INSTALLATION MANUAL
TIS RCU MODULE
Room Control Unit with 8 Channels
Model: RCU-8OUT-8IN

TIS CONTROL EVERYTHING

PRODUCT INFORMATION

This product is a smart controller with eight channels ideal for the automation of lights, sensors, FCU, curtains and motorized devices for maximum efficiency and user comfort.

PRODUCT SPECIFICATIONS

Output Switching Voltage	Number of channels	8
	Nominal voltage	0 – 230 V AC 50/60 Hz
	Max. switching voltage	440VAC / 125VDC
	Analog output	Ch8 include 0-10V output for dimming
Output switching current	Nominal current per channel	Ch1 20A, Ch 2-8 10 A
	Maximum total channels load	90 A
	Max switching current	16A resistive, 8A florescent
	Max Continues current	10A VAC
TIS Bus	Number of devices on 1 line	Max. 64
	Bus voltage	12-32 V DC
	Current consumption (Normal)	<30 mA / 24 V DC
	Current consumption (Peak)	<50 mA / 24 V DC
	Protection	Reverse polarity protection
Operation	Programming button/LED	For assignment of the physical address
	2 buttons	Manually ON/OFF and programming
	By TIS bus	TIS protocol messages and commands
	Programming	Manual & via software
Functions	Lighting control ON/OFF Dimming	8 separately controllable channels
	Curtain control	Can set 4 group of curtains open/close
	Fan speed control	Can set 2 group of fan speed options (low, med, high)
	Dimming	Ch 8 used with 0-10V output for dimming
	Scenes	8 different scenarios
	8 Digital inputs	Programmable inputs to connect to normal wall switches and sensors
Dimensions	Width × Length × Height	144mm × 76mm × 90mm
Housing	Materials	Fireproof ABS
	Casing color	Black
	Button color	Silver
	IP rating	IP 20

BARCODE (UPC-A)

6 58921 79821 8

Read Instructions

We recommend that you read this Instruction Manual before installation.

Safety instructions

Electrical equipment should only be installed and fitted by electrically skilled persons.
Failure to observe the instructions may cause damage to the device and other hazards.
These instructions are an integral part of the product and must remain with the end customer.

Programming

This device can be tested and programmed manually. Advanced programming requires TIS Device Search software. Advanced software programming knowledge should be obtained in the advanced training courses.

Simple Installation

DIN Rail mount facilitates installation. Fixing points are provided for installation without the use of DIN rail.

Mounting Location

Install in a dry, well-ventilated location.
Controllers may emit some mechanical noises. Consider this when deciding on a mounting location.

Data Cable

Use screened stranded RS485 data cable with four twisted pairs. Configure devices in a “Daisy Chain.”
Do not cut or terminate live data cables.

Electrical Wires

The installer should adequately consider the total current consumption when selecting the wires.
Recommended wire size for load (light channels) and input wires is 2.5 -4 mm.

Warranty

We provide a warranty as required by law.
A hologram warranty seal and product serial number are provided on each device.
Please send the description of the defect with Product S/N to our dealer network.

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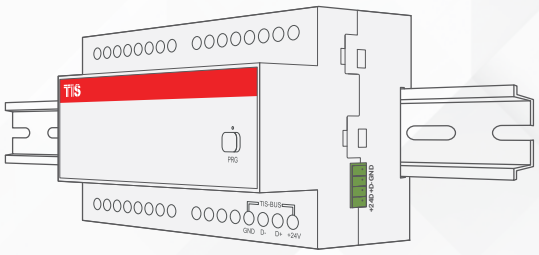
INSTALLATION STEPS

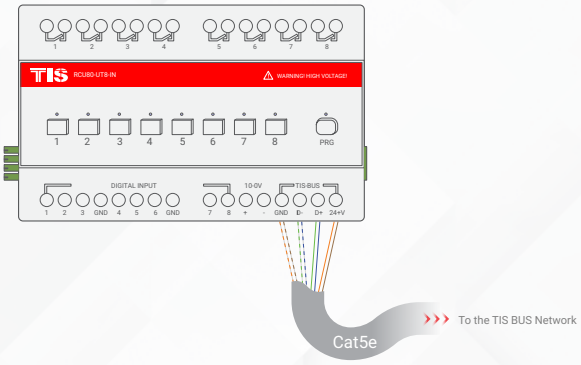
1 Turn off the main electrical source before installation.

WARNING! HIGH VOLTAGE

2 Mount the device on a DIN Rail inside an approved enclosure. The device can also be installed without the use of DIN Rail by two mounting screw holes.



3 Connect RS485 data cable to the TIS-BUS port as per the connection diagram. No need to loop the TIS-bus cable if 2 DIN Rail modules are connected together from the side bus train terminal.

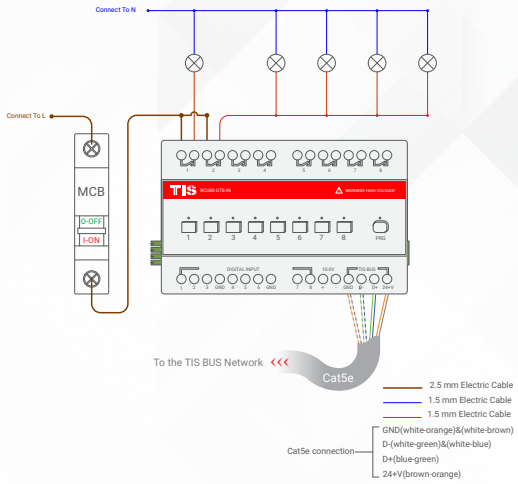


4 Complete the load connection, light, floor heating, and shutter as per the following steps:

LIGHTS / APPLIANCES / FLOOR-HEATING CONNECTION

Connect the load electrical wires to outputs 1-8. Each channel can control a maximum of 10A loads. The installer should make sure not to overload the channels.

Load neutral wire should be linked to the neutral connection in DB enclosure.



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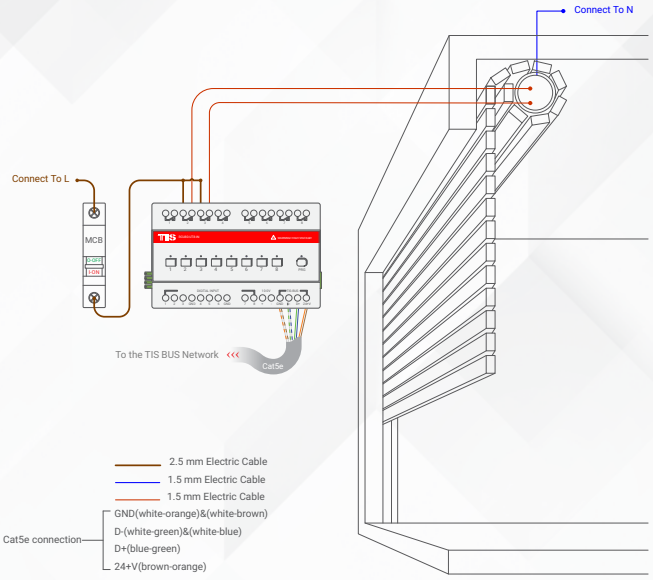
INSTALLATION STEPS

SHUTTER / CURTAIN CONNECTION

Once you combine any 2 channels as shutter/curtain, then connect the shutter-open wire to the first channel and the shutter-close wire to the second channel. The shutter neutral wire should be linked to the neutral connection in DB enclosure.

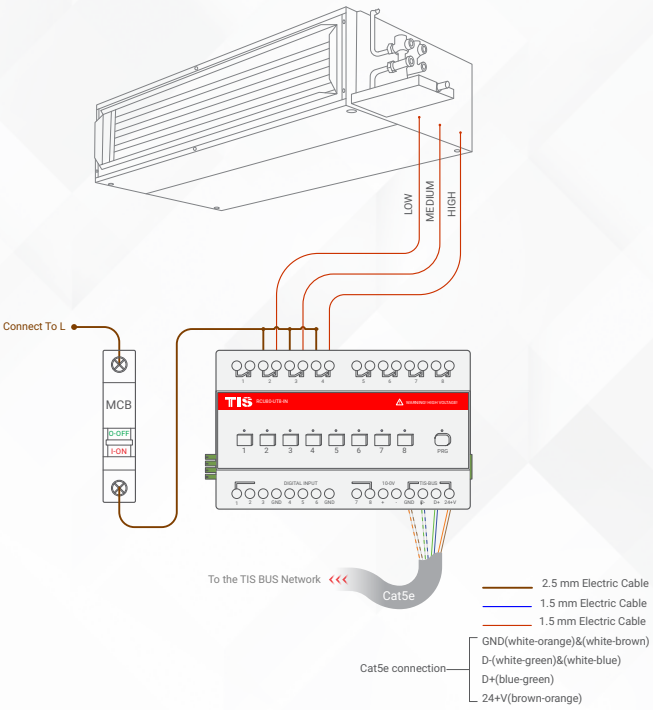
WARNING: Do not connect curtain motor wires before combining (interlocking) 2 relay channels together as curtain mode to avoid causing damage to motors. Please read about how to manually program shutter/curtain pairing in this manual.



FCU Connection

Once you combine any 3 channels as FCU, then connect the FCU (Low, Medium, High) wires to the first, second, and third channels, consecutively. The FCU neutral wire should be linked to the neutral connection of the same section.

WARNING: Do not connect FCU wires before combining (interlocking) 3 relay channels together as FCU mode to avoid causing damage to FCU. Please read about how to manually program FCU pairing in this manual.



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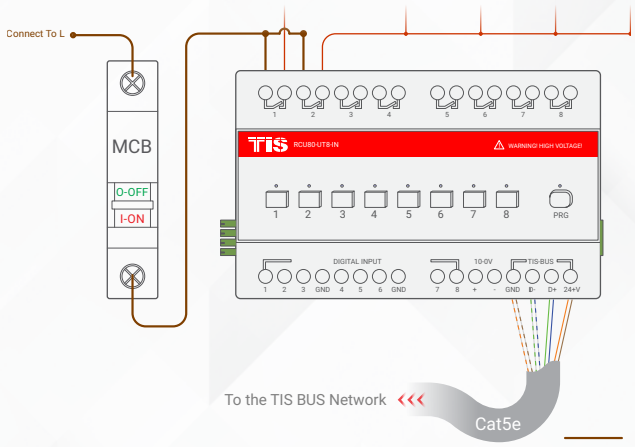
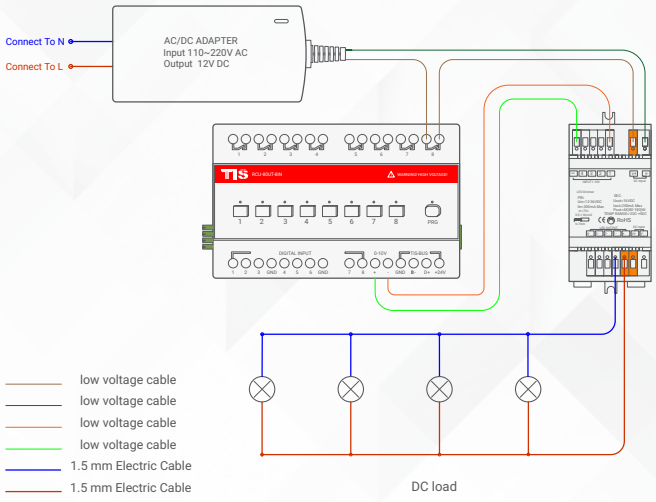
INSTALLATION STEPS

5 Connect the live (supply) wire to inputs. All inputs must have an appropriate voltage source and an MCB to protect that load circuit.



6 For channel 8, you can connect 0-10V output to any 0-10v ballast driver to sim it.



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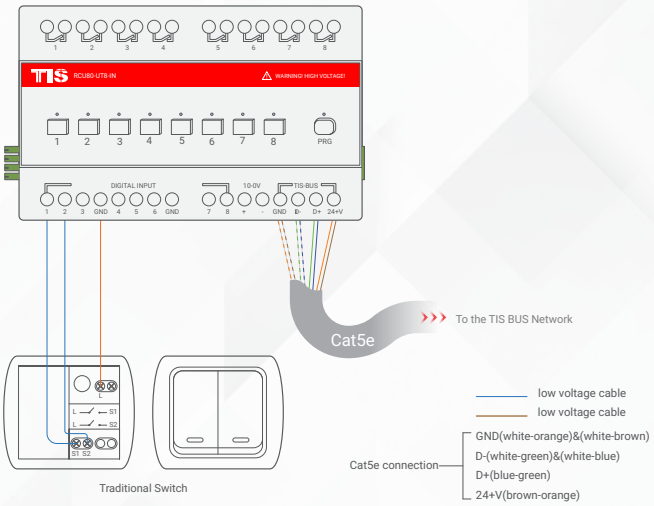
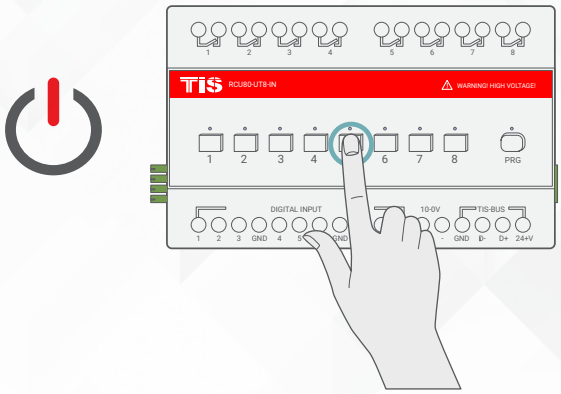
INSTALLATION STEPS

7 Connect digital inputs (dry contacts) GND terminal, and zone number (Z1-Z8) terminal to mechanical switches without any voltage supply. Then test it by pressing the wall switch up/down, Z1-Z8 inputs will trigger relay ch1-ch8 consecutively as default setting.



8 Turn on the power source, and then test the loads by short pressing on the device's local override buttons 1-8.



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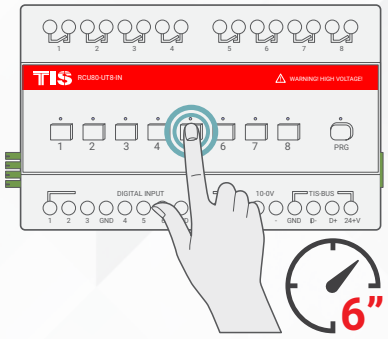
PAIRING (MANUAL PROGRAMMING)

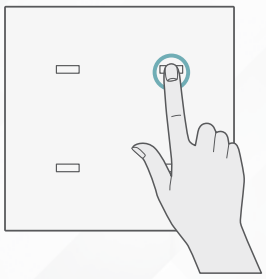
LIGHTS / APPLIANCES PROGRAMMING

All channels by default are used for lights/appliances control.
You can pair device light channels to any wall panels by doing the following:

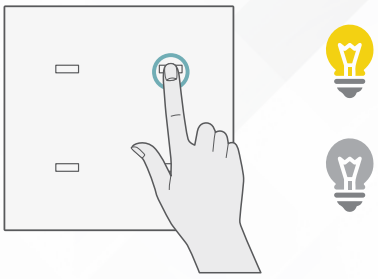
1 Long press on any buttons 1-8 for 6 seconds. The LED indicator for the pressed button will start blinking.



2 Short press on any wall lights buttons on the Luna, Mars, Terre or others panels.



3 Test the button on the panel by short pressing it for ON/OFF.



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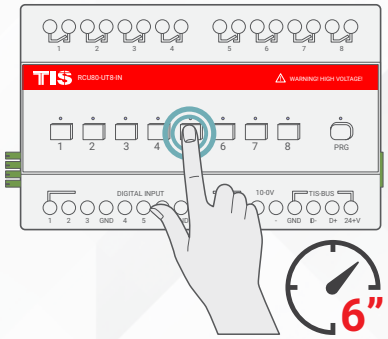
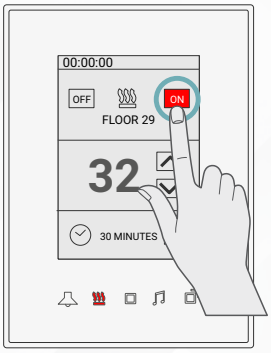
PAIRING (MANUAL PROGRAMMING)

FLOOR HEATING PROGRAMMING

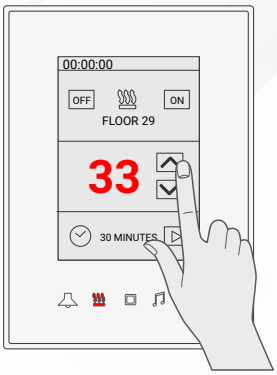
1 Long press on any buttons 1-8 for 6 seconds. The LED indicator for the pressed button will start blinking.



2 Go to floor heater page on any wall panel with the floor heating function, and press ON button to turn on the floor heating.



3 Test the floor heating by changing the temperature and turning it OFF/ON.



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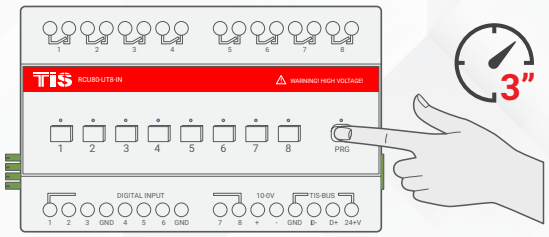
PAIRING (MANUAL PROGRAMMING)

SHUTTER COMBINATION PROGRAMMING

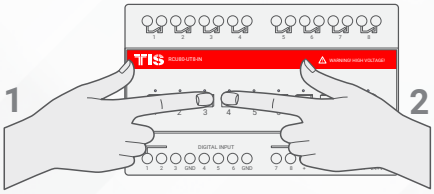
You can change any 2 channels in sequence like CH1 and CH2, Ch3 and CH4… , CH7 and CH8 to be combined (interlocked) together to work as shutter/curtain control.

To combine these 2 channels, complete the following steps manually:

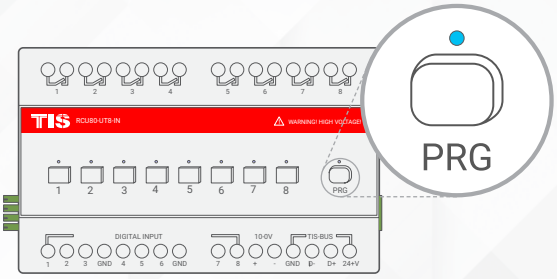
1 Press the PRG button for 3 seconds until the LED starts blinking rapidly.



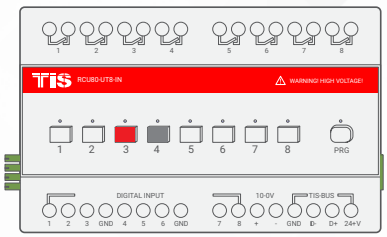
2 Short press on the first button and then the second button that you want to combine as curtain control; for example, CH3 and CH4.



3 Wait for few seconds until the PRG LED stops blinking.



4 Test by turning the first button ON and then the second button. Both buttons should not turn ON together. If you see that the first button is turning the other button off, that means that your buttons are successfully combined as shutter/curtain mode.



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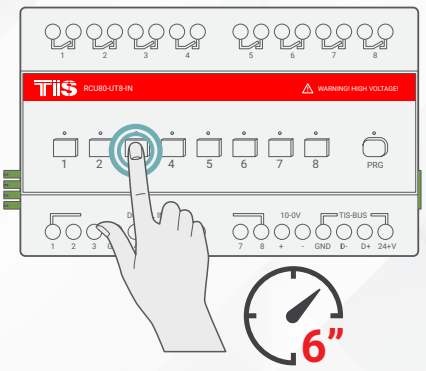
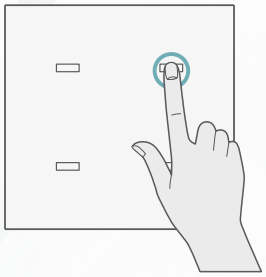
PAIRING (MANUAL PROGRAMMING)

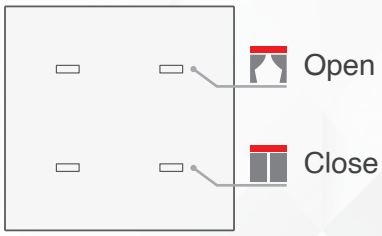
5 To program the curtain to any wall panel, press and hold the CH (Shutter-Open) button for 6 seconds. The LED indicator of the pressed button will start blinking,



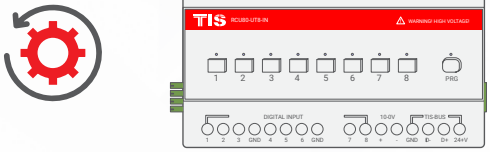
6 Short press on any button on the Luna, Mars, Terre or others wall panels.



7 Test the button on the panel by short pressing for open/stop. Do the same to program the Close channel with another button.



8 To cancel the curtain interlock and return to lighting mode, repeat steps 1-3 above.



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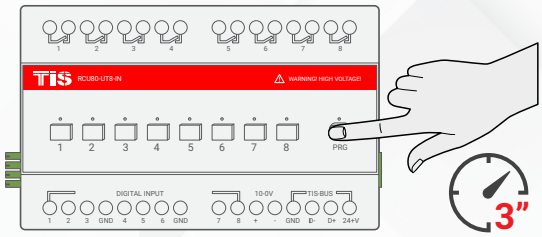
PAIRING (MANUAL PROGRAMMING)

FCU COMBINATION PROGRAMMING

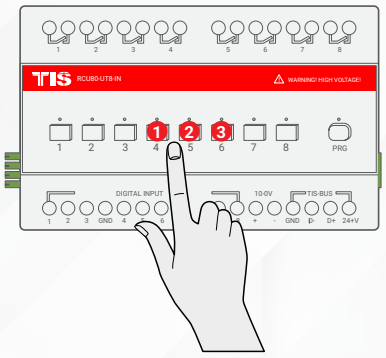
You can change any 3 channels in sequence like CH1-3, and CH4-6, to be combined (interlocked) together to work as FCU (Low, Medium, High).

To combine these 3 channels complete the following steps manually:

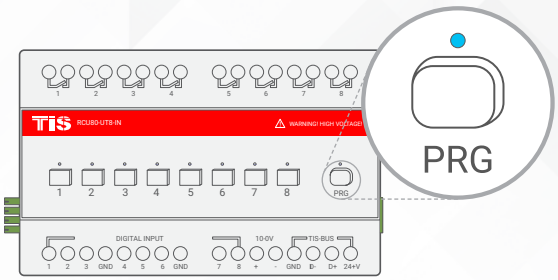
1 Press the PRG button for 3 seconds until the LED starts blinking rapidly.



2 Short press on the first button, then the second button, and then the third button that you want to combine as FCU; for example, CH4-6.



3 Wait for a few seconds until the PRG LED stops blinking.



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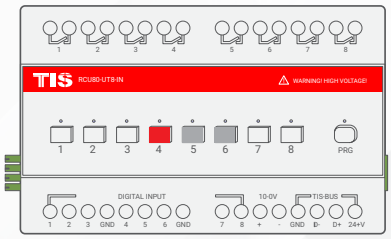
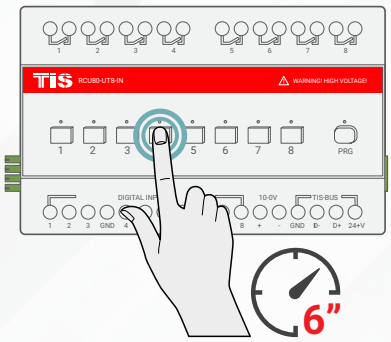
PAIRING (MANUAL PROGRAMMING)

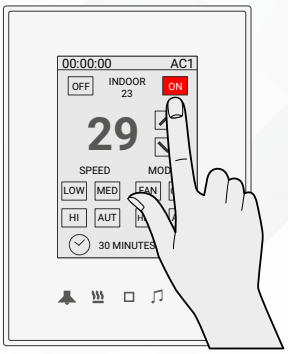
4 Test by turning the first button ON, then the second button, and then the third button. The buttons should not turn ON together. If you see that any button you turned ON is turning the other 2 buttons OFF, that means your buttons are successfully combined as FCU mode.



5 To program the FCU to any wall thermostat panel, press and hold the first Channel L (LOW) button for 6 seconds. The LED indicator of the pressed button will start blinking,



6 Go to the air conditioning page in your Luna TFT, Mars AC, Terre AC, or other thermostat panel, and turn the AC ON.



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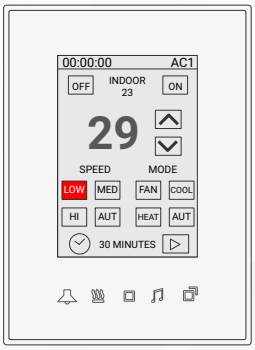
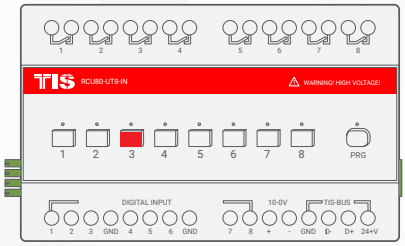
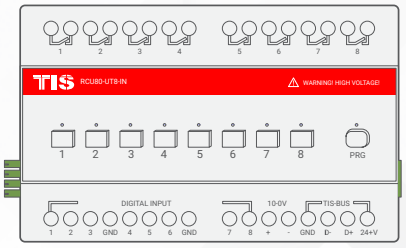
7 Test your air conditioning by changing the fan speed from low to medium to high. Your relay should respond accordingly.





8 To cancel the FCU interlock and return back to lighting mode, repeat steps 1-3 above.



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TROUBLESHOOTING

PRG Button Blinks Red Color Rapidly	**Reason:** The Module address conflicts with other device in TIS network, you need to press and hold the PRG button for 6 seconds so the module can get new address
Device PRG LED is not Blinking; Device not Powered	**Reason:** Device is not powered on; no TIS-BUS 24V supply connected to the device.
Device Button LED ON but lights not ON	**Reason 1:** Lights' neutral wire not connected **Reason 2:** Channel protection delay time is enabled in software.
Wall Panels can't Pair with the Device	**Reason 1:** TIS-BUS connection has a problem; check the wires and make sure there's not a short in the connection. **Reason 2:** Manual programming function disabled in the device (default is enabled).
Wall Panels can't Control the Device Channels	**Reason 1:** TIS-BUS connection has a problem; check the wires and make sure there's not a short in the connection. **Reason 2:** Programming address is wrong.
Dry input is not turning the RCU lights ON/OFF	**Reason:** Either the default setting in software or the RCU address has changed.
Channel is turning off by itself after few seconds	**Reason:** It is programmed as shutter / curtain combination, and running time is enabled in the software.

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