

# Manual GSE water timer

## Intro:

Thank you for purchasing the GSE Water Timer . The water timer is designed for commanding a water pump by setting an interval and impulse time . It's suitable for all kinds of plant's watering in Eb&Flow systems, dripper systems or NFT Systems (NFT=nutrient film technologies). The impulse and the interval time can be separately adjusted for day and night. The day/night cycle is recognized by a photo sensor or directly by the light-timer.

## Connections:

Terminal block 1 = power supply phase 230V (check polarity!)

Terminal block 2 = power supply neutral (check polarity!)

Terminal block 4 = exit pump neutral

Terminal block 5 = = exit pump phase 230V

Light-timer version:

Terminal block 6 = daylight timer 230V

**Attention!** Light- and water-timer must have the same potential. Otherwise a short-circuit may occur.

The wiring should be executed by an authorized electrician.

## Manual:

### LED indications:

LED1 = the left green light indicates the power connection :

Day indication = always ON

Night indication = short ON blink, longer OFF blink

Changeover = equal ON/OFF blinking periods (only in photo-sensor version)

LED2 = the right orange light indicates the ON/OFF status of the water pump. On, when pump is on.

### Photo sensor sensibility settings:

(Follow this step only in case you don't use the light-timer)

Put the photo sensor of the water timer in a direct position with the lightning. Let the water timer work for minimum 5 min in direct light-contact before adjusting. Avoid switching the light or letting shadows in front of the photo sensor. Turn the adjustment potentiometer (APOT) on with a little screwdriver after minimum 5 min until the green LED1 starts blinking. Then turn back a little until the blinking stops. You can leave the settings until the next time you change the position of the water timer.

Control check: The LED1 should start blinking as soon as the lights turn off and stop within 5 min when the light comes back (changeover time). And the opposite : If during the night the lights switch on , LED1 starts blinking . If the lights turn off in less than 5 min (changeover time) the timer indicates night again (short ON ,longer OFF blinking interval).

The changeover time prevents the start of the watering if there's only a short disturb of the light cycle.

### Water cycle settings:

The watering cycles can be adjusted separately for day and night. The two left knobs adjust the day-time, the right two knobs – the night-time. The upper knobs set the impulse time (watering duration) , and the bottom knobs set the interval time (brake duration).

The time frame can be set as followed:

#### Impulse:

Off, 1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s, 15s, 20s, 25s, 30s, 35s, 40s, 45s, 50s, 55s, 1min., 1.25min., 1.5min., 1.75min., 2min., 2.25min., 2.5min., 2.75min., 3min., 3.25min., 3.5min., 3.75min., 4min., 4.25min., 4.5min., 4.75min., 5min., 5.5min., 6min., 6.5min., 7min., 7.5min., 8min., 8.5min., 9min., 9.5min., 10min., 11min., min., 12min., 13min., 14min., 15min., 16min., 17min., 18min., 19min., 20min.

#### Interval:

1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s, 15s, 20s, 25s, 30s, 40s, 50s, 1min. 1.5min., 2min., 2.5min., 3min., 3.5min., 4min., 4.5min., 5min., 6min., 7min., 8min. ,9min. ,10min., 15min., 20min., 25min., 30min., 35min., 40min., 45min., 50min., 55min, 1h, 1.5h, 2h, 2.5h, 3h, 3.5h, 4h, 4.5h, 5h, 5.5h, 6h, 6.5h, 7h, 7.5h, 8h, 8.5h, 9h, 9.5h, 10h, 11h, 12h, 13h, 14h, 15h, 16h

