDC max.
System Off.......(E), System Off = Digital low to ground (Same ground as power source), 100mA @5VDC max.
Setpoint ....(3), Analog, 0 to 5 VDC.
Temperature ....(4), Analog thermistor resistance.
Termination: ....10 Terminals, 16 to 22 AWG.
Mounting:................Standard 2" × 4" J-Box or Drywall

Digital display sensor details

Enclosure material

ABS Plastic, UL94V-0.

Ambient

32º to 122ºF (0º to 50ºC), 0 to 95%RH, Non-condensing.

Agency

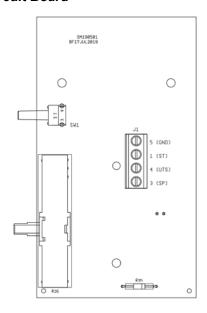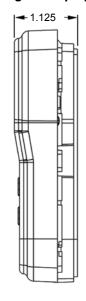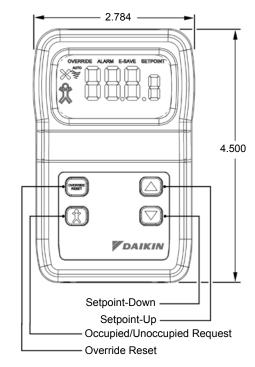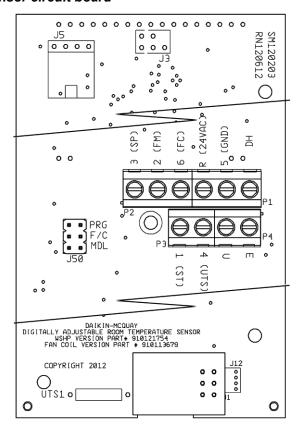Restriction of the use of certain Hazardous Substances (RoHS).

Terminations

Daikin recommends using a twisted shielded pair of at least 22AWG for the power wire connections. The shield should be earth grounded only at the power source. Larger gauge wire may be required for long runs.

Sensor circuit board

Terminal descriptions

R........... 15 to 28VAC* (AC requires separate shielded wire) (Shield terminated at power source only)

U .... Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only).

E .... System "Off" Indication. (Terminal grounded when in System "Off" mode, VDC only).

1 .... Status Indicator Input from the MicoTech III Controller. (5VDC).

3 .... Output Signal, Setpoint Adjust from 55º to 95˚F (default) or ±5º Configurable. (0 to 5VDC) See Setpoint Analog Range Tolerances.

4 .... Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2). 910113575 tenant override only

5 .... Ground or Neutral* (AC requires separate shielded wire). Common Reference for All Signal Terminals.

Setpoint analog range tolerance

Setpoint Analog Tolerance			
55˚ to 95℉ Scale	-3˚ to +3℉ Scale	-5˚ to +5℉ Scale	Terminal 3 Analog Output
@ 55℉ (min.)	@-3℉ (min.)	@ -5℉ (min.)	0.0 to 0.10 vdc
@65℉	@-1.5℉	@-2.5℉	1.3 to 1.42 vdc
@75℉	@0℉	@0℉	2.12 to 2.2 vdc
@85℉	@+1.5℉	@+2.5℉	2.58 to 2.63 vdc
@95℉ (max.)	@+3℉ (max.)	@+5℉ (max.)	3.0 to 4.0 vdc

Note: * The AC power wiring at terminals [R] & [5] should be run in a separate twisted shielded pair to avoid possible fluctuating and inaccurate signal levels induced into the other sensor signal wires.

This sensor AC power can be run in the same conduit with the sensor signal wire as long as it's run in twisted, shielded pair and terminated properly.

Digitally adjustable room temperature sensor wiring

Certified Drawing	**Digital Display Sensor Specs**
The Water Source Heat Pump product represented on this document will conform to the drawings and specifications set out below, in accordance with the express, written Limited Warranty. Purchaser's acceptance of this drawing certifies that the conforming equipment meets the order specifications. No changes may be made to this document without the prior, express, written authorization of the manufacturer.	Group: **WSHP**
	Type: **Accessory**
	Date: **October 2015**

Digitally Adjustable Display Sensor

Used With:

Water Source Heat Pumps (WSHP) - Sensor Part No. 910121754

SmartSource® Units - Models GS & GT

Enfinity™ Units with MicroTech® III Controls - Models CCH, CCW; VFC, VFW; LVC, LVW; MHC, MHW & VHC, VHF
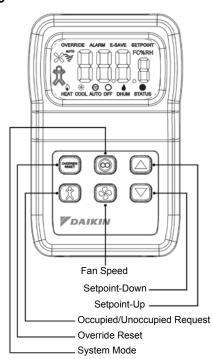
Fan Coil Units (FCU) - Sensor Part No. 910113679

Models With MicroTech III Controls

Overview

The display sensor is used in conjunction with the MicroTech III equipped units as described in the Application Section below. The same sensor is used for Water Source Heat Pump (WSHP) and for Fan Coil Units (FCU) with just a hardware jumper and menu change during configuration. The sensor has a digital display for Temperature, Humidity, Occupancy, Fan Speed, System Mode, Alarm, Setpoint and Status indication. Controls include six buttons for Setpoint, System Mode, Fan Speed, Occupied/Unoccupied Request, and Override Reset.

Digital display sensor - P/N 910121754, Fan Coil P/N 910113679

Fan Speed
Setpoint-Down
Setpoint-Up
Occupied/Unoccupied Request
Override Reset
System Mode
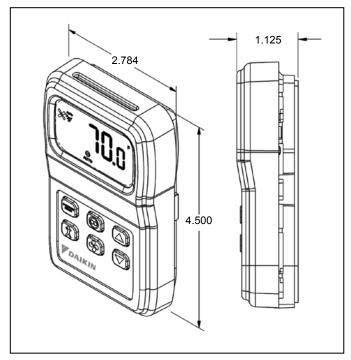
910113679, Fan Coil Unit Model:

- Display sensor to show room temperature, fan speed (Auto/High/Medium/Low), system mode (Heat/Cool/Auto/Off), alarm, override and occupancy.

910121754, Water Source Heat Pump Model:

- Display sensor to show room temperature, room humidity, fan speed (Auto/On), system mode (Heat/Cool/Auto/Off/Dhum), alarm, override and occupancy.
- De-humidification output contact has an adjustable setpoint and configurable deadband. This output operates automatically using the RH setpoint and deadband in the system "Auto" mode or in the "Dhum" mode.

Sensor dimensions
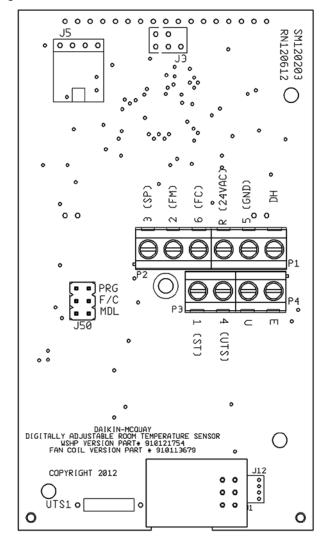
Termination

Daikin Applied recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Tests show that fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin Applied representative.

Figure 1: Sensor circuit board

Terminal Descriptions

R .... 15 to 28VAC (AC requires separate shielded wire)

DH ...... Dehumidification Contact (Triac from R to DH @170mA, WHSP Only).

U .... Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only).

E .... System "Off" Indication. (Terminal grounded when in System "Off" mode, VDC only).

1.......... Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC).

2.......... Output Signal, and Fan Mode System (0 to 5VDC). Output Signal, System Mode Select for FCU only, (0 to 5VDC).

3.......... Output Signal, Setpoint Adjust from 55º to 95ºF (default) or ±5º Configurable. (0 to 5VDC) See Setpoint Analog Range Tolerances.

4.......... Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2).

5.......... Ground or Neutral (AC requires separate shielded wire). Common Reference for All Signal Terminals.

6.......... Output Signal, Fan Speed Select for FCU only. (0 to 5VDC). Terminal 6 not used for WSHP units.

Setpoint analog range tolerance

Setpoint Analog Tolerance		
55° to 95°F Scale	-5° to +5°F Scale	Terminal 3 Analog Output
@ 55°F (min.)	@ -5°F (min.)	0.0 to 0.10 vdc
@65°F	@-2.5°F	1.3 to 1.42 vdc
@75°F	@0°F	2.12 to 2.2 vdc
@85°F	@+2.5°F	2.58 to 2.63 vdc
@95°F (max.)	@+5°F (max.)	3.0 to 4.0 vdc
Sensor Error	Sensor Error	Full Scale ≈ 5 vdc

Specifications

Supply Voltage:

AC Hot .... (R) 7 to 28VAC, 24VAC nominal, 0.17VA

GND/Neutral .... (5) Sensor common reference ground.

Sensor:

Temperature .... 10K-2 Thermistor, ±0.36ºF (±0.2ºC)

Humidity .... 2% Accuracy from 20 to 80%, Capacitive.

Outputs:

Unoccupied .... (U), Unoccupied = Digital low to ground (Same ground as power source), 100mA @5VDC max.

Dehumidify .... (DH), = Dehumidify = Voltage output (same as supply voltage), 170mA max.

System Off .... (E), System Off = Digital low to ground (Same ground as power source), 100mA @5VDC max.

Fan Speed .... (2 or 6), Analog, 0 to 5 VDC.

System Mode .... (2), Analog, 0 to 5 VDC.

Setpoint .... (3), Analog, 0 to 5 VDC.

Temperature .... (4), Analog thermistor resistance.

Sensor Controls:

Setpoint .... 2 Up/Down buttons

System................. 1 button to cycle between Heat/Cool Auto/Off/Dhum/Off

Fan .... 1 button to cycle between Auto/High/On.

Occupied .... 1 button to check and request change in Occupancy Status.

Override/Reset ... 1 button to request timed occupancy override and reset alarms.

Inputs:................. (1), Controller alarm & system status, 5VDC max.

Termination: .... 10 Terminals, 16 to 22 AWG.

Mounting:............. Standard 2" × 4" J-Box or Drywall

Field Setup Jumper J50:

PRG.................... Program Mode, On = Program, Off = Run.

F/C...................... Display Units, On = ºC, Off = ºF.

MDL.................... MODEL, On = WSHP.

Display:

LCD

Overall size.......... 2.04"W × 1.33"H.

Main Digits........... ±999.9 Digits @0.6"H

Resolution............ 0.5 displayed value, 0.1 for offset adjust

Main Value.......... Temp, Humidity & Setpoint, toggling every 5 sec.

Eng. Units............ ºF, ºC, %RH.

System................. Heat/Cool/Auto/Off/Dhum.

Fan .... Auto/High/Medium/Low/Off.

Occupied Icon...... Hollow = Unoccupied, Solid = Occupied.

Function.............. Override, Alarm, E-Save, Setpoint

Field Configuration Menu:

Requires J50 PRG jumper to be "On".

Offset .... Temp or Humidity display, ±2ºF (±1.0ºC) and ±5% RH.

Setpoint range ..... Default 55º to 95ºF (13º to 35ºC) or ±5ºF (±3ºC). Adjustable between 55º to 95ºF or ±3ºF (±1.6ºC).

Fan Lock-in.......... Any fan speed or off can be locked in System Lock-in. Any system mode can be locked in

Resolution............ Main display can be default .5, or .1 or 1.0 (ºF, ºC or %).

Display Mode....... Temp only, RH only, Setpoint only or any combination.

Dhum DB .... Dehumidify Dead Band adjust, 2% default.

Enclosure Material:

ABS Plastic, UL94V-0.

Ambient:

32º to 122ºF (0º to 50ºC), 0 to 95%RH, Non-condensing.

Agency:

RoHS.

Note: *For complete Installation, operation and maintenance information for the Digitally Adjustable Sensor, refer to IOM 1171.*

Applications

The display sensor can be used on the products shown in the table below

Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizonal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW, LVC, LVW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		
Fan Coils	Horizontal	ThinLine™	FC.H, FH.H	MicroTech III Unit Controller	Yes

The display sensor for water source heat pump applications is shown in the table below.

Water source heat pump application guide

Units	Product		Models	Applications							Electric Heat			Water-side Economizer
				Cooling	Heating	Dehumidification								
				Stages		Smart Dehumidification	Hot Gas Reheat	Simplified	Humidistat Controlled	Dehumidification Only	Boilerless	Supplemental	Primary	3-Way Valve Control
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW, LVC, LVW	1	1	No	Yes	No	No	No	Yes[1]	Yes[1]	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes[1]	Yes[1]	No	No
	Horizontal & Vertical	SmartSource 1-Stage	W GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Horizontal & Vertical	SmartSource 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: [1]With optional Boilerless controls

Certified Drawing	BasicSensor-669529001 Specs
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	Type: **Accessory**
	Date: **May 2016**

Basic Sensor – P/N 669529001

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls

Overview

The basic sensor provides simple room temperature sensing for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Electric heat options include boilerless, supplemental, and primary heat capabilities. Unit status is provided through a flashing LED located on the sensor while timed tenant override and fault reset are provided through the override button.

Note: *For complete installation, operation and maintenance information for the Basic Sensor, refer to IM 955-x*

Features

Setpoint Adjustment: None

Stages: Heating (4), Cooling (3)

Annunciaton: Status LED

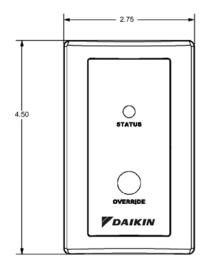**Reset:** Alarm (Override Button), Setback Override (Override Button)

Application

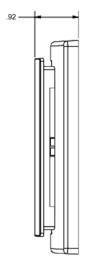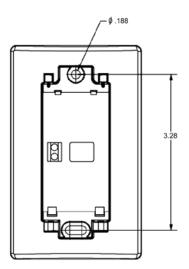**Electric Heat:** Boilerless, Supplemental, Primary

Waterside Economizer: 3-Way Valve Control

Dimensions

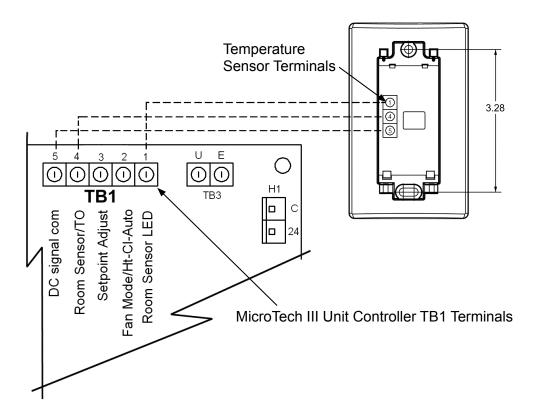*Temperature sensor wiring to MicroTech III unit controller (669529001)*

Temperature Sensor Terminals

3.28

5 4 3 2 1

TB1

U E

TB3

H1

C

24

DC signal com
Room Sensor/TO
Setpoint Adjust
Fan Mode/Ht-Cl-Auto
Room Sensor LED

MicroTech III Unit Controller TB1 Terminals

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	Type: **Accessory**
	Date: **May 2016**

Room Temperature Sensors Adjustable 55° to 95°F or +/- 3°F – P/N 669529101
Sensor +/- 3°F – P/N 669529201

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls
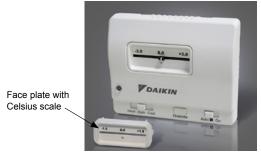
Overview

The adjustable 55° to 95°F or +/- 3°F or +/-1.5°C sensors can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Electric heat options include boilerless, supplemental, and primary heat capabilities. Unit status is provided through a flashing LED located on the sensor while timed tenant override and fault reset are provided through the override button. Changing the system or fan mode is easily accomplished through the slider switches.

Note: *For complete installation, operation and maintenance information for the Room Temperature Sensors, refer to IM 955-x*

Adjustable 55°F to 95°F (Part No. 669529101)

Face plate with Celsius scale
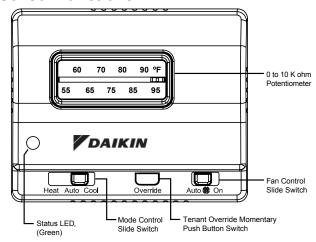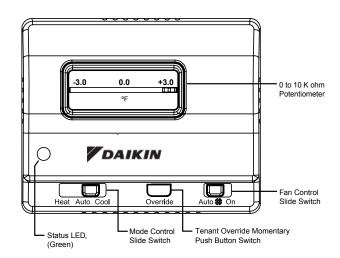
Adjustable +/- 3ºF or +/-1.5°C (Part No. 669529201)

Sensor Functions

0 to 10 K ohm Potentiometer

Fan Control Slide Switch

Status LED, (Green)

Mode Control Slide Switch

Tenant Override Momentary Push Button Switch

Adjustable 55°F to 95°F (Part No. 669529101)

0 to 10 K ohm Potentiometer

Fan Control Slide Switch

Status LED, (Green)

Mode Control Slide Switch

Tenant Override Momentary Push Button Switch

Adjustable +/- 3ºF or +/-1.5°C (Part No. 669529201)

Sensor Specifications

Thermistor resistance (10kΩ)

- (Conforms to Advance Thermal Products curve 2)

Ambient Temperature Limits:

Shipping and Storage: 40°F to 160°F (–40°C to 71°C)

Operating: 40°F to 140°F (4°C to 60°C)

Humidity: 5 to 95% RH, noncondensing

Locations: NEMA Type 1, Indoor only

Connections: Color Coded Leads

Operating Modes

Cool Mode

■ In cool mode the MicroTech III wall-mounted temperature sensor controls the cooling system

Heat Mode

■ In heat mode, the Microtech III wall-mounted Room Temperature Sensors controls the heating system.
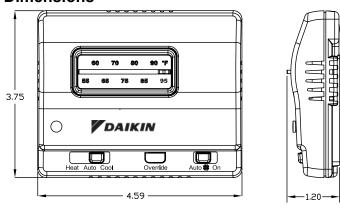
Auto-Changeover Mode

■ In this mode the Microtech III wall-mounted Room Temperature Sensors will automatically change from heat mode to cool mode, or vice versa.
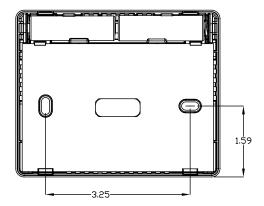
All Temperature Sensors

Timed Override
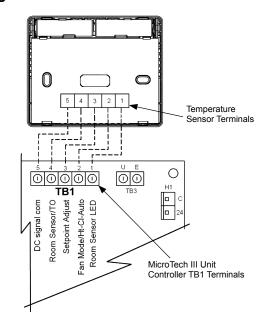
■ Press Override button for more than 3 but less than 10 seconds and Unit will return to Occupied operation until the override time expires (as programmed in BMS).

Dimensions

Wiring P/N 669529101 & P/N 669529201

MicroTech III Sensor Kits – Water Source Heat Pump (10 kW)

Sensor Kit P/N	Tenant Override Button	SPT Adj. Pot	Status LED	Fan and Mode Switches
669529101	Yes	Yes	Yes	Yes 55º to 95ºF (12º to 35ºC)
669529201	Yes	Yes	Yes	Yes -3º to +3ºF (-1.5º to +1.5ºC)

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	Type: **Accessory**
	Date: **May 2016**

Room Temperature Sensor – Adjustable Cool/Warm With Occupancy Switch – P/N 910121753

For Use With Daikin Enfinity™ And SmartSource® Water Source Heat Pump Units With MicroTech® III Controls
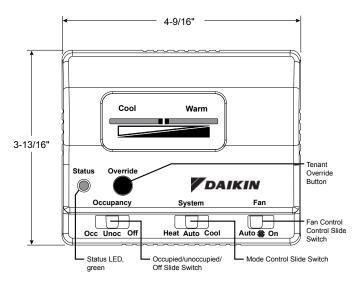
Overview

The Adjustable Cool/Warm Sensor with Occupancy Switch can be used for 2-stage heating, 2-stage cooling, and 2-stage electric heat applications. Unit status is provided through a flashing LED located on the thermostat while timed tenant override and fault reset are provided through the override button. Changing the system mode, fan mode and occupancy is easily accomplished through the slider switches.

Note: *For complete installation, operation and maintenance information for the Room Temperature Sensor, refer to IOM 1177*

Sensor Functions

This sensor is used for water source heat pump applications requiring the following functionality:

- **Cool/Warm Room Temperature Adjustment** – This slide adjustment is used to set the desired room temperature. To increase the desired room temperature, move the slide to the right toward "Warm". To decrease the desired room temperature, move the slide to the left toward "Cool".

- **Occupancy Switch** – Move the switch to the "Occ" to allow the unit to operate in the occupied mode. Move the switch to the "Unoc" to allow the unit to operate in the unoccupied mode. Move the switch to the "Off" so heating, cooling and the fan remain off.

- **System Switch** – Set to "Heat" for heating only operation. Set to "Auto" for operation of heating or cooling as needed to satisfy the room setpoint conditions. Set to "Cool" for cooling only operation. The output voltage on Terminal 2 will change based on the system mode selection.

- **Fan Switch** – Set to "Auto" to allow the fan to on when heat or cool are on. Set to "On" to allow the fan to operate continuously in the occupied mode and cycle on a call for heat or cool in the unoccupied mode.

- **Status LED** – This green LED will light to indicate the system status. See table below for unit status LED definitions.

- **Override Button** – When the "Override" button is pressed, the thermistor sensor across terminal 4 is shorted. If held for more than 5 seconds but less than 11 seconds, it puts the water source heat pump controller into a timed Occupied Override. If the unit is in alarm, then holding the "Override" Button for more than 11 seconds will clear all alarms in the water source heat pump controller but only if the cause of the alarm has already returned to its non-alarm condition. Some alarms will not reset from the room sensor.

In this case, power to the unit must be cycled off for 5 seconds to clear the alarm. Continuously resetting alarms from the room sensor could damage the controller. Please call a service technician when repeated alarm resets are required to keep the unit operational.
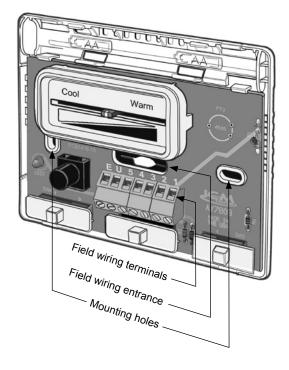
WSHP unit status LED definition

Status LED		Unit Status	Unit Operation
ON	**OFF**		
0.5 seconds	0.5 seconds	Controller Off (or Network "Wink" operation active)	"Alarm"
0.0 seconds	Continuous	Unit running in Night Setback Override Mode or no power to the sensor	"Override"
0.5 seconds	5.5 seconds	Unoccupied Mode	"Unoccupied"
5.5 seconds	0.5 seconds	Standby Mode	"Energy Save" or "Load Shed" command from Energy Management System
Continuous	0.0 seconds	Occupied Mode	"Occupied"

Termination

Daikin recommends using twisted pair of at least 22AWG and sealant filled connectors for all wire connections. Larger gauge wire may be required for long runs. All wiring must comply with the National Electric Code (NEC) and local codes. Do NOT run this device's wiring in the same conduit as AC power wiring. Fluctuating and inaccurate signal levels are possible when AC power wiring is present in the same conduit as the signal lines. If you are experiencing any of these difficulties, please contact your Daikin representative.

Field mounting and wiring termination

Field wiring terminals
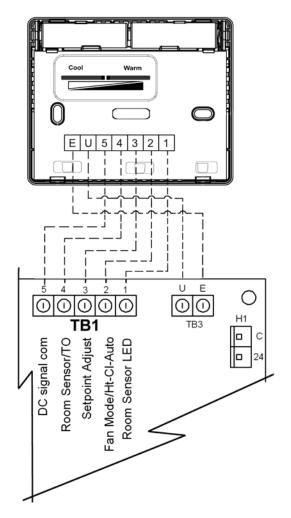Field wiring entrance
Mounting holes

Terminal Descriptions

1 – Unit Status Indicator Input from the MicoTech III SmartSource Unit Controller. (5VDC)

2 - Output Signal, Fan and Unit Mode (0 to 5VDC)

3 - Output Signal, Setpoint Adjustment

4 - Output Signal, Room Temp Thermistor Sensor. (10K ATP Z curve, 10K-2)

5 - Ground or Neutral. Common Reference for All Signal Terminals

E – Emergency Shutdown. (Terminal grounded when in System "Off" mode, VDC only)

U - Unoccupied Contact. (Terminal grounded when in Unoccupied, VDC only)

Wiring P/N 910121753

Wiring between the sensor and the water source heat pump unit for typical heating and cooling operation is shown below.

Applications

The display sensor can be used on the products shown in the table below.

Product usage guide

Units	Product		Models	Controls	Used with Digitally Adjustable Sensor with Temperature and Humidity Display
Water Source Heat Pumps	Horizontal	Enfinity™	W. CCH, CCW	MicroTech III Unit Controller	Yes
	Vertical		W. VFC, VFW		
	Vertical Stacked		W. VHC		
	Console		W. MHC, MHW		
	Horizontal & Vertical	SmartSource 1-Stage	W. GSH, GSV	MicroTech III SmartSource Unit Controller	
		SmartSource 2-Stage	W. GTH, GTV		

The display sensor for water source heat pump applications is shown in the table below.

Water source heat pump application guide

| Units | Product | | Models | Applications | | | | | | | | | | |
| | | | | Cool-ing | Heat-ing | Dehumidification | | | | | Electric Heat | | | Water-side Econo-mizer |
				Stages		Smart Dehu-midifi-cation	Hot Gas Reheat	Simpli-fied	Hu-midistat Con-trolled	Dehu-midifi-cation Only	Boil-erless	Supple-mental	Primary	3-Way Valve Control
Water Source Heat Pumps	Horizontal	Enfinity	W. CCH, CCW	1	1	No	No	No	No	No	No	No	No	No
	Vertical		W. VFC, VFW	1	1	No	Yes	No	No	No	Yes[1]	Yes	No	No
	Vertical Stacked		W. VHC	1	1	No	No	No	No	No	No	No	No	No
	Console		W. MHC, MHW	1	1	No	No	No	No	No	Yes[1]	Yes	No	No
	Horizontal & Vertical	Smart-Source 1-Stage	W. GSH, GSV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Horizontal & Vertical	Smart-Source 2-Stage	W. GTH, GTV	3	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: [1]With optional Boilerless controls

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Daikin Applied Training and Development

Now that you have made an investment in modern, efficient Daikin equipment, its care should be a high priority. For training information on all Daikin HVAC products, please visit us at www.DaikinApplied.com and click on Training, or call 540-248-9646 and ask for the Training Department.

Warranty

All Daikin equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied representative for warranty details. Refer to Form 933-430285Y. To find your local Daikin Applied representative, go to www.DaikinApplied.com.

Aftermarket Services

To find your local parts office, visit www.DaikinApplied.com or call 800-37PARTS (800-377-2787). To find your local service office, visit www.DaikinApplied.com or call 800-432-1342.

This document contains the most current product information as of this printing. For the most up-to-date product information, please go to www.DaikinApplied.com.

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