

MITSUBISHI ELECTRIC PAC-SE10TC-J

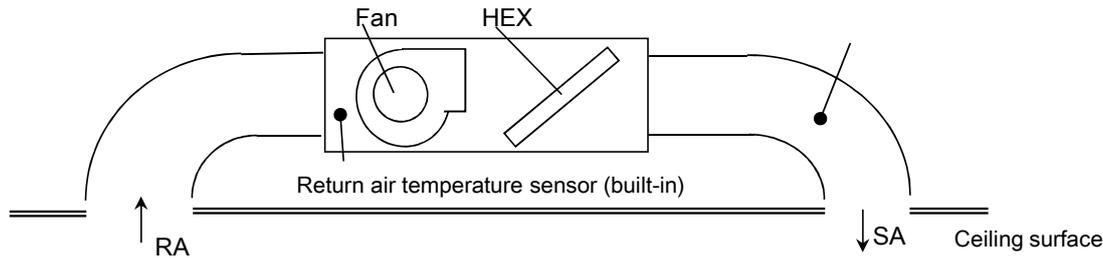
Air Conditioning For Building Application

Supply Air Temperature Control in Cooling

Installation Manual

Sensor configuration

Supply air temperature sensor [PAC-SE10TC-J (installed on site)]



Setting and the control methods

- The supply air temperature control function is enabled by setting the dip switch SW3-3 on the indoor unit to ON.
- Thermo-ON/OFF status is determined by the indoor unit thermistor (either the built-in thermistor on the unit or the one on the remote controller) just as it is during normal operation. Because the Thermo-ON/OFF status is not determined based on the supply air temperature, the units may stay in operation after the supply air temperature has reached the set temperature.
- The target supply temperature is settable from the MA remote controller or by using the function selection menu of the Maintenance Tool. It can be set to a temperature between 10 and 19°C in one-degree increments as shown in the table at right. (Initial setting: 14°C)
- The opening degree of the LEV on the indoor unit is controlled based on the differential between the supply air temperature setting and the actual supply air temperature. This control method decreases the refrigerant flow to the indoor unit as compared to the regular control method, resulting in a drop in the units' cooling performance.
- The supply air temperature control function is enabled only during cooling operation. During heating operation, this function will be disabled regardless of the enable/disable setting.

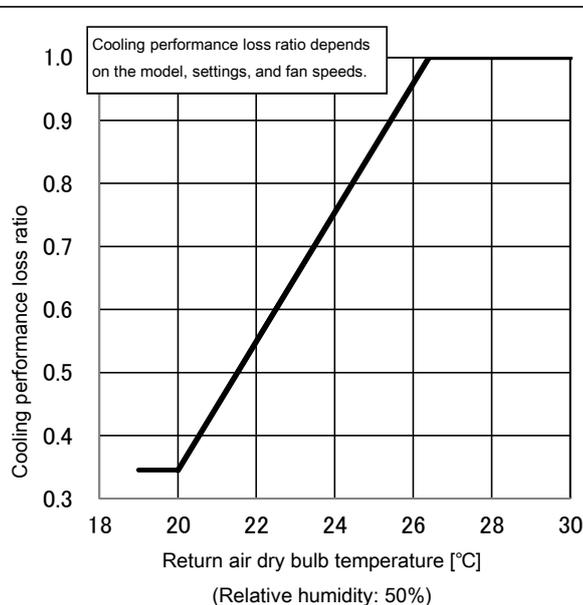
Target supply air temperature settings

Supply air temp. setting (Target supply air temp. (cooling))	Function setting No. 93	Factory setting
10°C	1	
11°C	2	
12°C	3	
13°C	4	
14°C	5	○
15°C	6	
16°C	7	
17°C	8	
18°C	9	
19°C	10	

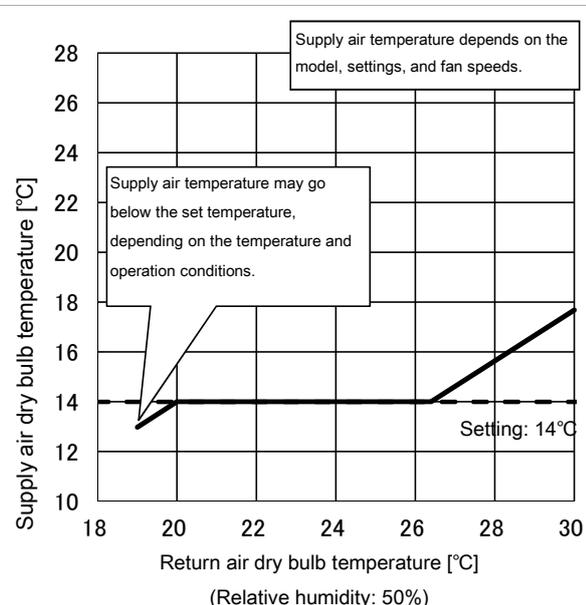
Performance loss while the supply-air-temperature control function is used

Supply air properties

Approximate cooling performance loss ratio when the supply air temperature control function is used (compared to normal control) (Supply air temperature setting: 14°C)



Approximate supply air temperature (Supply air temperature setting: 14°C)



Remarks

- Because the smallest capacity compressor on a given outdoor unit may still be too large for a given group of indoor units, it may not always be possible to maintain the target supply air temperature and the actual supply air temperature may go below the set temperature, depending on the temperature conditions and the operation conditions of other indoor units.
- If the return air temperature is high, the supply air temperature may go below the target supply air temperature.
- When the outdoor temperature is low or when the total capacity indexes of the indoor units is small relative to the capacity of the connected outdoor unit, the units tend to go into the heat-exchanger frost prevention operation, and the supply air temperature may become unstable.
- Supply air temperature of a given unit may temporarily become unstable immediately after startup or when other indoor units go on or off.
- If the fan speed is set to AUTO, supply air temperature may temporarily become unstable at the times of fan speed changes.
- This function is not available on the PUMY or HVRF series outdoor units.