



Service

BULLETIN

S030c

June 2018

Occupancy Sensor Control

This Bulletin provides explanation of, and field instruction for, using an external input for start and stop operation of an indoor unit when using a 3rd party occupancy sensor. For complete I/O use and function, please refer to the applicable Indoor Unit Installation Manual and Design and Technical Manual, D&T.

Items required: (See also 2. Control Circuitry)

- (1) Fujitsu accessory part # UTY—XWZXZD
- (1) 3rd party occupancy sensor- Must provide NC (Normally Closed) dry contact

1. External input description

- a. Airstage indoor units provide an external input function that can be used to shut down and restart the indoor unit automatically upon occupied conditions detected by a 3rd party occupancy sensor. This is referred to as the “Operation / Stop” or “Start / Stop” function within the indoor unit Installation Manual and D&T.

Occupancy sensors may include, but are not limited to:

- Infrared (PIR- Passive Infrared)
 - Ultrasonic
 - Dual Technology (Both PIR and Ultrasonic)
2. Control circuitry- The 3rd party occupancy sensor is wired as an external input to the Airstage indoor unit control board. The 3rd party occupancy sensor must be equipped with a set of NC (Normally Closed) dry contacts.
- a. Fujitsu accessory- An external input accessory wiring harness is required:
 - i. UTY-XWZXZD
 - b. Control signal- The 3rd party occupancy sensor NC contacts are wired as an external input to the indoor unit connector, CNA02.

3. External input “Operation / Stop” sequence of operation- The Airstage indoor unit operates until an unoccupied condition is detected by the 3rd party occupancy sensor.
 - a. STOP- When the sensors normally CLOSED contacts open, the indoor unit is turned OFF, and EEV is driven to the fully closed (45P) position.
 - b. START- Indoor unit will resume operation when occupancy is detected and the sensor contacts close:

Input signal	Unit Operation
CLOSED	ON
OPEN	OFF

4. 3rd party occupancy control wiring- See Fig. 1, page 3.
 - a. Connect Fujitsu accessory UTY- XWZXZD to indoor unit control board connector CNA02 (connector locations may vary upon unit model number)
 - b. Wire the occupancy sensor NORMALLY CLOSED contacts to indoor unit connector CNA02 pins 1 and 3.
 - c. Wiring notes:
 - i. Use 22 AWG twisted pair wiring from the indoor unit to the DC relay (“Fujitsu Pink” Honeywell Catalog # 3254 acceptable)
 - ii. Cable maximum length from indoor unit to relay: 492’ (150m)
 - iii. Keep twisted pair wiring separate from line voltage wiring
 - iv. All accessory UTY-XWZXZD connections should be soldered and insulated or made with butt type crimp connectors.
 1. Wire nuts not permitted

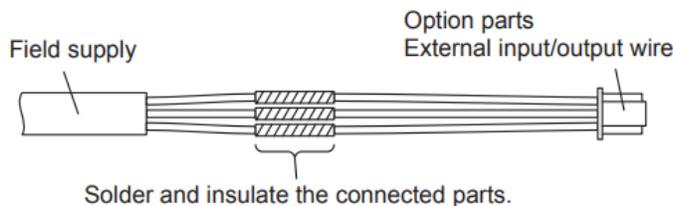
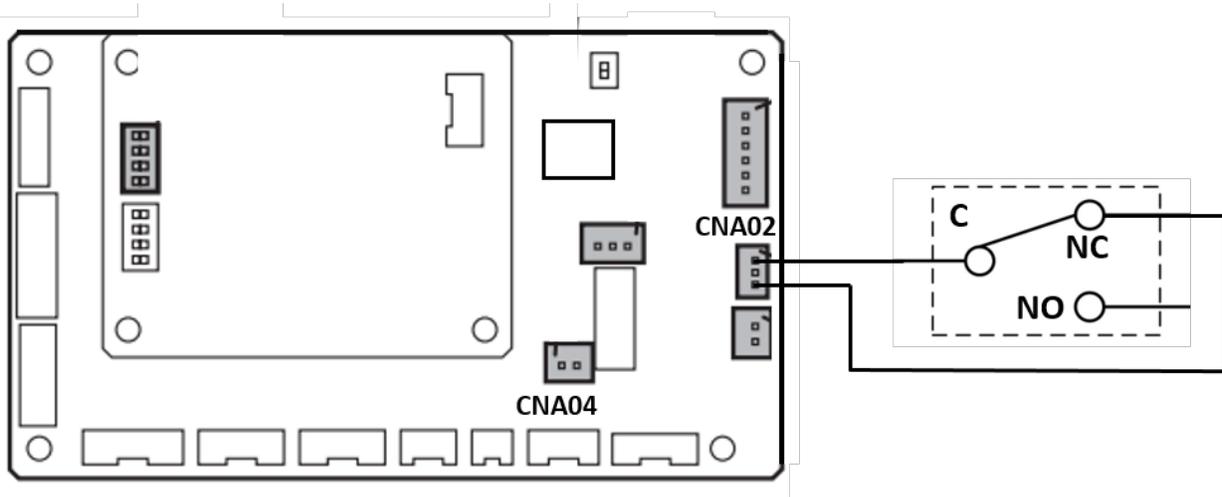


Fig. 1



5. Function codes- A function code change is not required to enable the “Start / Stop” feature of the indoor unit, however the setting should be verified.
 - a. Indoor unit function code change may be performed from either:
 - i. Wired Remote control
 - ii. Service Tool
 - b. Function code 46
 - i. Verify setting number to “00” for Start / Stop
 - ii. If setting has to be changed, cycle power at the indoor unit to enable the Function code.

External control	46	00	Start/Stop	○	Allow an external controller to start or stop the system, or to perform an emergency stop. * If an emergency stop is performed from an external controller, all refrigerant systems will be disabled. * If forced stop is set, indoor unit stops by the input to the external input terminals, and Start/ Stop by a remote controller is restricted.
		01	Emergency stop		
		02	Forced stop		



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6. Additional notes:

- a. D&T Manual for complete Operation / Stop set up and use details.
- b. Fujitsu General America is not liable for I/O control circuit design.

7. Additional indoor unit control option references:

Indoor Unit Function	Service Bulletin
Auxiliary Heat Control	S030a
3 rd Party Condensate Pump Shutdown	S030b
Occupancy Sensor Control	S030c
Proximity Sensor Control	S030d
Smoke Detector / Emergency Stop Control	S030e
Fresh Air / Exhaust Interlock	S030f
Indoor Unit External Error Notification	S030g

Application Engineering Bulletin	AE Bulletin
I/O External Input and Output Use	AE030

Please contact your local Airstage Distributor or Fujitsu General America Incorporated for technical assistance:

FGAI Technical Support- (866) 952-8324 8:00 a.m. – 8:00 p.m. EST, Monday - Friday