# RR-WDU
# Universal Digital Timer & Flasher

## 1. INTRODUCTION

RR-WDU is microcontroller based multifunctional timer. Device has four different selectable operating modes. Time adjustment range is from 0.01 sec. to 99 min. and from 1 sec. to 99 hours for RR-WDU.

## 2. USAGE OF RR-WDU

For getting better performance, the operation mode and time adjustments must be set after mounting.
**Operation Mode:** The device has four operation modes;
**P1:** On-Delay Timer
**P2:** Off-Delay Timer
**P3:** On-Delay Flasher
**P4:** Off-Delay Flasher

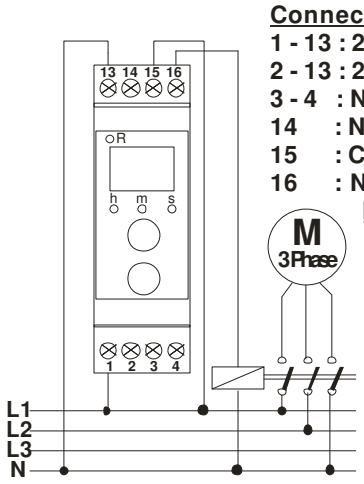
Operation mode can be selectable by using ↓ or ↑ buttons. If user keeps pressed ↓ or ↑ buttons for 5 second, the current operation mode will be displayed on the screen. User can choose one of P1, P2, P3, P4 operation modes and waits for 3 second to set the selected operation mode. When the display flashes the screen, the selected mode is stored in memory.
***The operating mode is changed, the power cut must be given again.***
**Time Setting:** After having the operation mode been set, ↓ or ↑ buttons are both pressed at the same time.

"h" LED will start blinking to inform that "hour" is going to be set. By using ↓ or ↑ buttons, the desired "hour" setting can be programmed from 0-99h Keep waiting for 3 seconds will allow the second "h" LED will be turned off and the minute "m" LED be started blinking In Following, the user can set "minute"(m) setting from 0-99 min. Keep waiting for 3 seconds will allow the minute "m" LED will be turned off and the second "s" LED be started blinking. In following, the user can set "second" (s) from 1-99 sec.

By using ↓ or ↑ buttons, the desired "time" setting can be programmed and keep waiting for 3 seconds. "m" and "s" LED will start blinking to inform that desired "time" is going to be set. The millisecond "ms" LED be started blinking. In following, the user can set "millisecond" (ms) from 1-99 min. By using ↓ or ↑ buttons, the desired "time" setting can be programmed and keep waiting for 3 seconds.The required time setting steps can continue as for time adjustments if provided that P1 or P2 programs are chosen. If P3 or P4 programs are chosen, two time setting must be required as operating and standby mode. User can apply above setting step is repeated one more time then the time adjustment is completed. New values to be active after completion of the setting operation should be wait to complete the last running program or device should be interrupted and then restored energy.

Device 100 milliseconds can be achieved with the shortest time (0.1s), the longest time is 100 hours. second = 1000 milliseconds. When setting of the value in milliseconds on the screen multiplied by 10. e.g. 500 milliseconds is desired to set the "m" and "s" LEDs flash on the screen when the value is set to 50. 50x10ms = 500ms.

## 3. CONNECTION DIAGRAM




**Connection Terminals:**
**1 - 13 : 220V AC**
**2 - 13 : 24V AC-DC**
**3 - 4 : Not Used.**
**14 : Nominal Close(NC)**
**15 : Common(C)**
**16 : Nominal Open(NO)**

**Product Scale Information:**
**h : Hour**
**m : Minute**
**s : Second**
**ms : Milisecond X 10**

**Figure -1** Connection Diagram

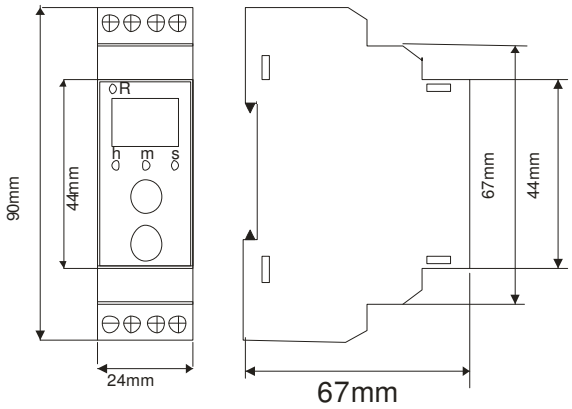
## 4. TECHNICAL SPECIFICATIONS

| | |
|---|---|
| **Operating Voltage (Un) 1, 13** | 220VAC 1Phase + 1Neutral |
| **2, 13** | 24VAC-DC |
| **Operating Range** | (0.8-1.2)xUn |
| **Operating Frequency** | 50/60 Hz |
| **Time Selection** | 0,1 sec.-100 Hours. |
| **Contact Output** | 250VAC 5A, 24VAC-DC 5A |
| **Display** | 2X7 Segment LED display |
| **Mounting Type** | Rail mounted |
| **Protection Class** | IP 20 |
| **Plastic Material** | V0 Nonflammable |
| **Operating Temperature** | -25ºC … +65ºC |
| **Weight** | 90 gr. |

## 5. SAFETY & WARNING INSTRUCTIONS

- Turn off power during connection/wiring.
- Check correct mains voltage/wiring terminal.
- Installation shall only be performed by qualified personnel.
- Do not use any solvent or alike for cleaning.

## 6. MECHANICAL DIMENSIONS

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