![Overdrive - Driven by Innovation]

Overdrive ODMR0210 'Dimmer + Controller'

Overdrive Dimmer Controller with MOSFET control provides the finest dimming for low light levels and strong lamp re-ignition. Dual Output channels can run independent lighting schedules which can illuminate or dim two lighting zones simultaneously. It is not only a dimmer but a controller also. For optimum performance and long life, use this dimmer controller with Overdrive dimmable Lamps.

| Maximum Overdrive Dimmable A19 LED Lamp on Dimmer			
Lamp Type	**No. of Lamp per channel**	**No. of Channel**	**No. Lamp per dimmer**
6W Dim LED A19	150	2	300
10W Dim LED A19	90	2	180
15W Dim LED A19	60	2	120

If Input Voltage is below 120V then maximum load capacity would also reduce in same proportion

Product Features

Main Features of ODMR0210 'Dimmer + Controller' are as follows:

❖ Dual output zones can run independent lighting schedules; Maximum load for each channel is 1200 watts (at 120V) / 10 Amperes.
❖ 3 Programs- Master, Manual and Slave mode for quick and easy programming
   ▪ Master mode with programmable auto lighting control
   ▪ Manual Mode with Keypad control
   ▪ Slave mode with 0-10V DC analog voltage control
❖ Supports memory function
❖ Supports ISP function and Comply with EU-BUS protocol
❖ Integrated 1.3'' OLED Display
❖ Fully integrated digital control system for precise and consistent dimming
❖ 4KV Surge Protection, Over Voltage Protection, Short Circuit Protection
❖ Replaceable output Fuses
❖ MOSFET Control

Product Functional Details
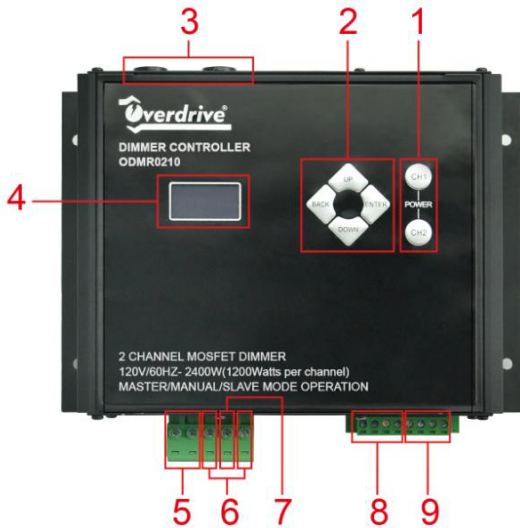
1	Power Keypad CH1 ,CH2	6	Input for AC (Hot & Ground Wire)
2	Edit Keypads	7	Neutral Wire
3	Replaceable fuses	8	EU-BUS Interface for ISP
4	OLED display	9	0-10V DC Analog Input
5	2 Channels Phase cut Output to LED Lamps Load （Hot Wire）		

Fig.1

2.3.3 Factory Reset

System Set	Factory Reset	Factory Reset
Time Edit	▶ NO	NO
LCD Sleep	YES	▶ YES
▶Factory Reset		

Factory Reset is used to backup original setting. The previous set program will be deleted and LCD sleep will be OFF.

Electricals Specifications:

Operating Voltage and Frequency	120/220V Volts 50/60Hz
Output Current	10 Amperes max per zone / Channel
OutputPowerat 120V Input	2400 Watts (1200 Watts max per zone / Channel) at 120V input supply
Analog Input Voltage in slave mode	0-10V DC
Product Dimensions	9.4"x 8.3"x 2.3" inches (239x210x58)mm
Working Temperature	-4° F ~ 113° F

For any trouble shooting or problems, please ask sales@overdrive-lighting.com for most updated FAQ which is continously updated based on customer feedback.

If user wants to reset program, please enter **Reset Program.** All settings will be deleted; now user can set a new program.

2.3 System Set

2.3.1 Time Edit

Main Menu
System Mode
Scene Edit
▶ System Set

System Set
▶ Time Edit
LCD Sleep
Factory Reset

Time Edit
⬍ 09:22:04
07/03 2016

In **system set** menu, current time can be set. After you enter **Time Edit,** user can edit Current time.

2.3.2 LCD Sleep

System Set
Time Edit
▶ LCD Sleep
Factory Reset

LCD Sleep	
▶ ON	✓
OFF	

LCD Sleep	
ON	
▶ OFF	✓

LCD can be set to go to sleep or not during power on time. If **sleep ON** is selected, LCD will go **OFF** after 2 minutes, without any operation. If selecting **sleep OFF**, LCD will always stay **ON**.

Note: LCD will be **OFF** during Power **OFF** time; this setting is only available during power on time.

CAUTION :

1   DO NOT SHORT OUTPUT CH1 AND CH2
2   ENSURE TO USE A DEDICATED NEUTRAL
3   CHECK THE VOLTAGE BETWEEN NEUTRAL AND GROUND AND IF ANY POSITIVE READING CORRECT IT BEFORE USING DIMMER.
4   POWER THE LIGHT AND DIMMER ON SAME 120V PHASE OF THE BREAKER PANEL
5   ENSURE TO HAVE PROPER GROUND ROD ON BREAKER PANEL
6   Please observe the # of Overdrive LED's that this dimmer can safely and properly control listed in this installation document. Also, if other branded LED's may have in-rush currents which may differ significantly from the Overdrive currents. This should be confirmed prior to installing. The maximum in-rush current per channel should not exceed 120 Amp.
7   For 0-10V DC Control Please connect hot DC input to CH+ for proper functioning
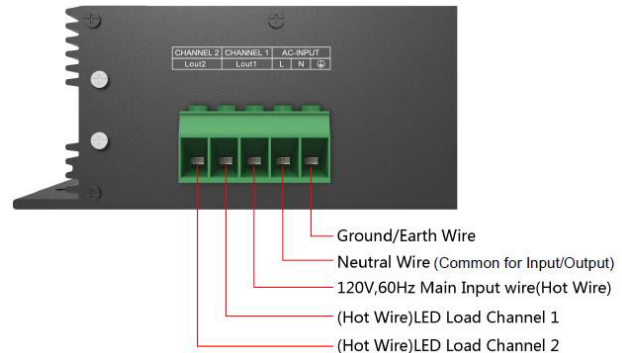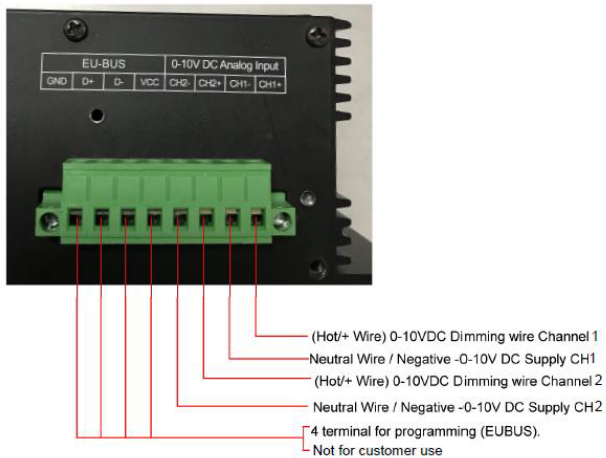
Connection Method

Ground/Earth Wire
Neutral Wire (Common for Input/Output)
120V,60Hz Main Input wire(Hot Wire)
(Hot Wire)LED Load Channel 1
(Hot Wire)LED Load Channel 2

Fig. 2 *Input & Output Connections*

Fig. 3 *0-10V DC Analog Input Connections EU-BUS Connections*

Fig. 4 *the Display & Keypad*

4 Keypads for Programming and 2 Keypads for power ON/OFF

- ➢ **OLED Display** for quick and easy programming
- ➢ **POWER CH1 CH2** to ON and OFF the Dimmer Output channel
- ➢ **ENTER** to select or go to next sub menu
- ➢ **UP** for up operation
- ➢ **DOWN** for down operation
- ➢ **BACK** to unselect or go back to previous menu

Dayxxx Period3
CH1:XX
CH2:XX
▶FadeTime:xxxxS

Dayxxx Period3
CH1:XX
CH2:XX
♦FadeTime:xxxxS

Fade Time can be set from 0-9999 second. When period 1 finishes and period 2 begins, Channel output may be different. **Fade time** is the time it takes to reach the new output level. **For example:** If in new period, **CH1** output will be from 10% to 20% with fade time is 10 second. Then **CH1** output will increase 1% each second until output level reaches 20%.

If fade time is set too long, then output will change slowly and the brightness of bulbs will also increase slowly. This provides a soft feel, without brightness changing suddenly.

1.3.2.3 Add New

Dayxxx Period
Period3
Period4
▶ Add New

Dayxxx Period
Period4
▶ Period5
Add New

When user wants to add a new period, put cursor on the line **Add New.** After you press **Enter**, new period will be added.

2.2.3 Reset Program

Scene Edit
Day Edit
Period Edit
▶Reset Program

Dayxxx Period3	Dayxxx Period3
Del Period	Del Period
▶ Begin:15:20	◆ Begin:15:20
End:20:00	End:20:00

Period begin time can be edited, after selecting **Begin: xx:xx,** when **Enter** keypad is first pressed, Hours will blink, user can use **UP/DOWN** keys to select hour, If user wants to adjust minutes, Press **Enter** Key for the second time.

Dayxxx Period3	Dayxxx Period3
Del Period	Del Period
Begin:15:20	Begin:15:20
▶ End:20:00	◆ End:20:00

Period end time can be edited, just as begin time.

Dayxxx Period3	Dayxxx Period3
▶ CH1:XX	◆ CH1:XX
CH2:XX	CH2:XX
FadeTime:xxS	FadeTime:xxS

Dayxxx Period3	Dayxxx Period3
CH1:XX	CH1:XX
▶ CH2:XX	◆ CH2:XX
FadeTime:xxS	FadeTime:xxS

CH1 and **CH2** output can be edited separately in one Period.

Assembly

**1.** Remove the screws which are marked below, then take down the top cover.

2. Knock-outs can be removed easily by pressing the round mark to connect Conduit of either "1/2" or "3/4" inch size.
Remove the screws from the sides to remove electrical cover as per need.

Battery replacement

Following these steps to replace the battery,

1. Open the case
2. Locate the position of the battery
3. Take note of the polarity of the battery, so the new one can be installed in the same position.
4. Pull up on the battery to remove it.
5. Place a new battery in the socket, make sure it is inserted in the same position as the one just removed.
6. Close the case.
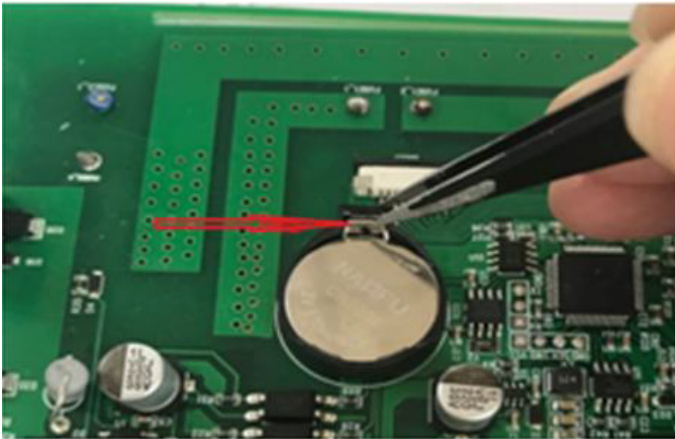
For example, if we edit Day1 and Day4 only, then the outputs of Day 2 and Day 3 will be 0%.

2.2.2 Period Edit

In *Period edit*, user can edit program in details.

2.2.2.1   Keep Pre Day Pro

Dayxxx Period
▶Keep Pre Day Pro
Period 1
Add New

Scene Edit
Day Edit
▶ Period Edit
Reset Program

After select day, period can be edited. There is an easy way to copy previous day program setting, just select **keep pre day pro**. The program will be same as previous day, without setting again.

2.2.2.2   Period x

Dayxxx Period
▶   Period3
Period4
Add New

Dayxxx Period3
▶   Del Period
Begin:15:20
End:20:00

Dayxxx Period
▶   Period3
Add New

Each period can be edited and can also be deleted. **For example,** if you want to delete **period3,** select p*eriod3, then* select *Del period.* **Period3** will be deleted*.* **Period4** will be renamed to **period3** to continue.

After selecting the start date, you can run the current program. Run cursor to the line and press enter. Current program information will be displayed on the screen.

2.2 Scene Edit

```
Main Menu            Scene Edit
System Mode        ▶Day Edit: xxx
▶ Scene Edit         Period Edit
System Set           Reset Program
```

In **Master Mode**, dimmer will run program automatically. The programs can be edited in **Scene Edit** menu. First select the day you want to edit,then divide the day into different periods.

In each period, you can select each channel output level and fade time.

NOTE: Time mode is military time. 00:00 = 12 Midnight, 01:00 = 1:00AM,

13:00 = 01:00AM, 23:00= 11:00PM

2.2.1 Day Edit

```
Scene Edit              Scene Edit
◆Day Edit:xx           ▶Day Edit: xxx
Period Edit             Period Edit
Reset Program           Reset Program
```

Run cursor to **Day Edit** line, press **Enter**, cursor will change, then select the day you want to edit. The days which are not edited, the digital output will stay in 0%.

Programming Methods

1. Initial startup

When input power is supplied, previous operating state (One of :Manual, Slave and Master Modes) will be loaded. Choose the channel, which you want to use. Turn on CH1 or CH2 or both. The LED display will show the channel, the LED display will show **1x** or **2x** to show that channel in ON.

```
Main Menu              Main Menu 1x
                                 2x
System Mode          ▶ System Mode
▶ Scene Edit           Scene Edit
System Set             System Set


        Main Menu 1x
      ▶ System Mode
        Scene Edit
        System Set
```

The top menu is the main menu, including System Mode/Scene Edit/System Set.

System Mode: User can select from Manual, Slave and Master Mode.

Scene Edit: User can edit and save programs under master mode.

System Set: This is to correct system time, LCD Backlight on/off and reset to factory setting

1.1 System Mode

Main Menu
▶ System Mode
Scene Edit
System Set

System Mode
▶ Manual Mode
Slave Mode
Master Mode

2. In the main menu, run cursor to system mode and press enter. You will be in the System Mode. You have an option to select one of 3 modes: Manual Mode/Slave Mode/Master Mode.

2.1.1 Manual Mode

Manual Mode
▶   CH1:XX
CH2:XX

Manual Mode
♦   CH1:XX
CH2:XX

Manual Mode
CH1:XX
▶   CH2:XX

Manual Mode
CH1:XX
♦   CH2:XX

In **Manual Mode**, user can control the output by keypads. Just run cursor to CH1 or CH2 by up or down keypad, press **Enter**, the cursor ▶ changes into ♦ . The dimming level can now be adjusted by **UP/Down** button within a range from 0% to 100%.

2.1.2 Slave Mode

Slave Mode
CH1:XX
CH2:XX

In **Slave Mode**, There is a 0-10V DC input for the user choose to operate the dimmer by a controller. The output percent will be displayed on LCD. If there is no 0-10V signal detected, then dimmer will shut down the output.

2.1.3 Master Mode

Master Mode
▶ Goto Day:xxx
Run Curprog
Prog Preview

Master Mode
♦ Goto Day:xxx
Run Curprog
Prog Preview

In **Master Mode**, we can select the start date.

Master Mode
Goto Day:xxx
▶ Run CurProg
Prog Preview

Master Mode
CH1:XX CH2:XX
07/03 14:35
Day:1,P:0

Master Mode
Goto Day:xxx
Run Curprog
▶ Prog Preview

Day7   Prog0
Time:XX-XX
CH1:XXX CH2:XXX
Fade time:0S