PAR-U02MEDA

ADVANCED REMOTE CONTROLLER

PAR-U02MEDA Advanced remote controller

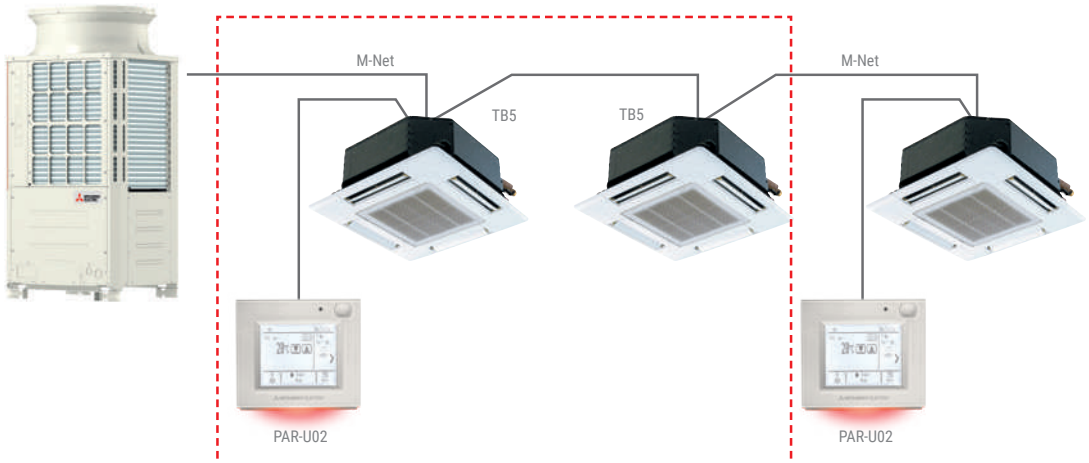
The Mitsubishi Electric Advanced remote control may be used to control up to 16 indoor units. While advanced, this controller also offers essential functions such as monitoring and controlling the status of the units in the system, and a weekly/hourly timer. Four integrated sensors (temperature, humidity, occupancy and light) allow a series of advanced adjustment and control functions. For example, the occupancy sensor can be used to save energy by configuring different modes based on the occupied/vacant status of each room.

- Large monochrome LCD touch screen display with white backlighting.
- Usable to manage 1 group of up to 16 indoor units.
- Integrated temperature, humidity, occupancy and light sensors.
- SMART energy saving and comfort functions.
- Contextual colour LED indicating operating status of indoor units.
- View and set setpoint temperatures in 0.5°C steps.
- Dual Setpoint function
- Internal weekly timer, daily timer and simplified timer (Auto-off, etc.) functions.
- ME M-Net addressing technology.
- Extended setting ranges for setpoints (Cool: 19-35°C; Heat: 5-28°C).
- New functions for use in conjunction with AHC Programmable Controller (PLC M-Net), for creating operating strategies with generic devices

Technical specifications

MODEL	DIMENSIONS (L X H X W)	WEIGHT	ELECTRIC POWER SUPPLY	M-NET UNIT POWER CONSUMPTION
PAR-U02	140 x 120 x 25 mm	300 g	17-32 VDC (M-Net connection)	0.5 M-Net unit

ARCHITECTURE



Groups of 2 indoor units

Temperature and humidity sensor

The integrated temperature and humidity sensor may be used to increase perceived comfort levels, while the ability to adjust the temperature with a precision of 0.5°C gives the user an even greater sense of control. The relative humidity sensor, combined with the ability to interlock the remote control with a programmable AHC controller, makes it possible to control humidity with external devices connected to the system via the AHC.

Occupancy Sensor

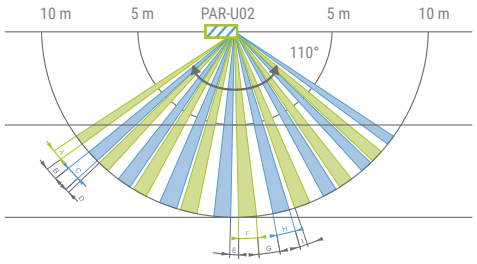
The occupancy sensor detects if a room is vacant and enables automatic control of the indoor units to implement energy saving strategies based on the effective occupancy of each room. The occupancy sensor enables the following energy saving functions:

- Switch indoor units ON/OFF based on occupied/vacant state of room;
- Fan speed control;
- Switch indoor unit from Thermo ON to Thermo OFF state;
- Configure temperature deviation based on occupied/vacant status.

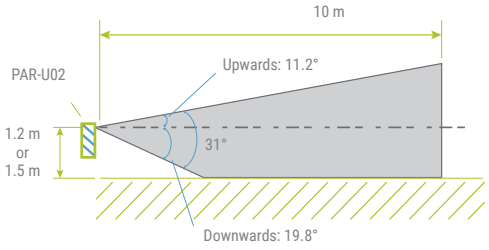
Light sensor

The light sensor measures the light levels in the conditioned room and adjusts the brightness of the remote control display accordingly.
Bright/dark thresholds may be set directly from the remote control over an extended luminosity range (1 to 65535 lx).
The light sensor is also used in low light conditions to confirm the occupied/vacant status of the room.

RADIAL MEASUREMENT UP TO 10 m



EXTENDED SPATIAL MEASUREMENT



Application 1: Splitting existing indoor spaces

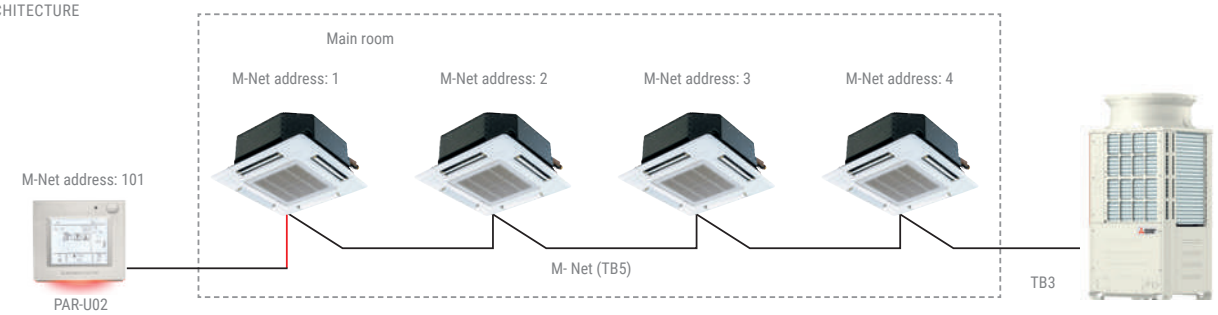
The need

- An existing indoor space is split into two spaces served by two indoor units each.

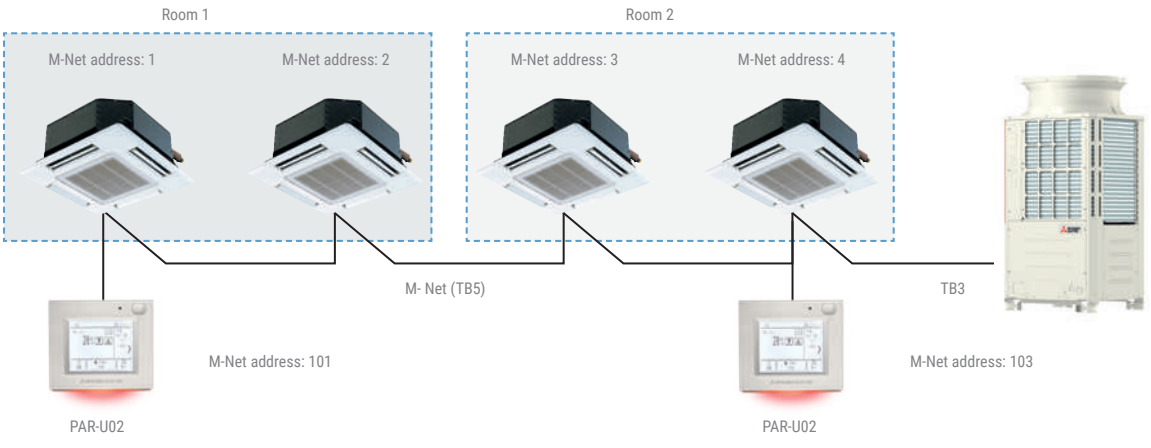
Solution

- The ME controller may be used to control the two spaces separately by adding a remote controller and reassigning the addresses of the two indoor units.

PREVIOUS ARCHITECTURE



NEW ARCHITECTURE



Application 2: Modifying Set-Point in relation to occupancy

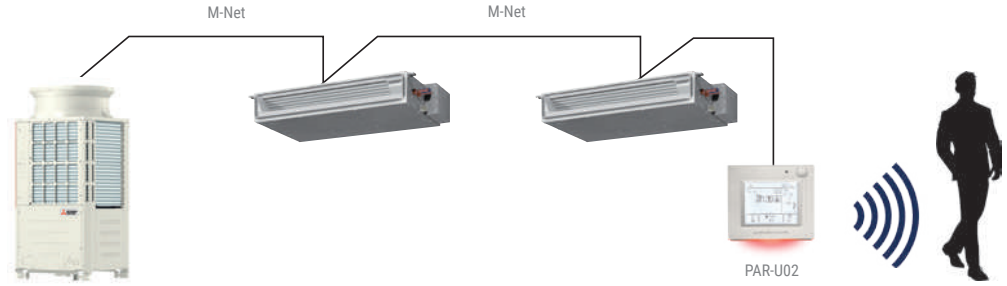
The need

• Occupancy-based set point adjustment is required for the indoor units in order to save energy while still ensuring the comfort of the personnel using the spaces.

Solution

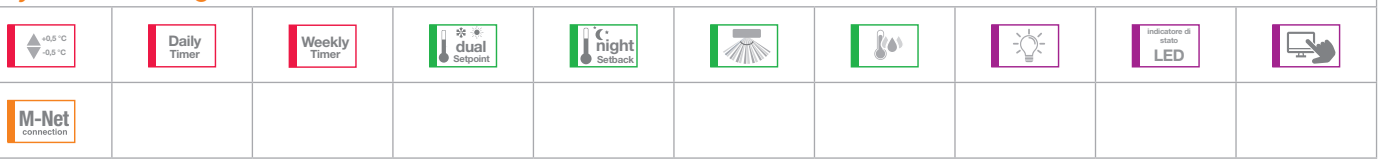
• The integrated occupancy sensor and the related operating logic enable occupancy-based control as shown in the following example:
- In summer: T° set to 22°C if space is occupied,
  T° set to 24°C if space is vacant.
- In winter: T° set to 21°C if space is occupied,
  T° set to 19°C if space is vacant.

ARCHITECTURE



This function may be set from the PAR-U02 controller, from the "Energy Saving" menu.

Key Technologies



FUNCTION	DESCRIPTION	SETTING	DISPLAY
ON/OFF	Switch between ON and OFF	○	○
Operating mode	For switching between cooling/dehum./fan/auto/heating modes	○	○
Temperature setting	Modify set temperature. The settable temperature range varies depending on the model of indoor unit.	○	○
Set speed	Modifies fan speed. Fan speeds available vary depending on the model of indoor unit installed.	○	○
Air flow direction	Modify direction of air flow. Selectable air flow directions depend on the model of indoor unit.	○	○
Enable/disable local operations	The following functions may be disabled from specific settings on the centralised controller: ON/OFF, select operating mode, set temperature, fan speed, air flow direction, reset filter indicator lamp. The relative icon is shown on the display when a function is disabled.	×	○
Error	Displays error with relative unit address. The following information may be displayed in the event of an error: indoor unit model, serial number, contact information (e.g. phone number of dealer). An error code may not be displayed for certain errors.	–	○
Weekly timer	Used to set weekly ON and OFF times. Time is settable in 5 minute steps. Up to eight operating patterns are available per day. Not available when Timer ON/OFF mode is active.	○	○
Timer	Used to set ON and OFF times. • Time settable in 5 minute steps. • Both ON and OFF times are settable. • Auto-OFF timer: Used to set Auto-Off time. • Time may be set within a range from 30 to 240 minutes in steps of 10 minutes.	○	○
Night Set-back	Temperature ranges and start/end times are settable for Night Set-back mode.	○	○
Occupancy sensor for energy saving mode.	Operation in energy saving mode is activated when the occupancy sensor detects that the room is vacant. Four control modes are available: "On/Off", "Set temp.","Vent", "Thermo-OFF". The light sensor may be used in conjunction with the occupancy sensor for more accurate detection of vacant room state.	○	○

○ Each group × Not available