resideo

RTF Series Communication Thermostat

Fan Coil Unit Control

Application

The RTF series is a fan coil unit (FCU) communication thermostat which controls the fan coil with the local temperature to create a comfortable environment. The thermostat communication interface is BACnet MS/TP profile and the thermostat can be easily integrated into a BTL listing/certificate network system.
The RTF series thermostat adopts two-piece structure, it consists of two devices: driver and wall module. Driver is a communication controller, which provides control algorithm, inputs/outputs and BACnet communication interface for thermostats. Wall module is a user interface which provides LCD and keypad for display and setup.

Feature

- AC220/230V operation voltage
- Two-wire polarity-free communicating between driver and wall module
- 32-bit ARM architecture CPU
- Power and communicating status indication with LED on driver
- Multi installation method for both driver and wall module, easy to install and set-up
- Safety, all line voltage terminals protected with cover
- Protection, provide random startup, freeze protection and data storage when power off
- Cyber security insurance
- Super modern appearance design, suitable for office, hotel and residential building
- Multi-color wall module to match different decorations
- Big LCD display with backlit in English and icons
- Fuse replaceable
- CE certification

Function

- BACnet MS/TP protocols
- 2-pipe/4-pipe ON/OFF valve control and 2-pipe modulating valve control
- 3-speed fan control
- Selection of application/parameters via wall module or BACnet network
- Room temperature or set point temperature display option
- Manual or automatic fan speed option
- Build-in temperature sensor or remote air
- temperature sensor option
- Cycle per Hour (CPH) option
- °C or °F temperature unit option
- Adjustment of display room temperature option
- Lock or unlock keys or part of keys option
- Heat and cool set point limitation for energy saving
- Energy saving function, support RSB1(hotel card) or/and RSB2(window contact)
- Running time accumulation
- Ventilation function
- Purge function with 2-pipe auto changeover system
- Alert function

CE

RFT-013-03B-EN01

Order Model

Driver

Model	Power Supply (Vac)	Application	Fan Control	Product Picture
RTF228AD/U	220/230	FCU on/off 2-pipe	3- speed	
RTF223AD/U	220/230	FCU modulating 2-pipe	3- speed	

Wall Module

Model	Color	Product Picture
RTFWNAP/U	White	

Accessory

Model	Description	Product Picture
TFDC	10 pcs driver cover per package	

Compatible Equipment

Model	Description	Product Picture
R50046096-001	Temperature sensor	
RVC4013	ON/OFF Valve	
RVC4043	ON/OFF Valve	
RV4043/RV4044	ON/OFF Valve	
RVC7931	Modulating Valve	

Specification

Power Supply	Operation Power	220/230VAC, 50/60Hz
	Product Power Consumption	6VA
	Circuit Protection Fuse	6.3A @250VAC, replaceable
Classification	Action Type	1
	Pollution Degree	2
	Protection against electric shock class	Class I
	Electronic control software class	Class A
	Rated Impulse Voltage	2500V
	Maximum Temperature	105°C
Output	Valve Control Output RTF228AD/U: Relay x 2 RTF428AD/U: Relay x 4 RTF223AD/U: Analog Output x1	Relay: 2(1)A at 250VAC(max.), life cycle: 100,000 2A: When the load is resistance 1A: When the load is inductance AO: 0 - 10Vdc at 10mA(max.) The valve need have overtravel-limit organ to turn off the load
	Fan Control Output Relay x 3	3(2)A at 250VAC(max.), life cycle: 100,000 3A: When the load is resistance 2A: When the load is inductance
	Whole Product Output Current	4A/3A 4A: When the load of the thermostat is resistance 3A: When the load of the thermostat is inductance
Input	Remote temperature sensor x 1 Pipe sensor x 1	20K NTC, R50046096-001
	RSB1(Hotel Card) x 1 RSB2(Window Contact) x 1	Dry contact, NO/NC selectable
BACnet	BACnet Interface	EIA-485(BACnet MS/TP)
Environment	Working Ambient Temperature	-10°C to 48°C (14°F to 118°F)
	Storage Ambient Temperature	-30°C to 65°(-22°F to 149°F)
	Relative Humidity	5% RH to 95% RH. Non-condensing.
Build-in Sensor	Display Temperature Range	-9.5°C to 48°C (14°F to 118°F)
	Calibration Temperature Range	+/- 5°C(+/-10°F)
	Accuracy	+/-0.5°C(+/-1°F)@21°C (70°F)
Terminal	Wire Gauge(recommended)	Line Voltage Terminals: 14AWG-18AWG (1.6mm – 1mm) solid BACnet Terminals: 18AWG-24AWG (1mm - 0.5mm), shielded twisted pair Other Terminals: 18AWG-24AWG(1mm - 0.5mm)
Compliance	IP Level	IP20
	Certification	CE
Applied altitude up to 2000m above sea level for all rating capacity		

Integration via BACnet

BACnet Interface

Resideo uses EIA-485 as the physical layer between driver and supervisory controller.

Specifications for a Resideo EIA-485 Network

- Cable Type: Twisted pair 18AWG-24AWG (1mm – 0.5mm), Shield
- Distributed Capacitance between conductors: less than 100pF/m
- Max length per segment: 1000m
- Polarity: Polarity sensitive
- Network wiring: Daisy-chain
- Maximum number of node per EIA-485 network: 63
- Baud rate: 9600, 19200, 38400, 76800 (auto detect)
- Termination: 80~130 Ω (should be installed at each end)

Note: Less than 40 devices are recommended in a EIA-485 network and shall use shielded twisted pair.

MAC Address

The driver is delivered from the factory with the default MAC address set at 1 (referred to ISU of wall module). To enable BACnet communication, set the local MAC address configuration property of the driver to any valid value from 0 to 99.

Device Object ID and Device Object Name

The BACnet Data Link layer has two key parameters: the device object name and the device object ID.
The device object ID must be unique from any other BACnet device object ID on the entire BACnet network (i.e. not just the MS/TP sub-network).
Device Name and Device ID properties are writable in Resideo device object. Both properties can be renamed from any BACnet network management tool if the tool itself gives access to write to these properties.
Device ID can also be changed by wall module.

BACnet Services

The BACnet communicating driver meets all requirements for designation as an Application Specific Controller (B-ASC), the detail information refer to PICS.

BACnet Objects

Configuration data:

Name	Description	R/W for Network	Settings
AV35FObjM-ACAddress	BACnet Address	R/W	[0-99], **default value is 1**
ISU_01_SysType	System Type	R/W	0 - Heat Only 1 - Cool Only **2 - 2 pipe manual (default)** 3 - 2 pipe auto changeover 4 - 4 pipe manual 5 - 4 pipe auto
ISU_02_SenOpt	Sensor Option	R/W	**0 - Onboard sensor (default)** 1 - Remote sensor
ISU_03_RS1	Hotel Card Enable/Disable	R/W	**0 - Disable (default)** 1 - Enable
ISU_04_RS2	Window Contact Enable/Disable	R/W	**0 - Disable (default)** 1 - Enable
ISU_12_RS1Opt	Hotel Card Configuration	R/W	**0 - NO (default)** 1 – NC
ISU_13_RS2Opt	Window Contact Configuration	R/W	**0 - NO (default)** 1 - NC
PS_threshold_C	Pipe Sensor Threshold for cool	R/W	10°C-22°C (50°F-72°F), **default 15.5°C (60°F)**
PS_threshold_H	Pipe Sensor Threshold for heat	R/W	24°C-32°C (75°F-90°F), **default 26.5°C (80°F)**
AV38FObj-TempScale	F/C display	R/W	0 - °F **1 - °C (default)**
ISU_21_FanCtrl	Fan control type	R/W	0 - Cycle 1 - Constant; **2 – Cycle and Constant (default)**
Differential	Differential for 4 pipe	R/W	1°C -3°C (2°F-6°F), **default 1.5C (3°F)**
CPH_Heat	Heat Cycle Rate	R/W	1-12, **default 4** (only for RTF228AD, RTF428AD)
CPH_Cool	Cool Cycle Rate	R/W	1-6, **default 3** (only for RTF228AD, RTF428AD)
FanAutoConfig	Fan Auto Configuration	R/W	**0 – Off-Low-Med-High in Auto mode (default)** 1 – Low-Med-High in Auto mode
ISU_26_TempAdj	Temp Display adjust	R/W	-5°C -5°C (-10°F -10°F), **default 0°C (0°F)**, step 0.5°C (1°F)
ISU_27_DispType	Display Type	R/W	**0 - Room (default)** 1- Setpoint
ISU_28_SP_min	Setpoint minimum value	R/W	10°C - 32°C (50°F-90°F), **default 10°C (50°F)**, step 0.5°C (1°F)
ISU_29_SP_max	Setpoint maximum value	R/W	10°C - 32°C (50°F-90°F), **default 32°C (90°F)**, step 0.5°C (1°F)

Name	Description	R/W for Network	Settings
AV37Obj-LockOption	Keypad Lockout	R/W	**0 – None (default)** 1 – "Mode"button 2 – "Fan" and "Mode" buttons 3 – All except "Power" buttons 4 – ALL buttons
ISU_32_ES_SP_H	ES Heating Setpoint	R/W	10°C - 21°C (50°F - 70°F), **default 18°C (64°F)**
ISU_33_ES_SP_C	ES Cooling Setpoint	R/W	22.5°C - 32°C (72°F - 90°F), **default 26 °C (79°F)**
ISU_35_Pwr Recovery	Power re-cover status	R/W	0 - OFF; **1 - Previous Status (default)**
ISU_37_ES_Fan	Fan mode in ES	R/W	0 - Run auto fan **1 - Run low fan (default)**
Object Identifier	Device ID	R/W	0-9999, **default 5555**

Run Data:

Name	Description	R/W for Network	Settings
Room Temperature	Room Temperature	R	-9.5°C -48°C
Setpoint	Setpoint	R/W	10°C - 32°C (50°F -90°F), Step 0.5°C (1°F)
FanSwitch	Fan status	R/W	0 - Auto 1 - Low 2 - Med 3 - High
System Switch	System type (Heat/cool/Auto/vent)	R/W	0 - Auto 1 - Cool 2 - Heat 3 - Vent
Power Switch	Power On/Off	R/W	0 - Off 1 - On
Freeze Protect State	Freeze protection	R	0 - Normal mode 1 - Freeze protection mode
ES mode	Energy saving mode	R	0 - Normal mode 1 - ES mode
AV39MObj-SylkStatus	Sylkbus com-munication statu	R	0 – Offline 1 - Online

I/O:

| Name	Description	R/W for Network	Settings
AI0RS	Remote sensor	R	The remote sensor temperature.
AI1PS	Pipe sensor	R	The pipe sensor temperature.
AI2RSB1	Remote setback1	R	0 - Open 1 - Short
AI3RSB2	Remote setback2	R	0 – Open 1 - Short
BO0FL	Fan low	R/W	0 - Off 1 - On
BO1FM	Fan Medium	R/W	0 - Off 1 - On
BO2FH	Fan High	R/W	0 - Off 1 - On
BO3VO1	Heat Valve	R/W	0 - Off 1 – On (Only For RTF 228AD, RTF428AD)
BO5VO2	Cool Valve	R/W	0 - Off 1 – On (Only For RTF 428AD)
VM	Modulating Valve	R/W	0-10V (For RTF223AD)

Others:

| Name	Description	R/W for Network	Settings
AV48F-ObjApp-No0	The application number of driver	R	0 - 2 pipe on/off 1 - 4 pipe on/off 2 - 2 pipe modulating
VO1Running time	Heat relay Runing time	R	Unit : second (only for RTF228AD, RTF428AD)
VO2Running time	cool relay Runing time	R	Unit : second (only for RTF228AD, RTF428AD)
FLRunning time	fan low Runing time	R	Unit : second
FM Running time	fan med Runing time	R	Unit : second
FH Running time	fan high Runing time	R	Unit : second
Reset VOAccumulate	Clear Heat and Cool valve running time	R/W	0 - Not clear 1 - Clear (only for RTF228AD, RTF428AD)
Reset FanAccumulate	Clear all the fan relay running time.	R/W	0 - Not clear 1 - Clear

Note: Please use the parameters listed in above param-eter table, others are not in guarantee.

Wall Module Operation

LCD Display
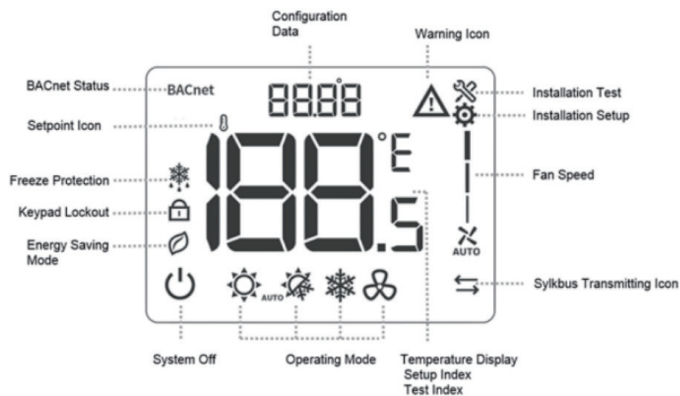
Keypad
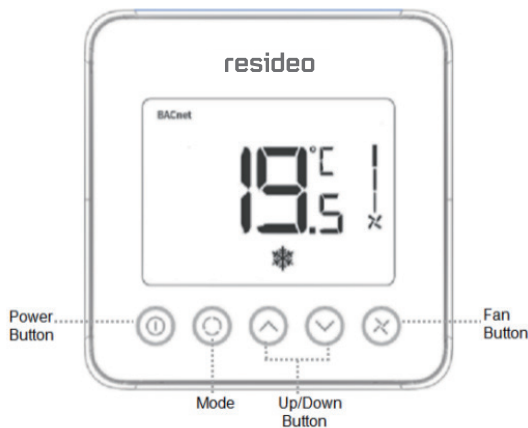
The user shall be able to slew the temperature setting by pressing the up or down button.

Working Mode

Normal Mode

In normal mode, user could turn on or turn off the thermostat, change thermostat operation mode (heating, cooling, auto and ventilation) and fan mode (auto, low, medium, high), adjust temperature setpoint. If there is an error, error code will be displayed on the LCD, and disable all above operation.

Note: The option of operation mode depends on the system type setup.

Installer Setup(ISU) Mode

A multi-key press will be used to enter ISU mode, to enter the ISU, press and hold the "Mode" and "Up" buttons at the same time for 3 seconds. To exit ISU, press and hold the "Mode" and "Up" buttons at the same time for 3 second.

In ISU mode, to switch configuration item, press the "Mode" button.

Note: In ISU mode, the thermostat will ignore all message coming from BACnet bus.
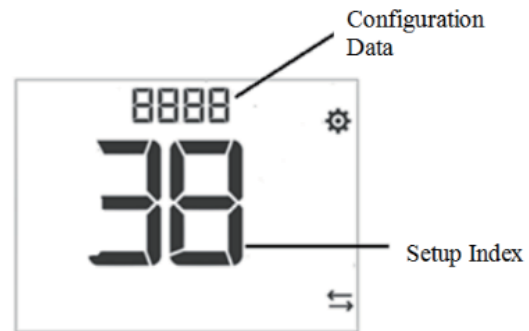
ISU category:

The displayed ISU category content is decided by previous setting, for example, when Item 1 is set to 0 – Heat only, item 33 will not be displayed.

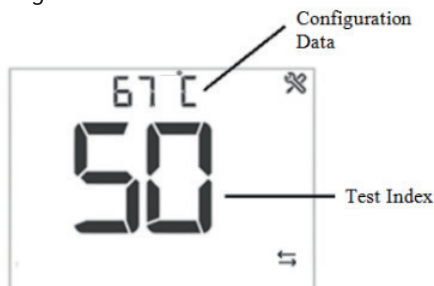| ISU Code	Description	Configuration Data
0	BACnet MAC Address	0-99, **default 1**
1	System Type	0 – Heat only
		1 – Cool only
		2 – Two pipe manual(default)
		3 – Two pipe auto (pipe sensor needed)
		4 – Four pipes manual
		5 – Four Pipes Auto
2	Sensor Option	**0 – Onboard Sensor (default)**
		1 – Remote Sensor
3	Hotel Card (Dry Contact)	**0 – Disabled (default)**
		1 – Enabled
4	Window Contact (Dry Contact)	**0 – Disabled (default)**
		1 – Enabled
12	Hotel Card Option	**0 – NO (default)**
		1 – NC
13	Window Contact Option	**0 – NO (default)**
		1 – NC
20	Temperature Scale	0 – °F
		1 – °C(default)
21	Fan Control Type	0 – Cycle only
		1 – Constant only low-med-high
		2 – User can choose Cycle or Constant, low -med -high-auto(default)
26	Display Temperature adjustment	-5°C -5°C (-10°F -10°F), **default 0°C(0°F)**, step 0.5°C(1°F)

ISU Code	Description	Configuration Data
27	Temperature Display Mode	**0 – Display room temperature (default)**
		1 – Display Setpoint
28	Minimum range stop of setpoint	10°C – 32°C (50°F–90°F), **default 10°C (50°F)**, step: 0.5°C (1°F)
29	Maximum range stop of setpoint	10°C – 32°C (50°F–90°F), **default 32°C (90°F)**, step: 0.5°C (1°F)
30	Keypad lockout	**0 – All keys available (default)**
		1 – System button Locked out
		2 – Fan and System button Locked out
		3 – All button locked out except power button
		4 – All buttons are locked
32	ES Heating Setpoint	10°C – 21°C (50°F –70°F), **default 18°C (64°F)**
33	ES Cooling Setpoint	22°C – 32°C (72°F – 90°F), **default 26 °C (79°F)**
35	Power recovery Status	0 – Off
		1 – Previous Status (default)
37	Fan mode in ES mode	0 – Run as Auto fan speed when ISU_21 =2
		1 – Run as Low fan speed when ISU_21 = 2 (default)
38	Device ID	0-9999 **default 5555**

Installer Test (IT) Mode

A multi-key press will be used to enter IT mode. To enter the IT, press and hold the "Up" and "Down" buttons at the same time for 3 seconds. To exit IT, press and hold the "Up" and "Down" buttons at the same time for 3 seconds.
In IT mode, to switch configuration item, press the "Mode" button.

Note: In IT mode, the thermostat will ignore all message coming from BACnet bus.

IT category:

The displayed IT category content is decided by driver model.

Index	Description	Configuration Data	RTF228 AD/U	RTF223 AD/U
10	VO	0 – Off	•	
		1 – On		
10	VM	0 – 0V output		•
		1 – 2.5V output		
		2 – 5V output		
		3 – 7.5V output		
		4 – 10V output		
30	VO2	0 – Off		
		1 – On		
40	Fan control	0 – Fan Close	•	•
		1 – Low Speed Open		
		2 – Medium Speed Open		
		3 – High Speed Open		
50	Pipe Sensor	If pipe sensor is out of range, display "--".	•	•
60	Remote Setback 1	0 – Open	•	•
		1 – Close		
70	Remote Setback2	0 – Open	•	•
		1 – Close		
80	Application No.	0-2	0	2
90	91 Software main version	01	•	•
	92 Software vice version	01	•	•
	93 Configuration Data Main version	01	•	•

Error Information

If error occurred, the alert icon and error code will be displayed on the LCD of the wall module, the buttons will be locked, but ISU/IT is accessible unless Sylkbus communication error.

Error Code	Error information	Description
E1	Room temperature error	The room temperature is higher than 48°C or lower than -10°C
E2	Sylkbus communication error	Sylkbus communication is failure.
E3	Pipe sensor error	The temperature of pipe sensor is higher than 93°C or lower than 0°C
E4	Room temperature and Sylkbus error	The room temperature and sylkbus communication are both failure
E5	Room Temperature and Pipe sensor error	The room temperature and pipe sensor are both failure
E6	Sylkbus and pipe sensor error	Sylkbus communication and pipe sensor are both failure
E7	Room temperature, pipe sensor and sylkbus error	Room temperature, pipe sensor and sylkbus are all failure

System Mode

Comfort Mode

In comfort mode, the thermostat operates with the comfort set point. This set point can be set via the up/down buttons of the wall module or via BACnet bus, the fan can be set to auto or manual speed: Low, medium or high.

Energy Saving(ES) Mode

ES mode can be active by the input of "RSB1(hotel card)" or by holding mode button for 3s.
If the ES mode is active by holding Mode button, pressing any button could inactive it.
In ES mode, the thermostat operates with the ES set point. This set point can be defined via ISU configuration. The fan speed will be auto or low speed which could be set in ISU configuration.(Fan mode in ES mode)

Ventilation Mode

The thermostat can be switched to ventilation mode by pressing "mode" button.
In ventilation mode, the fan can be set to manual speed: Low, medium or high.

Freeze Protection Mode

When the thermostat is in power off mode and the room temperature is lower than 6°C (43°F), the thermostat will enter freeze protection mode.

In freeze protection mode, the thermostat will start to heating until the room temperature reach 8°C (46 °F) or power on.

Note: Protection mode will not be active when the system type is cool only, or the system type is 2 pipe auto and pipe water is cool

Off Mode

Off mode can be active/inactive by the input of "RSB2(window contact)" or pressing power button. If the Off mode is entered by "RSB2(window contact)", it could be only inactive by "RSB2(window contact)".

LED Indication

One due-color LED on driver is used to indicate power, BACnet communication and data configuration status, detailed information is shown as below.

LED Status	BOAC State Description
Green blinking off once in 2.5 sec	The processor is running, but there is no MS/TP token
Green blinking off twice in 2.5 sec	The processor is running and there is an MS/TP token
Green blinking off thrice in 2.5 sec	The processor is running and there is MS/TP communication
Solid off	There is no power, the processor is not running, or the processor is dead
Red blinking	Configuration data is error.

Installation

Before Installation

Review the specification and application before installing the thermostat.
Make sure the devices are installed and used in physical security place, only the authorized person could operate the devices and access to the network.
Make sure the security of installation and maintenance for the network and upper plant controllers, the detailed information could refer to the plant controllers' instruction.
Make sure the thermostats are all in the isolated internal network.

Driver installation:

IMPORTANT:

• Short circuit or wrong wiring may permanently damage the driver or the equipment.
• If replacing an old driver, label the wires before removal of the old driver.

⚠ WARNING

Electrical Shock Hazard.
Can cause severe injury, death or property damage.

Disconnect power supply before beginning wiring or making wiring connection
The driver must be mounted in a position that allows clearance for wiring, servicing, removal, connection of the devices, and access to superior controller.
The driver may be mounted in any orientation.

Note: The driver must be wired after mounting to a panel or DIN rail.

Panel Mounting

The driver enclosure is constructed of a plastic base plate and a plastic factory-snap-on cover.

Note: The driver is designed so that the cover does not need to be removed from the base plate for either mounting or wiring.

The driver mounts using four screws inserted through the corners of the base plate. Fasten securely with four No. 4 machine or sheet metal screws.
The driver can be mounted in any orientation. Ventilation openings are designed into the cover to allow proper heat dissipation, regardless of the mounting orientation.

DIN Rail Mounting

To mount the driver on a DIN rail [standard EN50022; 1-3/8 in. x 9/32 in. (7.5 mm x 35 mm)], perform the following steps:

1. Holding the driver with its bottom tilted in towards the DIN rail, hook the two bottom tabs on the back of the driver onto the bottom of the DIN rail.
2. Pull up and rotate the driver to make sure the two-tops snap of the driver onto the DIN rail.
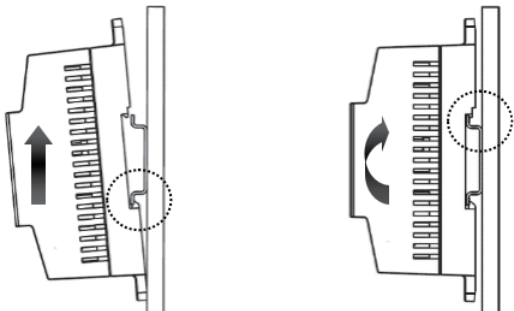
Wiring

All wiring must comply with applicable electrical codes and ordinances, or as specified on installation wiring diagrams.
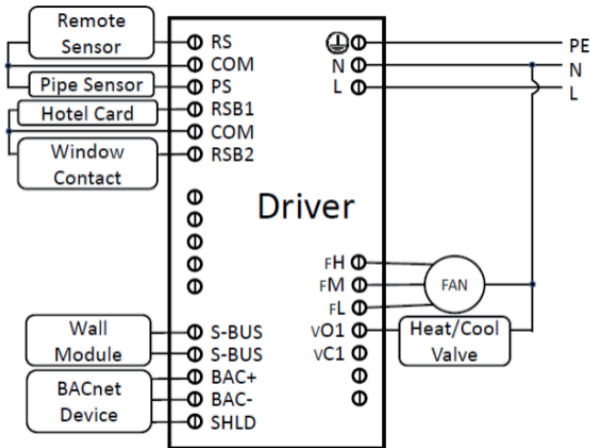Driver wiring is terminated to the screw terminal.

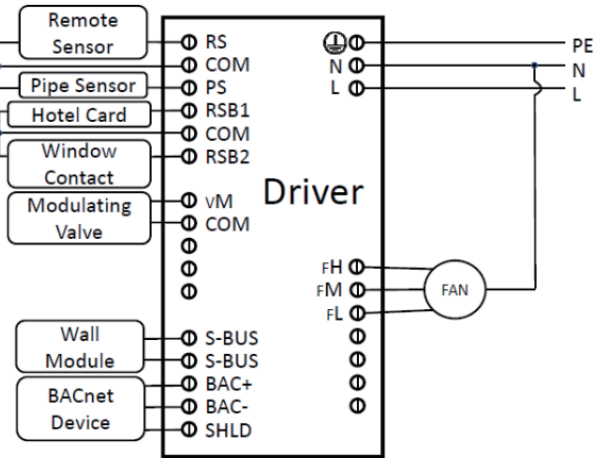Note: Keep the earth ground connection wire run as short as possible.

Terminal Definition:

Terminal Definition			Model	
Terminal	Symbol	Description	RTF228 AD/U	RTF223 AD/U
1	RS	Remote Sensor Input (NTC20K)	•	•
2	COM	Common	•	•
3	PS	Pipe Sensor Input (NTC20K)	•	•
4	RSB1	Hotel Card (Dry contact)	•	•
5	COM	Common	•	•
6	RSB2	Window Contact (Dry contact)	•	•
7	VM	Valve Modulating Output	x	•
8	COM	Common	x	•
9		Not used	x	x
10		Not used	x	x
11		Not used	x	x
12	S-BUS	Sylk Bus	•	•
13	S-BUS	Sylk Bus	•	•
14	BAC+	BACnet+	•	•
15	BAC-	BACnet-	•	•
16	SHLD	BACnet Shield	•	•
17	⏚	Protective Earthing Wire	•	•
18	N	Neutral Wire	•	•
19	L	Live Wire	•	•
20	FH	High Speed Fan	•	•
21	FM	Medium Speed Fan	•	•
22	FL	Low Speed Fan	•	•
23	VO1	Heating /Cooling Valve Open	•	x
24	VC1	Heating /Cooling Valve Close	•	x
25	VO2	Cooling valve open, 4 pipes only	x	x
26	VC2	Cooling valve close , 4 pipes only	x	x

Wiring Diagram

2- Pipe with RVC4013 Valve

Remote Sensor — RS
Pipe Sensor — PS
Hotel Card — RSB1
— COM
Window Contact — RSB2
Driver
— COM
N
L
PE
N
L
FH
FM — FAN
FL
Wall Module — S-BUS / S-BUS — vO1 — Heat/Cool Valve
BACnet Device — BAC+ / BAC- / SHLD — vC1

2- Pipe with RVC7931 Valve

Remote Sensor — RS
Pipe Sensor — PS
Hotel Card — RSB1
— COM
Window Contact — RSB2
Modulating Valve — vM — COM
Driver
N
L
PE
N
L
FH
FM — FAN
FL
Wall Module — S-BUS / S-BUS
BACnet Device — BAC+ / BAC- / SHLD
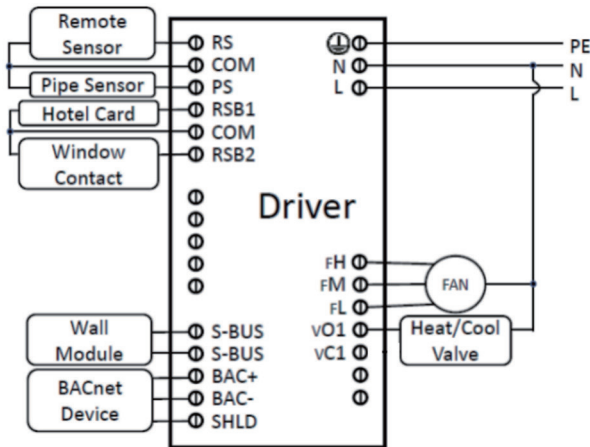
2-Pipe with RVC4043 Valve

Remote Sensor — RS
Pipe Sensor — PS
Hotel Card — RSB1
— COM
Window Contact — RSB2
Driver
N
L
PE
N
L
FH
FM — FAN
FL
Wall Module — S-BUS / S-BUS — vO1 — FAN / Heat/Cool Valve
BACnet Device — BAC+ / BAC- / SHLD — vC1
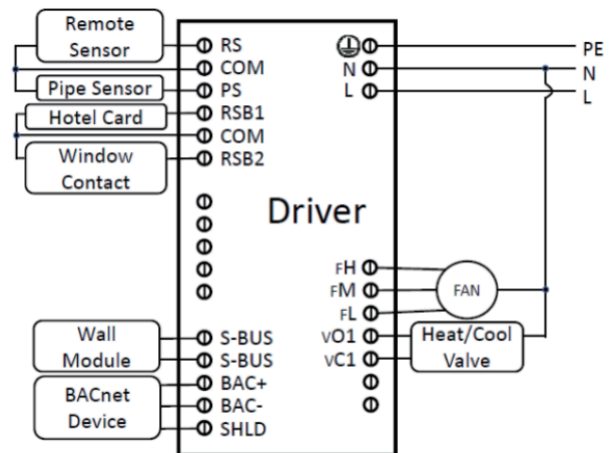
2-Pipe with RVN6013 Valve

Remote Sensor — RS
Pipe Sensor — PS
Hotel Card — RSB1
— COM
Window Contact — RSB2
Driver
N
L
PE
N
L
FH
FM — FAN
FL
Wall Module — S-BUS / S-BUS — vO1 — Heat/Cool Valve
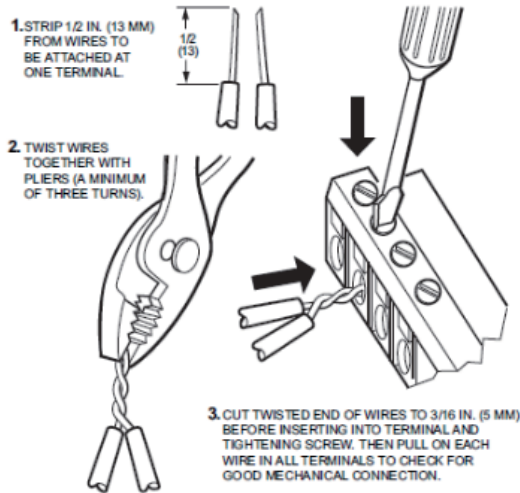BACnet Device — BAC+ / BAC- / SHLD — vC1

Wiring Method

Each terminal can accommodate the following gauges of wire:
— Single wire: from 24AWG(0.5mm) to 14 AWG(1.6mm) solid or stranded
— Multiple wires: up to two 18 AWG(1mm) stranded

Note: When attaching two or more wires to the same terminal, be sure to twist them together. Deviation from this rule can result in improper electrical contact.

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Prepare wiring for the terminal, as follows:
1. Strip 1/2 in. (13 mm) insulation from the conductor.
2. Cut a single wire to 3/16 in. (5 mm). Insert the wire in the required terminal location and tighten the screw.
3. If two or more wires are being inserted into one terminal location, twist the wires together a minimum of three turns before inserting them.

1. STRIP 1/2 IN. (13 MM) FROM WIRES TO BE ATTACHED AT ONE TERMINAL.
1/2 (13)
2. TWIST WIRES TOGETHER WITH PLIERS (A MINIMUM OF THREE TURNS).
3. CUT TWISTED END OF WIRES TO 3/16 IN. (5 MM) BEFORE INSERTING INTO TERMINAL AND TIGHTENING SCREW. THEN PULL ON EACH WIRE IN ALL TERMINALS TO CHECK FOR GOOD MECHANICAL CONNECTION.

4. Cut the twisted end of the wires to 3/16 in. (5 mm) before inserting them into the terminal and tightening the screw.
5. Pull on each wire in all terminals to check for good mechanical connection.

IMPORTANT:

After wiring, install terminal covers.

Fuse Replace

Disconnecting power supply, ensure all terminals have no wiring, before replace the fuse, need to remove the top cover by pushing the snaps with tool, during the replacement procedure, be sure wearing antistatic gloves to avoid damage the electrical board.

Wall Module Installation

Install the wall module about 5 feet (1.5m) above the floor in an area with good air circulation at average temperature.
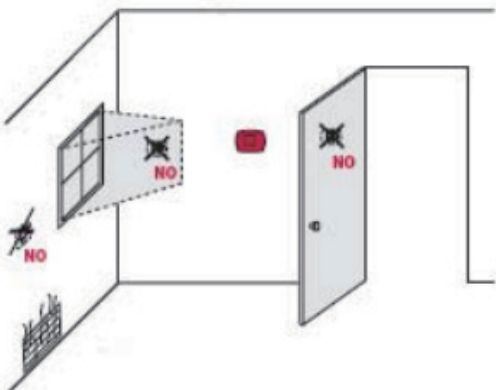

• Drafts or dead spots behind doors and in corners
• Hot or cold air from ducts
• Sunlight or radiant heat from appliances
• Concealed pipes or chimneys
• Unheated/uncooled areas such as an outside wall behind the wall module

1. Place the back cover of the wall module over junction box or panel, insert and tighten mounting screws, then connect the Sylk communicating wires of driver with wiring connector of the wall module, Sylk terminals have no polarity
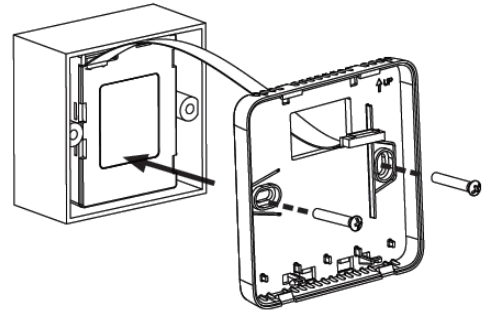
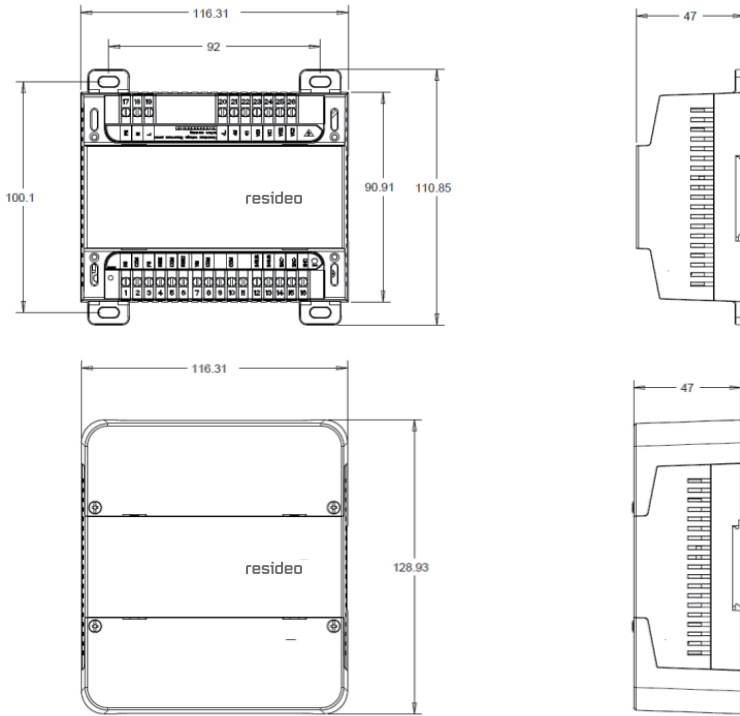2. Insert the connector terminal into the socket
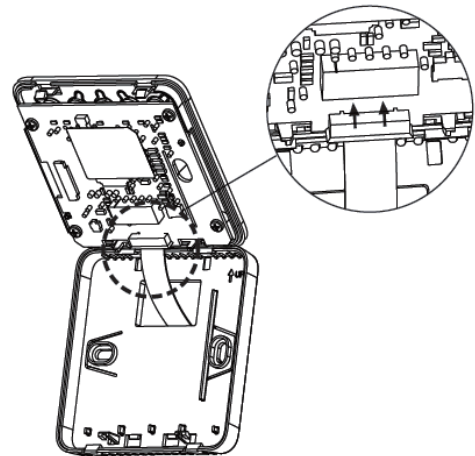
3. Align 4 tabs on the back cover with corresponding slots on the back of the wall module, and then push it until the wall module snaps in place.
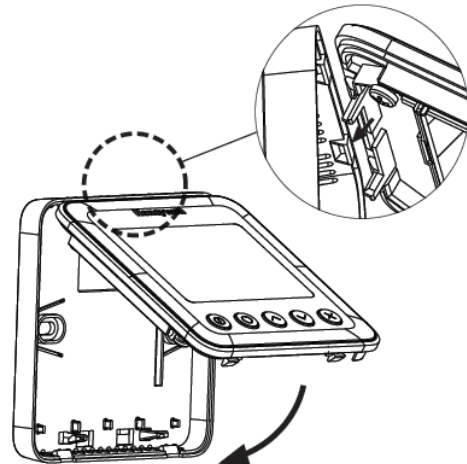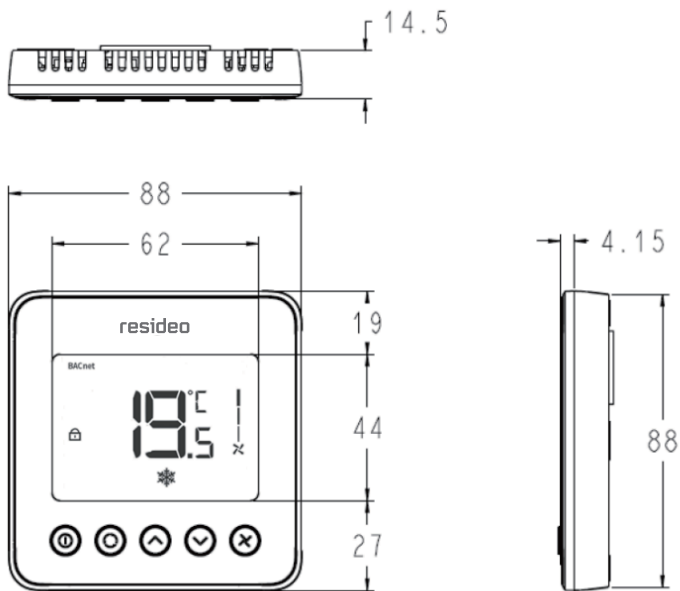
Mechanical Dimension:

Driver

Wall Module

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