# E055-71520325 E055-71520330

2 or 4 pipe systems 7-Day Programmable Fan Coil Thermostat with Wi-Fi and Local API

# with Wi-Fi and Local API

MODE

### • Wi-Fi Enabled

- Mobile app and website for easy remote control
- Switchable, nonprogrammable or 7 day programmable
- 2 or 4 pipe configurable,3 speed fan control
- Retrofit wall plate included
- Auto-Changeover\*
- Dry contact for condensate overflow or occupancy sensors
- Dehumidification option
- Setpoint Limiting and/or total keypad lockout
- Override capable
- Pre-occupancy fan purge
- CA Title 24 Compliant
- OpenADR 2.0b Certified



THE WORLD LEADER IN FAN COIL SOLUTIONS

\* Auto-changeover is available in 4-pipe systems, in 2-pipe systems with Electric Heat, or when used with G100-71520306 accessory, auto-changeover sensor.

# Quick start & setup guide

# Thank You

Congratulations and thank you for purchasing your new IEC Fan Coil thermostat. This guide is intended to help you install and setup the basic features of your Thermostat. For a full owner's manual and installation guide, visit iec-okc.com, and search for FL-310.



# Compatibility

Your IEC fancoil thermostat is designed to work with 24V fancoils, both 2 pipe or 4 pipe. For 2 pipe units with automatic changeover between heating and cooling based on water supply, you will need to obtain a H2O changeover switch, G100-71520306. The thermostat controls 3 speed fans and can control to a remote temperature sensor.

# Contents



# Step 1 - Power Off Current System

- All power must be disconnected before any installation or service is attempted. More than one power source may be supplied to a unit. Power to remote mounted control devices may not be supplied through the unit.
- To confirm power is off, adjust the temperature on your current thermostat.





**WARNING**: Failure to follow this step can result in personal injury and/or death from shock and electrocution.

# Step 2 - Remove Faceplate

Remove the faceplate of current system. Most faceplates snap-off or feature small screws that will need to be removed.



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WARNING: If you see large thick electrical wires, wire nuts, or if your system is labeled 120V, 240V, or 277V DO NOT PROCEED. THIS THERMOSTAT IS NOT COMPATIBLE WITH THESE SYSTEMS



**WARNING**: Failure to follow this step can result in personal injury and/or death from shock and electrocution.

Side View

# Step 3 -

If you are NOT replacing an existing IEC thermostat (model numbers E055-71520301 – E055-71520305, E055-71520316 – E055-71520319), proceed to Step 4.

If you ARE replacing one of those thermostat models, you should not need to unwire or replace the existing backplate. Your new thermostat not only fits onto that backplate but has the same wire locations.

If you see any wire attached to the RS terminal, you may need to change the remote sensor in the fancoil. *See Owner's Manual for details.* 

If you see a wallplate in place behind the thermostat backplate, you will need to use a plastic shim (E055-71520329) to give a better mechanical fit. The shim is available for purchase through Parts. Contact your local sales representative for assistance.

Proceed to Step 8.

# Step 4 - Label & Disconnect Wires

 One by one, apply a label designated to each wire you disconnect from your current thermostat.



TIP: Before disconnecting any wires, take a photo of your current wire configuration with your mobile device.



Wire from the old thermostat terminal marked	Function	Install on the new thermostat connector marked	Wire Color
G1, GL	Low Fan Speed	G	
G2, GM	Middle Fan Speed	G2	
G3, GH	High Fan Speed	G3	
Y, Y1	chilled water valve (4 pipe) or hot/chilled water valve (2 pipe)	YI	
W, W1	hot water valve (4 pipe) or strip heat (2 pipe)	W1	
H/C, WATER	2 pipe water temp sensor (open = hot, closed = chilled)	H20	
SWITCH	Dry contact for condensate overflow, occupancy sensor, door switch	CKI	
REMOTE	wired remote 10K thermistor	RS	
R, Rh, M, Vr, A	power (24v)	R	
C	common	С	
Y2	2-stage cooling	Y2	

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# Step 5 - Remove Current Backplate

Unscrew the current backplate and remove it from the wall. Be careful not to let the wires fall into the wall.

**TIP:** If needed, wrap the wires around a pencil or pen to keep them from falling inside the wall.





# Step 6 - Mount New Base

- Gently separate the display from the base by pulling first from one side, then the other until the two pieces unsnap. A small screwdriver may be used, very carefully, to start separating the two pieces.
- Position the base against your wall, and determine if wall anchors from current thermostat align with screw locations of new base.
- If base does not align with existing anchor holes, mark new screw locations with a pencil.
  Drywall: Drill 3/16" hole for the anchor
  Plaster: Drill 7/32" hole for the anchor
- Pull wires through opening in base and secure to the wall using provided screws.

**TIP:** Use a level to ensure thermostat is properly aligned before marking screw locations.





# Step 7 - Connect Wires

 Match your previous wire configuration to the new base. One by one, connect each wire by inserting the metal end into the corresponding slot and tightening the screw.





TIP: Use pliers to straighten wire before inserting into new base. Be sure to cut any excess wire so that the insulation extends to the terminal block. When the wire is installed properly to the terminal block, there should be no copper exposed.

# Step 8 - Attach Thermostat

 Align the pins on the thermostat circuit board with the corresponding holes below the wiring connectors and push the top and the bottom of the plastic housing enclosing the display until it clicks into place, top and bottom.



Side View

# Step 9 - Switch Power/Circuit Breakers Back On

Turn your fancoil back on.

# Step 10 - Set Up Wi-Fi Connection

# Overview

At minimum, the first 3 tasks below must be completed to access your thermostat remotely from a browser. The 4th step is optional (highly recommended) and only is needed to access your thermostat(s) from a mobile device.

### These steps are:

- 1. Successful connection to a local Wi-Fi Access Point with internet access.
- 2. Confirm receipt of a Skyport generated verification email (this only occurs once during the Skyport account setup).
- 3. A 6-digit code obtained from the thermostat is successfully entered into a Skyport account.
- 4. Successfully download and install the IEC Skyport app on your mobile device(s).

Your thermostat operates on the 2.4 Ghz, Wi-Fi b/g/n band.

TO ENTER MENUS	BUTTON PRESS
Setup Steps	MODE & FAN for 5 seconds
Time Schedule	MODE & Up for 2 seconds
Emergency Heat	Up & FAN for 2 seconds
Lockout Buttons	MODE, Up & Down for 2 seconds
Calibration	MODE & Down for 2 seconds, then MODE
Wireless Setup	FAN for 5 Seconds
Humidity	MODE for 2 seconds

### TABLE OF BUTTON PRESSES TO ENTER MENUS

### Quick Start - Connect to Wi-Fi

The IEC thermostats are joined to a Wi-Fi network with the help of the **IEC Configurator App**. This app may be downloaded from your mobile device's app store. Once the thermostat is installed and powered, the Configurator App will facilitate connection to the access point in 6 steps as outlined below.



Select "Setup Wi-Fi" on the Configurator App. Press and hold the FAN button for 5 seconds. When "Wireless Setup" appears on the display, release the FAN button. Then press the COOLER button on the thermostat to configure Wi-Fi settings. Select "continue" on the Configurator App.

# 3

Go to the settings of the mobile device. Select Wi-Fi, then select the IEC thermostat (THERMOSTAT-XXXX). Enter the password: 123456789 when prompted. Return to the Configurator App and select "Continue".

### Quick Start - Connect to Wi-Fi (continued)



## Quick Start - Connect to Skyport

Although there is more than one way to create a Skyport account, the steps below illustrate account creation from a browser. To create a Skyport account a thermostat must be joined to the account.

If the thermostat is connected to the local Wi-Fi Access Point, but you do not have a Skyport account, you may create an account and join the thermostat to the account by doing the following:

- 1. Open your browser to: http://iec.skyportcloud.com
- 2. Select "Create account now"

✓ Create Account Now

3. Follow on screen instructions to create an account and add a thermostat to the Skyport account.

If the thermostat is connected to the local Wi-Fi access point but not yet joined to an existing Skyport account, you may join the thermostat to the account by doing the following:

- 1. Log in to your Skyport account.
- 2. Select the "Location" you want to add a thermostat into.
- 3. Select the "Thermostat tab".
- Select "+ Add Thermostat". A screen will 'pop-up' asking for a six digit code.
- 5. Press and hold the fan button on the thermostat for 5 seconds.
- 6. Press the Up button on the thermostat.
- 7. A six digit code will appear on the thermostat's display.
- 8. Enter the six digit code into your Skyport account.

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Skyport will maintain the correct time and day on your thermostat.

If you would like to set up a program/schedule to maintain the desired temperature at various times of the day, you can do this manually at the thermostat or use the Skyport website to enter a time period schedule.

The complete manual is available at iec-okc.com.

It is much easier to setup the time period program/schedule on the Skyport Web App. To make these adjustments and more to your thermostat from Skyport follow these steps:

- 1. Login to your Skyport account
- 2. Choose the location where your thermostat is installed (the left column)

You may now control the basic functions of the thermostat like MODE, setpoints or fan speed.

You can also press on the upper right section of the panel in order to customize the settings.

A quick summary of the settings is as follows:

**Thermostat info** – allows you to name the thermostat, view software revision

**Permissions** – as the owner of this thermostat, you can grant access to other users

**Runtimes** – view the two week heat or cool runtime of this specific thermostat

**Sensors** – view the current and daily min/max values from the internal temperature/humidity sensor and any linked wireless sensors



Alerts - view and edit this thermostat's alerts and setup email notifications

Schedule - view/edit the time period schedule for this thermostat

**Settings** – view/edit all settings within the thermostat (fancoil type, setpoint limits, etc)

# Troubleshooting

Use the following troubleshooting guide to diagnose common problems.

Problem	Possible Cause	Solution
Display won't turn on	Lack of proper power	Make sure that the fancoil unit is powered. Check for 24 VAC between R and C at backplate
Cooling won't turn on	The cool setpoint is set too high	Lower the cool setpoint, minimum setpoint limit or reduce deadband
Heating won't turn on	The heat setpoint is set too low	Raise the heat setpoint, maximum setpoint limit or reduce deadband
Two pipe auto changeover fancoil shows heat with chilled water or cool with hot water	Water changeover switch not installed or incorrect type	Contact IEC for proper changeover switch (closed below 60F, open above 75F)
2 pipe water valve won't open in heat or cool	Valve not wired to Y1 terminal	Check wiring
4 pipe hot water valve open with no heat demand	Valve might be 'power to close' type	Check with fancoil manufacturer before altering 'Hot Water Valve Type' setting

(continued)

# Troubleshooting (continued)

Problem	Possible Cause	Solution
The thermostat won't connect to the access point	Wrong password	Enter the correct password
	Access point offline	Bring access point online
Can't connect to Skyport	No internet connection on access point	Restore internet
	Firewall restrictions	Check firewall settings
Can't get a 6 digit pairing code	Thermostat already in account	Factory default thermostat, remove from Skyport account
	No internet connection on access point	Restore internet
	Firewall restrictions	Check firewall settings

For additional support, contact Technical Support at 405-605-5000.

# International Environmental Corporation Terms And Conditions

1. Orders shall not be binding upon International Environmental Corporation, an Oklahoma corporation (hereinafter referred to as "IEC") unless accepted by an authorized representative of IEC at its office in Oklahoma City, Oklahoma. No distributor, sales representative or any other person or entity (except authorized employees of IEC at its office in Oklahoma City, Oklahoma) has any authority whatsoever to bind IEC to any representation or agreement of any kind.

2. IEC does not build items to plans and specifications. IEC agrees to furnish only the items as described in IEC's acknowledgment unless IEC's office in Oklahoma City, Oklahoma has previously received and accepted, in writing, approved submittals from Purchaser.

3. Prices acknowledged are firm only if Purchaser releases the goods covered by this order for immediate production by IEC within sixty (60) days from the date of Purchaser's initial offer to purchase and for shipment by IEC within IEC's estimated shipping date,unless otherwise agreed to in writing by IEC at its office in Oklahoma City, Oklahoma. If Purchaser does not meet the terms and conditions of this paragraph, the prices are subject to escalation to those prices in effect at time of shipment without notice to Purchaser.

 All prices are F.O.B. IEC's factory, unless otherwise agreed by IEC in writing; and, all payments and prices shall be in U.S.A. dollars.

5. If goods are released for production but IEC is prevented by the Purchaser from shipping upon completion or by IEC's estimated shipping date, whichever is later, IEC may at its option, in addition to all other remedies, invoice Purchaser to be payable within thirty (30) days and store the goods at Purchaser's sole expense.

6. Title to and risk of loss to the goods passes to the Purchaser F.O.B. IEC's factory.

### 7. Disclaimer

It is expressly understood that unless a statement is specifically identified as a warranty, statements made by IEC or its representatives relating to IEC's products, whether oral, written or contained in any sales literature, catalog or any other agreement, are not express warranties and do not form a part of the basis of the bargain, but are merely IEC's opinion or commendation of IEC's products. EXCEPT AS SPECIFICALLY SET FORTH HEREIN, THERE IS NO EXPRESS WARRANTY ASTO ANY OF IEC'S PRODUCTS. IEC MAKES NO WARRANTY AGAINST LATENT DEFECTS. IEC MAKES NO WARRANTY OF MERCHANTABILITY OFTHE GOODS OR OFTHE FITNESS OF THE GOODS FOR ANY PARTICULAR PURPOSE.

### 8. Grant of Limited Express Warranty

IEC warrants IEC products purchased and retained in the United States of America and Canada to be free from defects in material and workmanship under normal use and maintenance as follows: (1) All complete fan coil units built or sold by IEC for twelve (12)months from date of unit start up or eighteen (18) months from date of shipment (from factory), whichever comes first.

All parts must be returned to IEC's factory in Oklahoma City, Oklahoma, freight prepaid, no later than sixty (60) days after the date of the failure of the part; if IEC determines the part to be defective and within IEC's Limited Express Warranty, IEC shall, when such part has been either replaced or repaired, return such to a factory recognized contractor or service organization, F.O.B. IEC's factory, Oklahoma City, Oklahoma, freight prepaid. The warranty on any parts repaired or replaced under warranty expires at the end of the original warranty period. For information and warranty service contact:

International Environmental Corporation Customer Service 5000 West I-40 Oklahoma City, OK 73128 (405)605-5000 This warranty does not cover and does not apply to: (1) Air filters, fuses, fluids; (2) Products relocated after initial installation; (3) Any portion or component of any system that is not supplied by IEC, regardless of the cause of the failure of such portion or component; (4) Products on which the unit identification tags or labels have been removed or defaced; (5) Products on which payment to IEC is or has been in default; (6) Products which have defects or damage which result from improper installation, wiring, electrical imbalance characteristics or maintenance; or are caused by accident, misuse or abuse, fire, flood, alteration or misapplication of the product; (7) Products which have defects or damage which result from a contaminated or corrosive air or liquid supply, or operation at abnormal temperatures; (8) Mold, fungus or bacteria damages; (9) Products which have been subjected to misuse, negligence or accidents; (12) Products which have been operated in a manner contrary to IEC's printed instructions; or (13) Products which have defects, damage or insufficient performance as a result of insufficient or incorrect system design or the improper application of IEC's products.

IEC is not responsible for: (1) The cost of any fluids or other system components, or associated labor to repair or replace the same, which is incurred as a result of a defective part covered by IEC's Limited Express Warranty; (2) The costs of labor, materials or service incurred in removal of the defective part, or in obtaining and replacing the new or repaired part; or, (3) Transportation costs of the defective part from the installation site to IEC or of the return of any part not covered by IEC's Limited Express Warranty.

Limitation: This Limited Express Warranty is given in lieu of all other warranties. If, notwithstanding the disclaimers contained herein, it is determined that other warranties exist, any such warranties, including without limitation any express warranties or any

implied warranties of fitness for particular purpose and merchantability, shall be limited to the duration of the Limited Express Warranty.

### 9. Limitation of Remedies

In the event of a breach of the Limited Express Warranty, IEC will only be obligated at IEC's option to repair the failed part or unit or to furnish a new or rebuilt part or unit in exchange for the part or unit which has failed. If after written notice to IEC's factory in Oklahoma City, Oklahoma of each defect, malfunction or other failure and a reasonable number of attempts by IEC to correct the defect, malfunction or other failure and the remedy fails of its essential purpose, IEC shall refund the purchase price paid to IEC in exchange for the return of the sold good(s). Said refund shall be the maximum liability of IEC.THIS REMEDY ISTHE SOLE AND EXCLUSIVE REMEDY OF THE BUYER OR THEIR PURCHASER AGAINST IEC FOR BREACH OF CONTRACT, FOR BREACH OF ANY WARRANTY OR FOR IEC'S NEGLIGENCE OR IN STRICT LIABILITY.

### 10. Limitation of Liability

IEC shall have no liability for any damages if IEC's performance is delayed for any reason or is prevented to any extent by any event such as, but not limited to: any war, civil unrest, government restrictions or restraints, strikes, or work stoppages, fire, flood, accident, shortages of transportation, fuel, material or labor, acts of God or any other reason beyond the sole control of IEC. IEC EXPRESSLY DISCLAIMS AND EXCLUDES ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE IN CONTRACT, FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, OR IN TORT, WHETHER FOR IEC's NEGLIGENCE OR AS STRICT LIABILITY.

11. IEC shall have no system design, application or maintenance responsibility or responsibility for mold, fungus or bacteria to Purchaser or any other third party.

12. All sales, goods and services, use, excise, value added, transportation, privilege, occupational consumption, storage, document, transaction or other taxes which may be levied by any taxing authority as a result of this transaction shall be paid by the Purchaser.

13. Unless otherwise agreed to in writing by IEC any technical data furnished in conjunction with this order and not obtainable from another source shall not be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate this order. 14. IEC shall have no liability or other obligation hereunder, if IEC's performance is delayed for any reason or is prevented to any extent by any event such as, but not limited to: any act of God, strike or work stoppage, fire, flood, accident, allocation, or other controls of Government authorities, shortages of transportation, fuel, material or labor, or any other cause beyond IEC's sole control. Any shipping date stated by IEC is IEC's best estimate but IEC makes no guarantee of shipment by any such date and shall have no liability or other obligation for failure to ship on such date, regardless of cause.

15. Payment terms are net thirty (30) days from date of shipment on approved credit. One and one half percent (1 1/2%) per month (18%annual rate) may be charged on past due accounts or the highest rate permitted by applicable law, whichever is lesser. In the event the account is placed for collection, Purchaser shall be responsible for all reasonable attorneys fees or costs on a solicitor and client basis, plus all other costs and expenses incurred by IEC in securing payment.

16. Purchaser shall not cancel the contract without prior written consent of an authorized representative of IEC at its offices in Oklahoma City, Oklahoma. In the event Purchaser cancels the contract with the prior written consent of IEC after the Purchaser's offer to purchase is received and acknowledged in writing, IEC shall be entitled to receive from Purchaser IEC's cost incurred to time of cancellation plus a reasonable allowance for overhead and profit.

17. Purchaser shall not assign any of its interest or rights under this agreement without written consent of IEC.

18. IEC will protect all its lien rights. IEC will not furnish lien waivers or releases until IEC receives payment, in full, at its office in Oklahoma City, Oklahoma from Purchaser for the goods covered by this order. There is no authorized retain age for any reason.

19. This Agreement shall be construed, and the rights and liabilities of the parties hereunder shall be determined in accordance with the laws of the State of Oklahoma. If it shall be found that any portion of this agreement violates any particular law of the United States or any state in the United States having jurisdiction or, if applicable, any law of Canada or any province or territory in Canada having jurisdiction, such portion of the agreement shall be of no force and effect in that political unit, division or sub-division in which they are illegal or unenforceable and the agreement shall be treated as if such portion or portions had not been inserted. In the event that any dispute or disagreement in connection with any order should arise or exist between Purchaser and IEC, jurisdiction and venue for any legal action shall be, if IEC so elects, exclusively in the state or federal courts in Oklahoma County, Oklahoma. The statute of limitations on any claim of the Purchaser against the IEC shall be one (1) year from the date the cause of action accrues.

20. Without regard to any other agreement, all obligations of Purchaser to IEC shall become immediately due and payable if Purchaser becomes insolvent or if Purchaser does not make payments when due or breaches any other agreement or fails to perform any obligation.

21. All orders are expressly limited and made conditional upon acceptance by Purchaser of the terms and conditions set forth above without change. There shall be no understandings, agreements, or obligations (outside these terms and conditions) unless specifically set forth in writing and accepted by signature of an authorized representative of IEC in Oklahoma City, Oklahoma.

22. The parties hereto have requested that these presents and all judicial proceedings relating thereto be drafted in English. Les parties aux présentes ont demandé à ce que les présentes et toutes procedures judiciaires y afférentes soient rédigées en anglais.

### FCC Compliance Statement

This equipment has been tested and found to comply with the limits for an intentional radiator, pursuant to Part 15, subpart C of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference in radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- · Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that of the receiver.
- · Consult the dealer or an experienced radio or TV technician for help.

Notice: Only peripherals complying with FCC limits may be attached to this equipment. Operation with noncompliant peripherals or peripherals not recommended by IEC, is likely to result in interference to radio and TV reception. Changes or modifications to the product, not expressly approved by IEC could void the user's authority to operate the equipment.

### FCC - INDOOR Mobile Radio Information:

To comply with FCC/IC RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This Device complies with Industry Canada License-exempt RSS standard(s), Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. Cet appareil est conforme avec Industrie Canada, exempts de licence standard RSS(s). Son fonctionnement est soumis aux deux conditions suivantes: 1) ce dispositif ne doit pas causer d'interférences, et 2) ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

En vertu des règlements d'Industrie Canada, cet émetteur de radio ne peut fonctionner en utilisant une antenne d'un type et maximale (ou moins) Gain approuvé pour l'émetteur par Industrie Canada. Pour réduire les interférences radio potentielles aux autres utilisateurs, le type d'antenne et son gain doivent être choisis afin que la puissance isotrope ravonnée équivalente (PIRE) ne est pas plus de ce qui est nécessaire pour une communication réussie.

We, IEC, declare under our sole responsibility that the device to which this declaration relates; Complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC ID: MUH-SKYPORT10

IC: 12547A-SKYPORT10





Fi) Innovation, Science and Economic Development Canada ICES-003 Compliance Label: CAN ICES-3 (B)/NM8-3(B)



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