Fan Coil Controller
FC/S 1.1
Fan Coil Controller, MDRC

- Control of Fan Coil Units via EIB/KNX
- MDRC installation
- 6 modules width
- All connections: screw terminals
- Application: Heating and cooling with individual room temperature control
- Central boiler and cold water supply system
Structure of an HVAC system with fan coil units

- Fan coil units
- Hot water circulation loop
- Cold water circulation loop
- Boiler and cold water supply
Structure of a fan coil unit

- Valves
- Fan
- Motor
- Switch box with controller
- Drip tray
- Filter
- Heat Exchanger
Variants – Water Systems I

4-pipe version

- Separate water circulation loops for hot and cold water
Variants – Water Systems II

3-pipe version

- Separate inlet for hot and cold water
- Common return flow
2-pipe version

- One water circulation loop only

- Either hot or cold water depending on the time of the year or only cold water (heating via radiators)
Variants – Designs

- Compact units (including housing): upright, wall mounting, or ceiling mounting
- Built-in units (without housing): wall mounting, ceiling mounting, or floor mounting
- Circulating air units / mixed air units
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Outputs

- 1 output for heating
- 1 output for cooling (for electromotive or electrothermal valve drives)
- Output for fan motors with up to 3 speed levels via potential-free contacts
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Inputs

- Temperature sensor TS/K 1.1
- 2 binary inputs 24 V AC for:
  - window contact
  - drip tray monitoring (condensated water)
- Potentiometer

Other connections

- 230 V AC Power supply
- 24 V AC Auxiliary voltage for binary inputs
- EIB/KNX
Operation Modes

- Fan Coil / Convector
  (Heating and cooling)
  - Fan coil: Valve drive and fan control
  - Convector: only valve drive control

- 2-pipe / 4-pipe version
  - 4-pipe version: 2 separat valves for heating and cooling (two water circulation loops)
  - 2-pipe version: 1 common valve for heating and cooling (one water circulation loops)
    (Valve is connected to heating output)
Actual temperature

- Room temperature
  - local via temperature sensor TS/K 1.1
    (can be sent via EIB/KNX, cyclically or on change of value)
  - from room temperature controller via EIB/KNX
    (cyclically monitored)

- Outside temperature
  - via EIB/KNX
    (cyclically monitored)
  - for adjusting of set temperature
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Setpoint values I

- Base setpoint temperature
  (via parameter or communication object)
- Setpoint adjustment
  (via EIB/KNX or local via potentiometer)
- Optional: Setpoint correction depending on external temperature for cooling
- Insensitive zone between heating and cooling
Setpoint values II

- Reduced heating / increased cooling setpoint temperature for:
  - standby mode
  - night setback

- Temperature thresholds for frost and heat protection mode

- Limit setpoint values for heating and cooling

- Switching between comfort mode, standby mode and night setback via EIB/KNX
Connections

1. Power supply 230 V AC
2. Cooling valve
3. Heating valve
4. Fan (up to 3 levels)
5. EIB/KNX
6. 2 binary inputs 24 V AC
7. Temp. Sensor + Potentiometer
8. Auxiliary voltage 24 V AC for binary inputs
9. Test push button
10. Programming push button
11. Programming LED / Test LED
12. Test table