

**Interface for control  
ERV unit FUJITSU**

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# **TECHNICAL MANUAL**

**ERV-C**

**IMPROMAT**  
**KLIMA**

# Usage

The module can be used as the interface for 2 types of using:

## 1. Only heat recovery mode

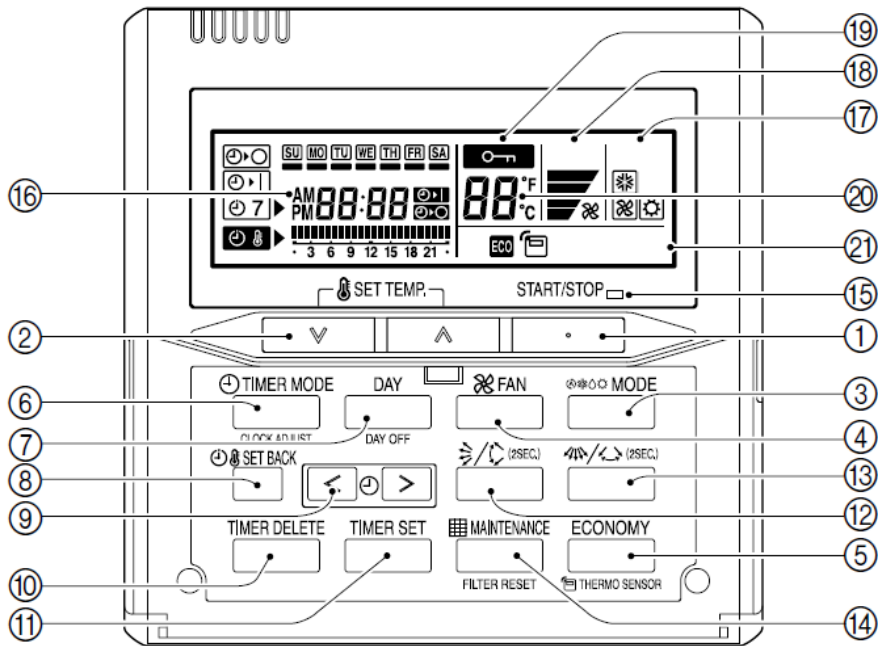
- the interface between ERV unit and the wired controller type RNKY
- Controller YUD can control the fan speed, the damper of free colling . The function of economical ventilation is available in case of avaiability of outdoor temperature sensor .

## 2. Together with duct type unit (N/A, under development)

# WIRING DIAGRAM



# Description of the buttons of remote controller



- |                                    |                            |
|------------------------------------|----------------------------|
| ① Start/Stop Button                | ⑬ N/A                      |
| ② Set Temperature Button           | ⑭ Filter Button            |
| ③ Master Control Button            | ⑮ Operation Lamp           |
| ④ Fan Control Button               | ⑯ Timer and Clock Display  |
| ⑤ Recovery ventilator ON/OFF       | ⑰ Operation Mode Display   |
| ⑥ Timer Mode (CLOCK ADJUST) Button | ⑱ Fan Speed Display        |
| ⑦ DAY (DAY OFF) Button             | ⑲ Operation Lock Display   |
| ⑧ SET BACK Button                  | ⑳ Temperature Display      |
| ⑨ Set Time Button                  | ㉑ Function Display         |
| ⑩ DELETE Button                    | 📄 Thermo Sensor Display    |
| ⑪ SET Button                       | ECO Recovery ventilator ON |
| ⑫ N/A                              |                            |

# Description of connection

## Upper terminal box (at the ERV unit):

- N** – neutral wire of module power supply
- DA** – controlling of the damper of ERV unit
- L** – live wire of module power supply
- HI** – controlling of fan speed (high speed)
- EH** – controlling of fan speed (medium speed)
- LO** – controlling of fan speed (low speed)

## Lower terminal box (at the ERV unit):

- (GND)** – earth wire for the contact FA
- FA** – external input for ON/OFF of ERV unit  
(connected – ON, disconnected – OFF)
- CM** – connection port for wired remote controller
- +12** – connection port for wired remote controller
- (GND)** – connection port for wired remote controller and ambient temperature sensor
- TH** – connection port for ambient temperature sensor

## INTERFACE

If the connection of an interface is „**only heat recovery**“ following functions are available at wired remote controller:

- button **START/STOP** (to start up the ERV unit)
- button **FAN** (to change the fan speed)
- button **ECO** (controlling of the damper for free cooling, if the ECO mode is ON – the heat recovery is on, if ECO mode is OFF, free cooling is running).
- function **TIMER** is available

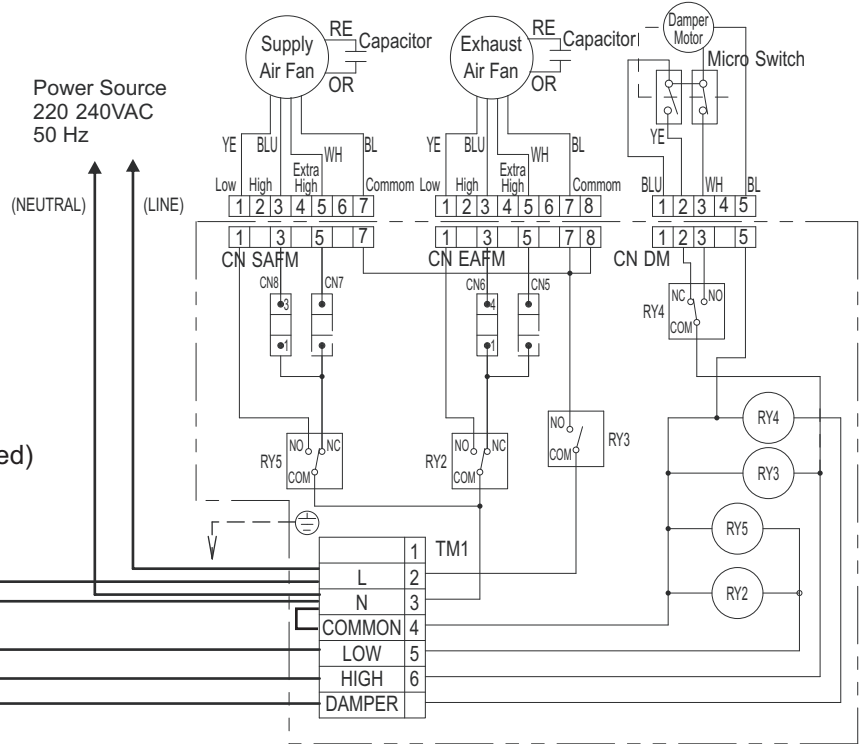
When the ambient temperature sensor is connected into ERV-C module, the function of economical ventilation is available. This function can be set by the button **MODE**. We can choose the following regimes:

- **Common service** (the propeller is lighting at a controller), ERV unit is working in „**only heat recovery** „ pattern.
- **Summer service** (the flake is lighting at a controller – cooling), the damper is automatically controlled. The required temperature is set on the controller. When the indoor temperature is higher that the set up one and the ambient temperature is lower than set up one, the mode free cooling is on.
- **Winter service** (the sun is lighting at the controller – heating), the damper is automatically controlled. When the indoor temperature is lower that the set up one and the ambient temperature is higher than set up one, the mode free cooling is on.

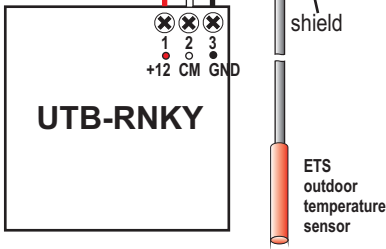
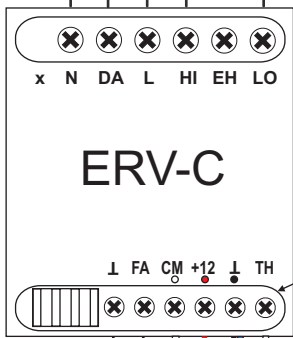
# WIRING DIAGRAM

## ERV-C connecting

- N – neutral wire of module power supply
- DA – controlling of the damper of ERV unit
- L – live wire of module power supply
- HI – controlling of fan speed (high speed)
- EH – controlling of fan speed (medium speed)
- is not used
- LO – controlling of fan speed (low speed)



External ON/OFF input



- ⊥ – common terminal for the contact FA
- FA – external input for ON/OFF of ERV unit (connected ON, disconnected – OFF)
- CM – terminal for wired remote controller (white wire)
- +12 – terminal for wired remote controller (red wire)
- ⊥ – common (GND) terminal for wired remote controller (black wire) and outdoor temperature sensor
- TH – terminal for outdoor temperature sensor