## dimmer module / LED

 INSTALLATION MANUAL US (NDM-024061 / BP-VR250US)COMPATIBLE WITH 3 WAY \& INTERMEDIATE SWITCHES


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## IMPORTANT NOTES

please read before installing.

1. this product must be installed by a qualfied professional. install in accordance with all national and local electrical codes. turn Off the power at the breaker prior to installing this product. this dimmer may not be compatible with all wiring, circuits or ligh
2. THIS DIMMER MAY BE USED ASA SINGLE CIRCUIT OR WITHA WAY CONFIGURATION WHEN USED WITH A 3 -WAY TOGGLE SWITCH. FOR OTHER
3. USE WIRES RATED FOR AT LEAST $75^{\circ} \mathrm{C} \&$ USE COPPER WIRE ONLY

## CAUTION

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TO REDUCE THE RISK OF OVERHEATING AND POSSIBLE DAMAGE TO OTHER EQUIPMENT, DO NOT INSTALL TO CONTROL A RECEPTACLE, A MOTOR-OPERATED APPLIANCE, OR A TRANSFORMERSUPPLIED APPLIANCE.

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GRADATEURS COMMANDANT UN BALLAST-AFIN DE REDUIRE LE RISQUE DE SURCHAUFFE ET LA POSSIBILITED'ENDOMMAGEMENT A D'AUTRES MATERIELS, NE PAS INSTALLER POUR COMMANDER UNE PRISE, UN APPAREIL AMOTEUR OU UN APPAREIL ALIMENTE PAR UN TRANSFORMATEUR.

## WARNING: ELECTRIC SHOCK HAZARD

Hazardous voltage may be present at the dimmer's output despite setting the dimmer to zero brightness level.

## ELECTRICALSPECIFICATIONS

| PARAMETER |  | VALUE |
| :---: | :---: | :---: |
| Supply voltage \& Frequency |  | 100-120V AC 60 Hz |
| Rating |  | 5-250W: When used with dimmable LED lamps. 10-300W: When used with incandescent lamps, halogen lamps and Low Voltage Incandescent Ballasts |
| Dimming Technology | R.L.C | Automatic Detection of Forward Phase and Reverse Phase Dimming mode. User Select also available. |
| Compatible loads for RP MODE - REVERSE PHASE |  | Dimmable LED lighting with compatible Electronic Transformers |
|  |  | LV Halogen Lighting with electronic transformers |
| Compatible loads for FP MODE - FORWARD PHASE |  | Incandescent lighting, MV Halogen lamps |
|  |  | LV Halogen Lighting with Iron-core transformers |
| Operating Temperature |  | $32^{\circ}-95^{\circ} \mathrm{F}$ |
| Operating Humidity |  | 10-90\% R.H. |

## THERMAL OVERLOAD PROTECTION:

This dimmer has a built-in thermal protected circuit. It will automatically switch off if the temperature rises above $131^{\circ} \mathrm{F} / 55^{\circ} \mathrm{C}$ and reset when the dimmer cools down to $95^{\circ} \mathrm{F} / 35^{\circ} \mathrm{C}$. If the issue persists, please reduce the load on the dimmer.
SHORT CIRCUIT PROTECTION
Once activated, the dimmer will stop and reset after 5 seconds. If there is still a fault on the circuit, the dimmer will suspend operation until power is disconnected and switch on again. In this case, please contact a qualified professional.

## NOTE

Only Forward Phase Mode is compatible when connecting with IRON-CORE transformers, DO NOT use in Reverse Phase mode. Multiple compatible loads can be used if the total lamp wattage does not exceed the maximum load rating of the dimmer (Halogen/Incandescent 300W, LED 250 W ). Some lamps may exhibit unexpected performance characteristics when cold. Dimming performance should improve after the lamp warms up. If the lamp appears unstable, try changing to Forward Phase or Reverse Phase mode.

## RECYCLING ELECTRICALPRODUCTS:

Buster and Punch encourages all of its customers to make note of this symbol and avoid putting any waste electrical goods in domestic waste bins or containers. Please ensure you take your waste electrical goods to a suitable facility for disposal.


## MINIMUM BRIGHTNESS LEVEL SETTING:

How to set the minimum brightness level :

| FOLLOW OPERATING STEPS |  | ACTIONS |
| :--- | :--- | :--- |
|  |  | Remove front plate cover, turn ON the lamp, set to maximum <br> brightness, then push button (A) once. Lamp will appear half brightness <br> now ready to set minimum brightness |

## MODESETTING

How to manually change the MODE SETTING (Factory default Reverse Phase/auto mode) :


## 1 TURN OFF MAIN POWER SUPPLY OR SPECIFIC BREAKER FOR THE INSTALLATION.

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POWER TO THE PROPERTY.


Single circuit wiring / single location control:
HOW TO DIM THE DIMMER SWITCH: clockwise to increase brightness. Turn knob anti-clockwise to decrease brightness.


## terminal legend

L - Single Circuit \& 3-Way Switch output
LD OR C - Live in from Distribution power source
L1-3-Way switch output
If 3-Way Switch Output installation does not turn on, swap $\mathbf{L}$ and $\mathbf{L 1}$

## INSTALLATION NOTATIONS

- Some dimmer modules may show the Live in terminals as either a "LD" or "C". Please note this when replacing modules.
- When trouble shooting a 3-Way circuit, be sure to check the "L" and "L1" traveler wires for proper connection and functionality between the 3-Way dimmer module and the 3-Way toggle switch. These connections can vary based on how circuitry is wired

2 B $\begin{aligned} & \text { 3-WAY CIRCUIT WIRING (TWO LOCATION CONTROL - WHEN USED WITH A } \\ & \text { 3-WAY TOGGLE }\end{aligned}$ :


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For toggle wiring see relevant installation manual

3 MOUNT MODULE INTO WALL BOX / PLATE USING SCREWS(A) PROVIDED.


4 PLACE INFILL PLATE (A) OVER THE DIMMER SHAFT
PLACE COVER PLATE (B) OVER THE INFILL PLATE \& TIGHTEN SCREWS (C) FINGER TIGHT.
FYI: This product has a $1 / 8$ inch shadow gap when installed


5 SCREW CENTRE RETAINING NUTS (A) (2 PARTS, PLASTIC FITMENT NUT AND METAL FINISHED LOCK NUT) INTO PLACE, BY HAND FINGER TIGHT ONLY. ALIGN INTERNAL FLAT OF DIMMER KNOB (B) WITH DIMMER SHAFT AND PRESS FIT BY HAND TAKING CARE TO ALIGN PARTS CAREFULLY.


## *NOTE:

When tightening threaded parts be careful not to cross thread. We recommend pushing and rotating the part anticlockwise until you feel a click, then tighten clockwise finger tight.

6 FIT COIN CAPS (A) USING TOOL (B) PROVIDED, FINGER TIGHT, BE SURE NOT TO OVER-TIGHTEN

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tURN POWER back on.
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