

## **UAT MTP**





# Active day and night

**Design and Produce by MTP(Manufactory)** 

**Yours Speed Radar Sign** 

with Simple Face with Message:

THANK YOU &
SLOW DOWN



### MTP POLAND sp.zo.o

NIP: 5252655683 REGON: 364224743 KRS: 0000612101

| Technical Specification        |   |  |
|--------------------------------|---|--|
| Dimension                      | Size : 60*208*5cm   |  |
| Weight                         | 20Kg  |  |
| Body Material                  | Aluminum black color Electrostatic powder coated                                    |  |
| Solar power                    | 50 Watts, Life time more than 20 years  |  |
| Battery                        | Internal 12-volt, 36 Ah, sealed lead acid   |  |
| Display model                  | 2 digits with 7 segment LED board<br>And Face                                       |  |
| LED quantity                   | 396pcs Super high bright  |  |
| LED Color                      | 198pcs Red + face SLOW DOWN<br>198pcs Green + face THANK YOU                        |  |
| LED Life                       | More than 100,000 Hours   |  |
| Light luminous                 | 8000mcd   |  |
| Light Intensity                | Automatic regulation light intensity in day and night (day intensity 5 times night) |  |
| Light Increment                | Charge controller with microcontroller  |  |
| Radar                          | CW Doppler device operating in the K-Band (24GHz)                                   |  |
| <b>Speed Detection Rang</b>    | 1km/h – 99km/h  |  |
| <b>Detection distance</b>      | ≤100m   |  |
| Response Time                  | ≤5ms  |  |
| Working time after full charge | 4 days  |  |
| Visible distance               | More than 100m  |  |
| Angle                          | 100 Degree  |  |

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| Reflective sheet | 3M |
|------------------|----|

#### **Features**

Uses Solar Energy as source of electricity.

Display effects includes active flash & passive reflection

The light pattern delivers a synchronized or sequential visual effects which will not make drivers feel glare; instead, drivers can be informed his speed.

Inside key switch control, If turn on, all system will function (solar panel, LED light, charging) and opposite function for turn off.

#### **LED**



LED's are identified very well and amount of their desired life is 100.000 hours in lawful range for traffic light and traffic signals and its light intensity is 8000mcd.

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## **Battery**



**Sealed Lead Acid batteries** of 2×12v 18Ah (36Ah), having desired life of 5 years.

## **Solar Panel**



| SILICON SOLAR PV MODULE |                                 |  |
|-------------------------|---------------------------------|--|
| Model                   | SA- 50P                         |  |
| Pm                      | 50watt                          |  |
| Vmp                     | 18 <b>V</b>                     |  |
| Imp                     | 2.5A                            |  |
| Voc                     | 21. 24V                         |  |
| lsc                     | 3.3A                            |  |
| Dimension               | 50*60*3cm                       |  |
| Max System Voltage      | 1000V                           |  |
| Test Condition          | AM1.5 1000W/m <sup>2</sup> 25°C |  |

**Solar panel** is 50W, 17v 2.5A, with the efficiency of %16

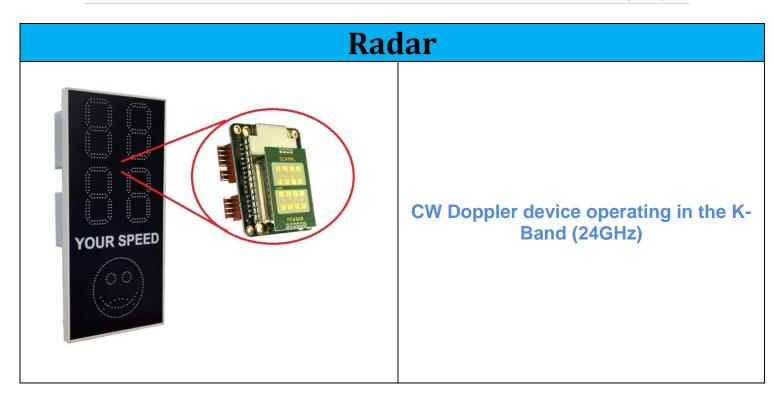
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## **Intelligent Microcontroller System**



- Measuring voltage of battery, solar panel, charge current and related measuring.
- Light Regulation and optimization of consumption, according to charge current (environmental light) and battery voltage and solar panel.
- Neutralizing of change effects of battery voltage in light illumination of flashing light.
- Preventing of battery over charge and undesired de-charge of battery and neutralizing effect of heat.
- Using modulation of PWM for changing light illumination.
- Probability of performing all changes, according to orders of buyer, (Software changes).
- Working time, without any charge and with full battery is almost 4 days.
- Charging time for empty battery is 18 hours in light, in case of performing operation, and 14 hours without any operation.
- Maximum exited rates (day) into its minimum (night) is 5 to 1 and (it is changeable, on the basis of order).

Controller circuit is considered in a separated package.



| Other Spare Parts |                              |
|-------------------|------------------------------|
|                   | 5-inch house clamp           |
|                   | 3-inch Stainless Steel Clamp |

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## **Installation Guide**

#### **Installation:**

#### **Seven Steps to Installation:**

- 1- Prepare U clamp and round clamp and tools,
- 2- Put U clamp into U channel stand on the rear of sign,
- 3- Install sign board on the horizontal or vertical pole by U clamp,
- 4- Install Solar Panel on the pole with round clamp (face of solar panel should be in south side),
- 4- Connect Solar cable Socket to control box Socket,
- 5- Turn ON main switch which is below of battery box,
- 6- Adjust speed limit by push button which is below of control box, it will increase with 5 km steps
- 7- Installation is finished and since now, sign board automatically will get charge at day and will be active at day and night,







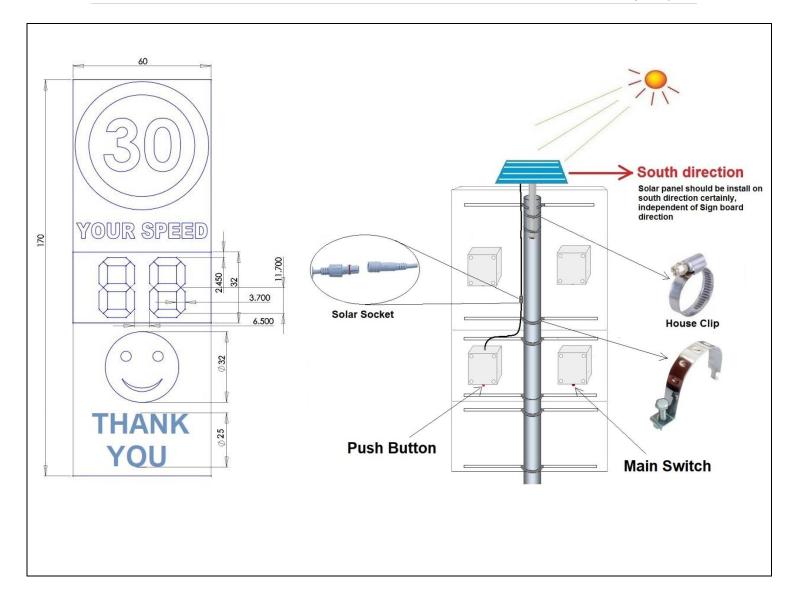
#### **Solar Panel Connection**

Each solar panel has a cable, having 1 blue & black wire. After installation sign board one the pole, mentioned cable is entered into battery box which located rear of sign. Then it connects into its terminal. Note that blue wire shall be connected into blue wire of terminal and black wire into black wire of terminal.





Solar panel is installed on pole by an aluminum tube. After orientation of solar panel into south, they are fastened by two house clips.



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