Emergency Temperature Output Function

Emergency Temperature Output (ETO) function is designed to provide a signal when an indoor unit is in error status or when the programmed high indoor room temperature limit has been exceeded. The ETO signal can be used to activate backup systems, provide a simple signal to a building management system, or to provide a simple visual/audible notification locally (ex: LED, buzzer, etc.).

ETO application requires:

- External Contact Interface Module (one per indoor unit)
- Additional field wiring and configuration of the systems

Application Example

- When a main indoor unit fails to operate, the backup indoor unit operates automatically.
- When a main indoor unit operates, but the room temperature does not approach the desired temperature for a certain period of time (delay set via option code), the backup/sub indoor unit operates automatically.

Control Logic (Cooling)

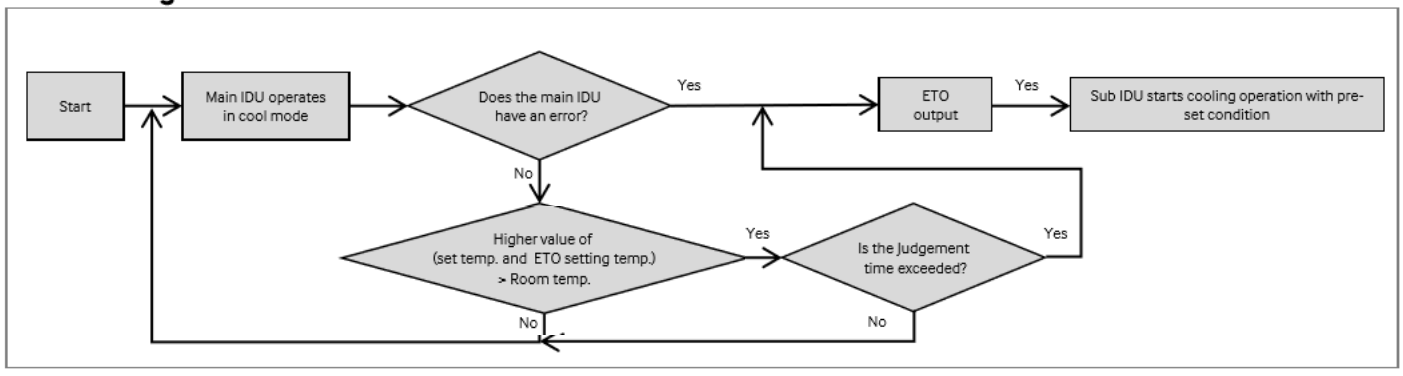
How it works (example assumes ETO is connected to a secondary indoor unit)

1. When the main indoor unit has an error, it signals the sub indoor unit to turn on

   OR When Room temp > higher value of ("Set Temp" AND "ETO Setting Temp") for a certain period of time (ETO judgement time), the main indoor unit signals the sub indoor unit to turn on.

2. When the sub indoor unit receives an ETO signal from the main unit, it turns on with programed settings set via TUT tool (mode, fan speed, set temp).

Control Logic



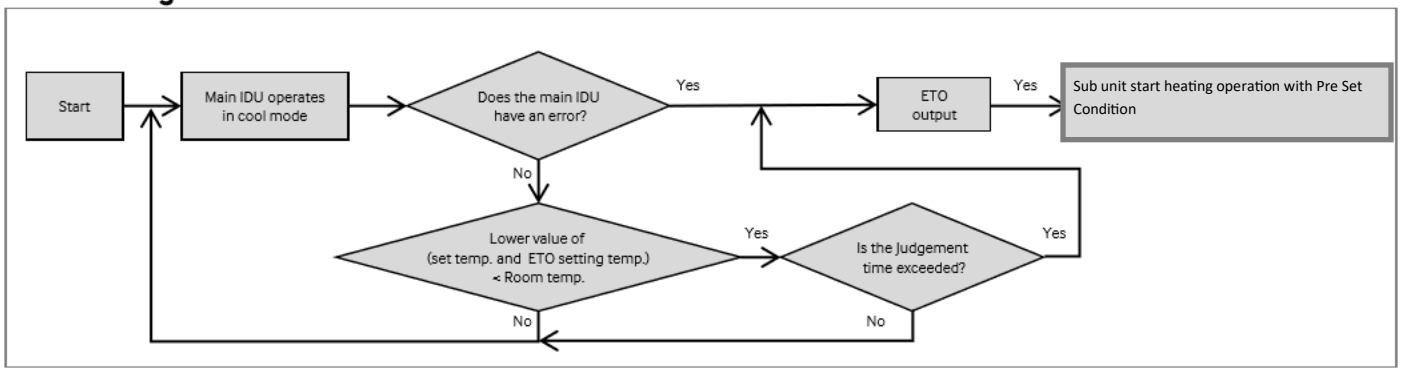
Control Logic Heating

How it works (example assumes ETO is connected to a secondary indoor unit)

1. When the main indoor unit has an error, it signals the sub indoor unit to turn on OR When Room temp < lower value of (“Set Temp” AND “ETO Setting Temp”) for a certain period of time (ETO judgement time), the main indoor unit signals the sub indoor unit to turn on.

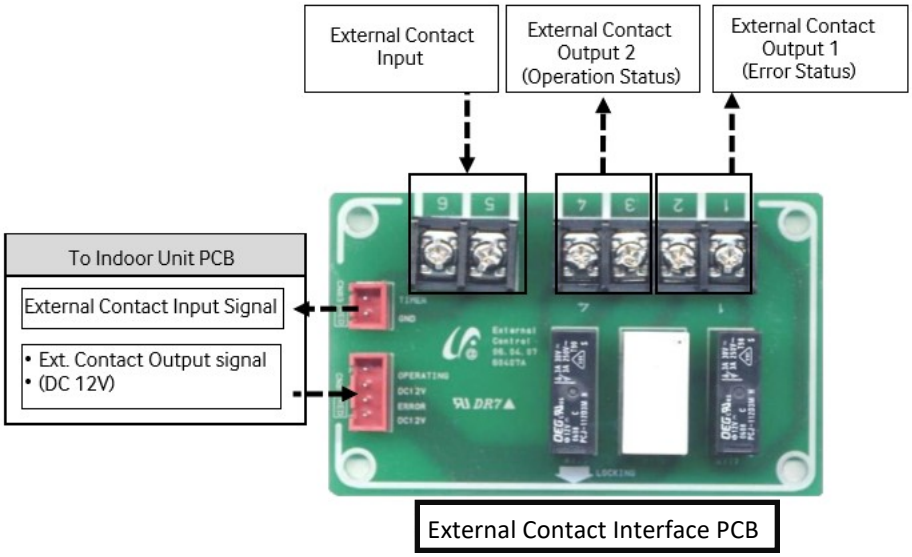
2. When the sub indoor unit receives an ETO signal from the main unit, it turns on with programed settings set via TUT Tool (mode, fan speed, set temp).

Control Logic



System Settings

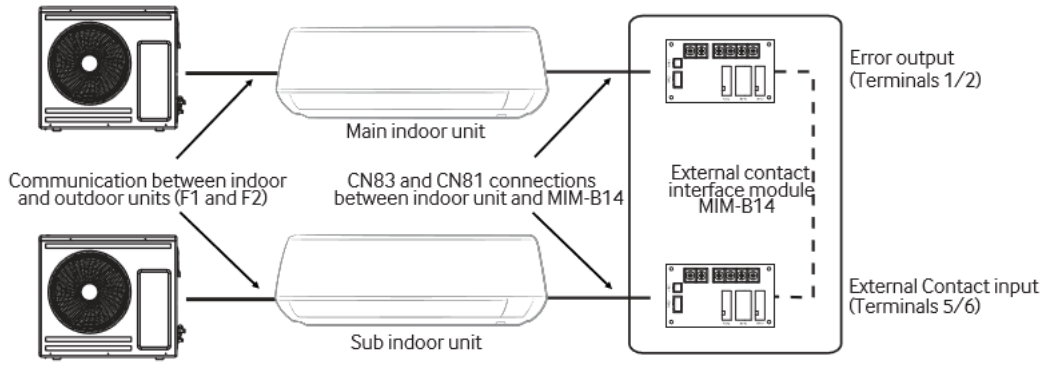
External Contact Interface board Terminal details



Wiring

1. Connect the External Contact Interface to each indoor unit (main and sub) using the provided cables o

2 Connect the main unit's External Contact Interface terminals 1 & 2 (error output) to sub unit's External Contact Interface terminals 5 & 6 (contact input)



ATTENTION: Do not connect F1-F2 from the main system to the sub system.**

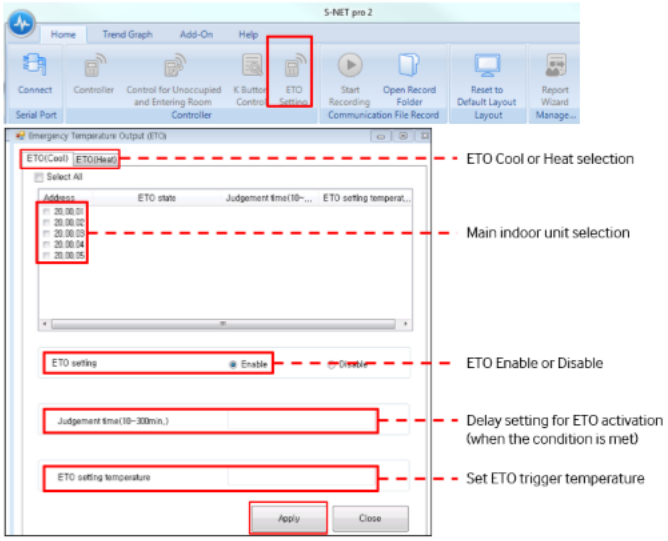
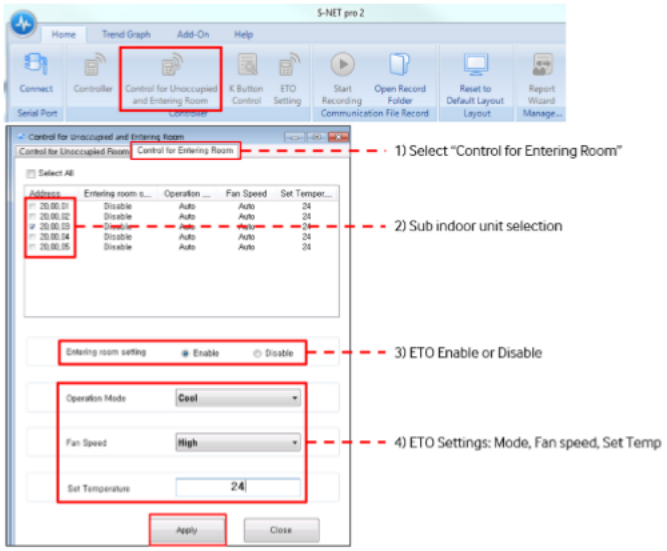
Option Code Setting

- To apply ETO, an indoor unit option setting change is required (02 series, segment 14)

Segment	Value	Description / Details	
Segment 14 Use of External Control	0	Disuse	Normal control • *Short* ⟶ *control signal ON* • *Open* ⟶ *control signal OFF*
	1	On/Off control	
	2	Off only control	
	3	On/Off control ("window" on/off)	
	8	Disuse	Reverse control • *Short* ⟶ *control signal OFF* • *Open* ⟶ *control signal ON*
	9	On/Off control	
	A	Off only control	
	B	On/Off control ("window" on/off)	

Detailed Option Settings (only available via TUT Tool)

- o Connect TUT Tool to F1 & F2
- o Set preferences (details in the chart below)

Main Indoor Unit	Sub Indoor Unit
a. From the menu bar, click 'ETO Setting' b. Select applicable units c. Enable ETO function d. Set preferences - Judgement Time: 10 ~ 300 mins - ETO Setting Temperature: 61 ~ 86°F [16 ~ 30°C]	a. From the menu bar, click 'Control for Unoccupied and Entering Room' b. Select applicable units c. Enable "Entering room setting" d. Set preferences - Operation Mode - Fan Speed - Set Temperature
	

Compatibility

To use the updated Emergency Temperature Output (ETO) function, a firmware update is required for indoor units manufactured before the dates listed in the below tables. Firmware updates can be done using TUT Tool service software). Please contact Trane Technologies Technical Support for updated firmware files.

Trane ProSpace Indoor Unit Firmware

Model Number	Model Type	DB Code	SW Version	Date Applied to Production
AM0**MNVDCH/AA, AM032MNQDCH/AA	Whisper Wall Mount A3050	DB91-01674A	190423	7/8/2019
AM0**KN4DCH/AA	360 Cassette	DB91-01742A	190308	3/19/2019
AM0**JNZDCH/AA	Multi-Position Air Handler (MPAH)	DB91-01509A	190405	7/26/2019
AM076FNHDCH/AA, AM096FNHDCH/AA	Big Duct (HSP)	DB91-01507A	190308	3/27/2019
AM0*JNESCH/AA	Outside Air Processing (OAP) Duct	DB91-01507A	190308	3/27/2019
AM0**FNCDCH/AA	Under Ceiling/Low Wall Mount Console	DB91-01507A	190308	3/27/2019
AM0**JNFDCH/AA	Floor Standing Unit (Concealed)	DB91-01507A	190308	3/27/2019
AM0**JNGDCH/AA	Floor Standing Unit (Exposed)	DB91-01507A	190308	3/27/2019
AM054JNHDCH/AA	High Static Pressure (HSP) Duct	DB91-01507A	190308	3/27/2019
AM0**FNLDCH/AA	Slim Duct	DB91-01507A	190308	3/27/2019
AM0**JNCDCH/AA	Big Ceiling	DB91-01684A	190424	7/8/2019
AM0**(M/R)NMDCH/AA, AM0**MNHDCH/AA	Duct S (MSP/HSP)	DB91-01889A	190423	7/8/2019
MCM-D211UN	Universal Communication Kit (UCK)	DB91-01823A	190423	7/8/2019
AM0**NN1DCH/AA	Wind-Free™[1] 1-way	DB91-01888C	190308	3/20/2019
AM0**(N/R)N4DCH/AA, AM0**NNNDCH/AA	Wind-Free™[1] 4-Way/Mini 4-Way	DB91-02029A	190313	3/27/2019

Trane C Series Firmware

Model Number	Model Type	DB Code	SW Version	Date Applied to Production
AC0**MNHDCH/AA	Slim Duct	DB91-01811A	170216	2017
AC0**KNLDCH/AA	Duct S (MSP/HSP)	DB91-01811A	170216	2017
AC0**MNADCH/AA, AC0**MNTDCH/AA	CAC Wall Mount	DB91-01810A	170330	2017
AC0**NN4DCH/AA	Wind Free™[1] 4 Way Cassette	DB91-01971A	171212	2018
AC0**KN4DCH/AA	360 Cassette	DB91-01731B	180623	2018