Panasonic®

WRKT4100J5NC   ROOM CONTROLLER 8 DRY-IN / 6 RELAY-OUT RC100

WRKT4101J5NC   ROOM CONTROLLER 19 DRY-IN / 2 VOL-IN / 13 RELAY-OUT RC101

WRKT4100J5NC
WRKT4101J5NC   CE

⚠️ USB 2.0 compatible flash memory is supported

⚠️ Installation should only be carried out by a technical personnel having certificate of competency

Panasonic®

611072-EN

Product Components
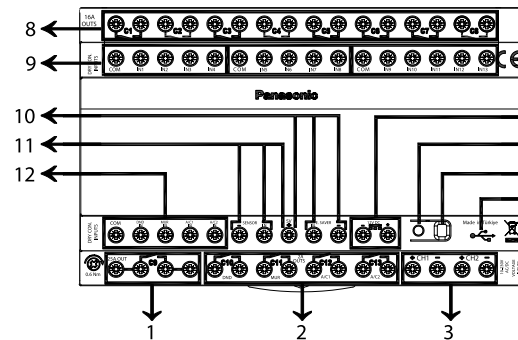

1. 25-A Output
2. 2-A Outputs (DND, MUR, A/C)
3. Wide Range Voltage Inputs
4. USB Port
5. Program Button
6. Status LED
7. 12V DC Input
8. 16A Outputs
9. Dry Contact Inputs
10. Energy Saver Connections
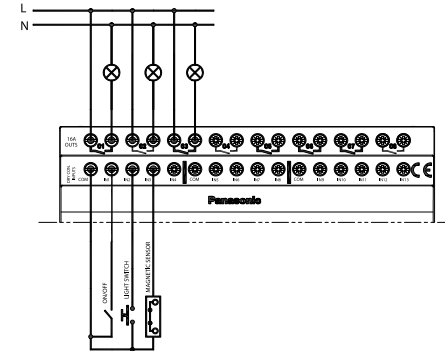11. Sensor Connections
12. DND MUR, A/C Inputs

Figure 1

Figure 3

For shutter / blind connections, inputs between IN1 - IN13 and outputs between C1–C8 can be used. An example shutter / blind connection diagram is shown in Figure 4.

Figure 4

Panasonic Room Controller contains 2 identical wide range (10–230V) voltage inputs (CH1, CH2). Each of them can be used separately. Using with DC voltage special attention should be paid to polarity. An example wide range voltage input connection diagram is shown in Figure 5.

General Information

Panasonic Room Controller is an input and output device designed to fulfil the automation requirements of a typical hotel room. The entire configuration of the hotel room can be easily done with the accompanying PC application (Room Controller Configurator), and this configuration can be uploaded to Panasonic Room Controller via a USB memory stick. USB interface also allows firmware updates. Printable configuration instructions document is generated by the PC application for the ease of installation. Panasonic Room Controller has outputs that supports 2A-16A and 25A loads for the control of the various devices and lighting. It has 13 dry contact inputs, 2 wide range voltage inputs (AC/DC), 1 motion/presence sensor input, 1 card holder input, 5V supply output for sensors and card holder, 1 DND/MUR interface, 2 air conditioning interface. It mounts on din-rail.

Main Features

• Energy Saving
• Switching – Lighting
• Shutter/Blind Control (AC)
• Digital I/O
• Wide Range Voltage Inputs (10-230V)
• Air Conditioner Control
• DND/MUR
• Logic Functions
• Master Off
• USB Configuration/Programming

Technical Information

Power	
Operating voltage	12V DC (±%5) SELV
Power consumption	<3W (RC100) <6W (RC101)
Environmental conditions	
Ambient temperature	-5 C …+45 C
Storage temperature	-10 C … +55 C
Transportation temperature	-25 °C … +70 °C
Ambient humidity	5…93% (non-condensing)
Housing	
Dimensions (HxWxD)	90mmx143.8mmx69.8mm
Mounting (IEC60715)	35 mm top-hat rail (TH35)
Mounting width	DIN rail 144mm (8 modules)
Connection type	Screw terminal Single wire: 1,5mm²…4mm² or 2x1,5mm²…2x2,5mm² Stranded wire without ferrule: 0,75mm²…4mm² Stranded wire without ferrule: 0,5mm²…2,5mm²
USB PORT	USB type A female connector
Weight	0.37 kg (RC100) 0.55 kg (RC101)
Input & Output	
High Range Voltage Input	2ch isolated 10-230V AC/DC Inputs (RC101)
Dry Contact Input	8ch dry contact inputs (RC100) (2 general + 4 dedicated + 1 PIRSensor + 1 Energy Saver) 19ch dry contact inputs (RC101) (13 general + 4 dedicated + 1 PIRSensor + 1 Energy Saver)
Energy Saver and PIR Sensor Power Output	5VDC 100mA, for supplying energy saver unit (Panasonic devices) and PIR Sensor both.
Relay Outputs Normally Open, Potential free, μ –contacts, Monostable	4x 2A 230 V AC 50/60 Hz, 2A (PF=1) C10, C11, C12, C13 (RC100 / RC101)
	1x 16A 230 V AC 50/60 Hz, 16A (PF=1), max. inrush 80A/20ms C1 (RC100)
	8x 16A 230 V AC 50/60 Hz, 16A (PF=1), max. inrush 80A/20ms C1, C2, C3, C4, C5, C6, C7, C8 (RC101)
	1x 25A 230 V AC 50/60 Hz, 25A (PF=1) C9 (RC100 / RC101)
Physcal Interface	
USB 2.0 port	1 USB type A female. (for Updating firmware and device configuration.)
Electrical safety	
Protection type (IEC60529)	IP 20
Pollution degree (IEC60664)	2
Protection class (IEC61140)	II
Overvoltage category (IEC60664)	III
Standards	
EMC/LVD	EN 60669-2-1

Product Versions

Product Features	WRKT4100J5NC	WRKT4101J5NC
Energy Saving	√	√
Switching – Lighting	√	√
Shutter/Blind AC	–	√
Digital I/O	√	√
High Range Voltage Inputs	–	√
Air Conditioner Control	√	√
DND/MUR	√	√
Logic Functions	√	√
Master Off	√	√

Connection

All the input output relations of Panasonic Room Controller can be configured via Room Controller Configurator PC application.
For the energy saver card holder dedicated interface and 5 V power supply can be used. Connection diagram of energy saver is shown in Figure 2.
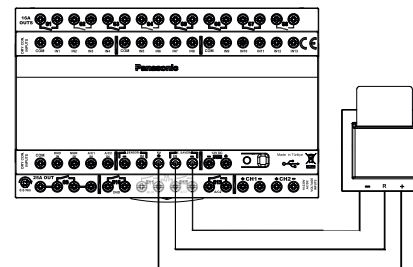

Figure 2

For the Lighting and Digital I/O connections, inputs between IN1 - IN13 and outputs between C1-C8 can be used. An example lighting connection diagram is shown in Figure 3.
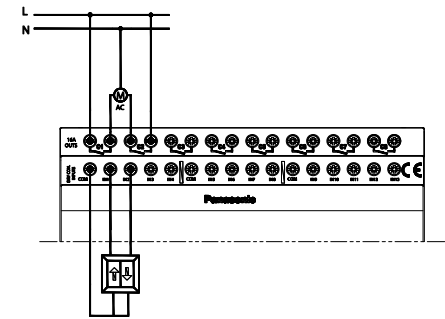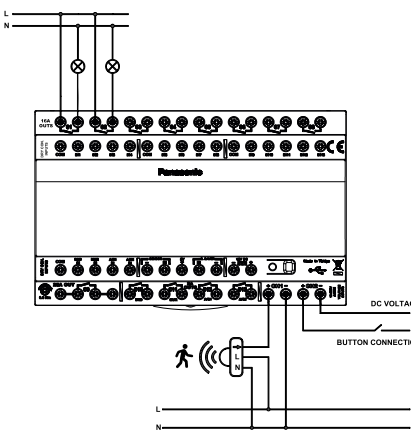
Figure 5

Panasonic Room Controller can control up to two air conditioner thanks to its 2 identical sensor inputs (A/C1 IN, A/C2 IN) and 2 identical control outputs (C12, C13). Also motion/presence sensor input (SENSOR) can be used for the occupancy detection in the room. An example air conditioner connection diagram is shown in Figure 6.
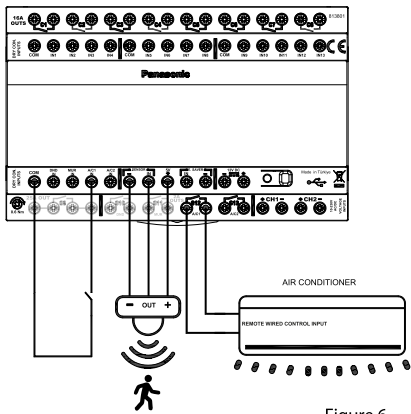

Figure 6

Panasonic Room Controller contains dedicated input and outputs for Do Not Disturb (DND) and Make Up Room (MUR) functionalities. DND input (DND IN) and MUR input (MUR IN) and respected outputs C10 (DND) and C11 (MUR) can be used to interface DND/MUR. Also an optional doorbell output can be connected to outputs C1-C8. An example DND/MUR connection diagram is shown in Figure 7.
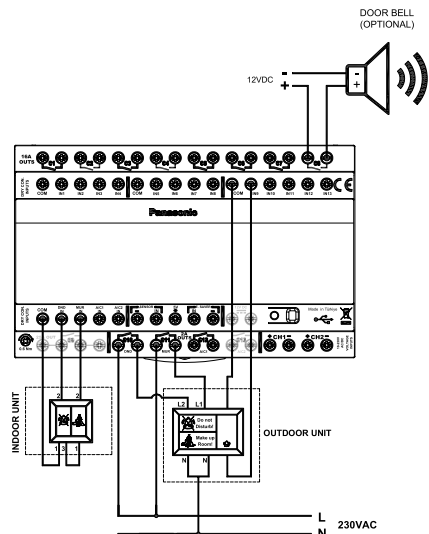

Figure 7

For the Master Off functionality, inputs between IN1 - IN13 and outputs between C1-C8 can be used. An example master off connection diagram is shown in Figure 8.
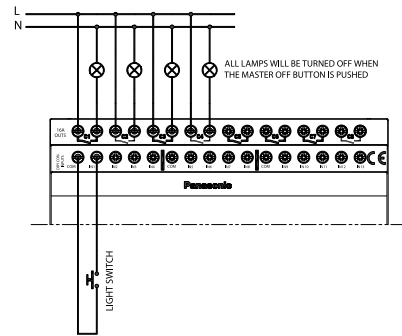

ALL LAMPS WILL BE TURNED OFF WHEN THE MASTER OFF BUTTON IS PUSHED

Figure 8

Device Behavior

Factory Default / Normal Operation

In the delivered state, the device comes without any configuration. Please use "Room Controller Configurator" to create a configuration and upload it to the device. In normal operation of the device, LED colors identifies the errors and faults as shown in the following table.

LED STATUS		
	No Configuration (Factory Default)	Sequentially red and green LEDs blink in 500ms period
	Normal Operation	Green LED is constantly ON
ERROR	High/Low Supply Voltage	Red LED is constantly ON
ERROR	Energy Saving / PIR Sensor Short Circuit	Yellow LED is constantly ON
	USB Error (Read/Write, Invalid Folder, Short Circuit)	Red LED is constantly ON for 5-sec then turns to the last status

Configuring / Firmware Updating

User has to upload a configuration by using the accompanying PC application (Room Controller Configurator), and this configuration can be uploaded to Panasonic Room Controller via a USB memory stick. USB interface also allows firmware updates. All these operations can be realized using the button and following the status LED indicators on the device. There are 2 menu items of the device, which are Configuration Upload and Firmware Update.

| Mode Selection	Button Status	LED Status
Inserting Menu	Long Press (More than 3-sec)	Green LED blinks in 500 ms period
Changing Menu Item	Short Press (Less than 1-sec)	LED color changes to the color of the next item
Confirming the Action	Long Press (More than 1-sec)	LED blinks in 100 ms to the color of the selected item
Exiting Menu	No operation during 5-sec	LED, turns to last status before menu selection

Device menu can be reached with long press. (more than 3-sec) Inside the menu short presses (less than 1-sec) will allow user to switch between the menu items. Every menu item is identified with a color code that is mentioned below. After the required menu item is selected long press (more than 1-sec) will confirm the action. If the action is successful LED will blink rapidly in 100 ms to the color of the selected item and the device will restart. If a failure happens during the menu operations, LED will stay in red for 5-sec and the device will turn back to last status before menu operations.

Item No	Menu Item Name	Color of the Item
1	Configuration Upload	Green Blink
2	Firmware Update	Red Blink

Configuration Upload: Using this device menu action, configuration created by Room Controller Configurator application can be uploaded to the device via USB memory stick. To indicate that the device is in this mode LED flashes in green color. USB memory stick that contains the configuration file should be inserted before confirming the configuration upload action with 1-sec-long press.

Firmware Update: Using this device menu action, firmware of the device can be updated via USB memory stick. To indicate that the device is in this mode LED flashes in red color. USB memory stick that contains the firmware file should be inserted before confirming the firmware update action with 1-sec-long press.

Dimensions

143,80

90,00

69,80
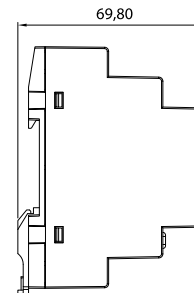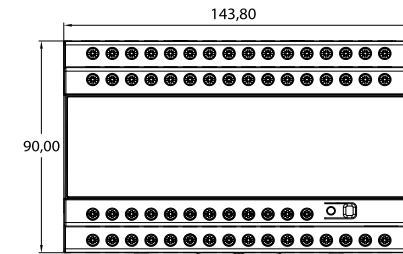
Notes

• Protect the device by using a circuit breaker at the declared current values at the relay outputs.
• Do not disassemble, repair or modify this device.
• For mounting use an appropriate equipment according to IEC60715.
• Installation only on a 35 mm DIN rail (TH35).
• Installation only in distribution boards and enclosed housings.
• When product is no longer use, it must not be left in place and it must be removed.
• Only SELV (12V DC) type external power supply have to be used.

WARNING

• Ensure that the power is cut off before the assembly of the products.
• Connection and assembly of the electrical devices should be carried out only by the technical personnel having certificate of competency.
• No responsibility is assumed for the entire of the malfunction, accident and loss arising from the assembly or interference of the persons not having the competency certificate.
• Use dry or slightly damp cloth to clean the buttons, cover and frame of the product. Never use alcohol, cologne, detergent or other similar chemicals for cleaning. Do not perform wet cleaning do not contact the product with water when the product is energized.
• In case the surface to which the product is connected is dyed, store the product by removing its cover and the frames.
• Keep the product away from the damp or wet environment during the transportation and shipping.
• It is intended for indoor use only.

Service and Guarantee

• Warranty period starts as of the delivery date of the product and it is 2 years.
• Warranty covers the malfunctions likely to occur due to the manufacturing defects of the product and within the warranty period.
• The product including all of its parts is under waranty as a whole. If the product turns out to be defective, the consumer can use one of the following rights stipulated in Article 11 of Consumer Protection Law no. 6502;
a- Withdrawal from the contract
b- Demanding discount from sales fee
c- Demanding free repair,
d- Demanding the replacement of the sold one with a fungible one free from defects. In case the consumer chooses the right of free repair among those rights; the dealer is obliged to repair the product or have the product repaired without claiming any fee under the name of replaced part fee, labor cost or for any other reasons. The consumer can also use the right of free repair against the manufacturer or exporter. The dealer, manufacturer and exporter are jointly and severally liable for the usage of this right by the consumer.
• In case the consumer uses the right of free repair and if the product
- Fails within the warranty period again and
- The maximum period required for the repair is exceeded and
- Authorized service station, dealer, manufacturer or exporter state that it's not possible to repair the product in a report, the consumer can demand the return of the product fee, fee discount at the ratio of the defect or the replacement with the one free of defects, if possible, from the dealer. The dealer can not reject the demand of the consumer. In case this demand is not met, the dealer, manufacturer and exporter shall jointly and severally be held responsible.
• The repair period of the product can not exceed 20 business days. This period starts on the notification of the failure on the product to the authorized service station or the dealer within the warranty period and from the date of delivery of the product to the authorized service station out of warranty period. In case of not eliminating the product malfunction within 10 business days, manufacturer or importer is obliged to dedicate another product with similar characteristics to the use of the consumer until the completion of the product repair. In case the product fails within the warranty period, elapsed time is added to the warranty period.
• Usage of the product contrary to the rules stipulated in user's manual, operating out of determined voltage, current and environmental conditions, damage on the cable connection due to the user's fault and failure of the product due to the facts arising from the fire, flood, earthquake, lightning and similar disasters are not under warranty.
• The consumer can apply to the arbitration committee for consumers or the consumer court where the consumer operations are made or in the residential area for the disputes to be occurred regarding the usage of the rights arising from the warranty.
• In case the dealer doesn't provide this certificate of warranty, the consumer can apply to the General Directorate of Consumer Protection and Market Surveillance of Ministry of Customs and Trade".