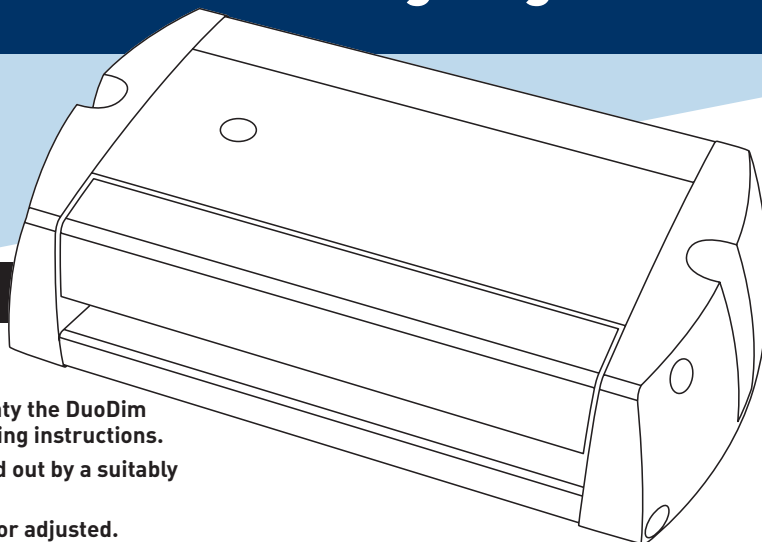


INSTALLATION AND OPERATING GUIDE



IMPORTANT

The DuoDim Lighting Dimmer must only be used in accordance with the directives and standards associated with the particular application.

In order to comply with the manufacturer's terms and conditions of warranty the DuoDim Lighting Dimmer must be installed and connected as detailed in the following instructions.

All wiring and connections to the DuoDim Lighting Dimmer must be carried out by a suitably qualified person according to sound electrical installation practices.

Under no circumstances should the DuoDim Lighting Dimmer be modified or adjusted. Opening the case by removing the screws will render the warranty void.

APPLICATION

The DuoDim can be used in two distinctly different ways. Primarily it is a two channel dimmer, where each channel (circuit) can be separated out and switched individually (UNGROUP mode) or where both channels (circuits) can be switched as one, operating from a single switch (GROUP mode). Please see the diagram for further details.

The DuoDim Lighting Dimmer is designed to be used on filament type lamps of the appropriate voltage ONLY (12 or 24VDC). Filament lamps include incandescent, halogen and xenon types. The DuoDim will NOT operate fluorescent lights and should NOT be used as a motor speed controller i.e. fans, blowers, wipers, etc. The maximum load ratings are depicted in the table below.

Model	Mode	For 12VDC Applications	Rating for 24VDC Applications	Input Fuse Rating
SLD2040DD	UNGROUP GROUP	100 Watts @ 13.0VDC per channel.* 200 Watts @ 13.0VDC total overall.*	200 Watts @ 26.0Volts DC per channel.* 400 Watts @ 26.0Volts DC total overall.*	20 Amps

*Maximum circuit rating @ 30°C (86°F).

INSTALLATION

Select a suitable location where the DuoDim Lighting Dimmer can be mounted. It is important that the following conditions are adhered to:

1. The surface must be vertical, hard and flat. Do not install on an upholstered or insulated surface as the rear of the DuoDim must have clearance from the surface to ensure adequate heat dissipation.
2. Ensure the DuoDim is located in a well ventilated position, free from excessive moisture, dust, vibration and heat. A minimum of 50mm clearance should be allowed to other equipment at the top and bottom only (see diagram).
3. Ensure that the termination side of the DuoDim is facing downward and that there is adequate clearance to connect the wiring to the terminals.
4. Fix the DuoDim with appropriate fasteners ensuring both anchor holes are utilized. Do not overtighten.

WIRING

In order to ensure safety, good service and long life the DuoDim Lighting Dimmer should be wired and connected according to the following method:

1. Disconnect the 12 or 24VDC supply at the source before attempting any connection to the DuoDim or lighting circuit.
2. Install an appropriately rated fuse or circuit breaker (see chart above) as the input protection for the 12/24VDC supply cable to the DuoDim.
3. Connect all circuits to the DuoDim as per the diagram overleaf. Ensure that the correct wire sizes are used for the model installed (consult your wire supplier for appropriate current ratings).
4. It is important to note that all output wiring (lighting circuit) should NOT be routed alongside any communication, data, signal or speaker cables. Doing so MAY cause induced interference in the applicable equipment.
5. A single, normally open, momentary, pushbutton switch can be used to operate each channel of the DuoDim. It is also possible to parallel as many switches as desired in order to operate the DuoDim from any location.

6. Re-connect the input supply at the source and turn on the circuit breaker or switch. The LED Diagnostic Indicator on the DuoDim should now be flashing green intermittently. This indicates the DuoDim is in standby mode and ready to use. If only one channel is used, the channel which is not connected, will stay in standby mode permanently. If there is no indication refer to the fault finding section overleaf.

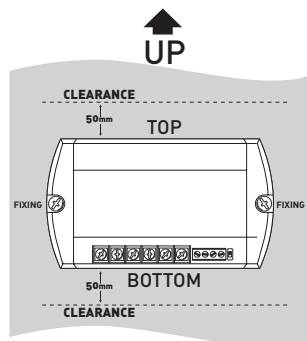
NB: Before the unit is powered up the mode selector switch must be set to the desired mode, GROUP or UNGROUP, as this cannot be selected after the input power is connected.

OPERATION

Once properly installed and connected, operating the DuoDim Lighting Dimmer is a simple procedure. The steps are outlined below:

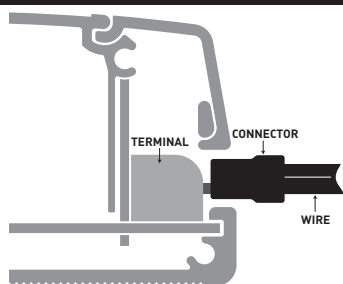
- After checking that the main circuit breaker/switch is turned on, push and hold the light switch (pushbutton). The lights will come on at the factory set level initially.
- Hold the light switch to ramp the level up or down. There is no need to ramp through the complete cycle to find the appropriate level. The direction can be reversed by simply removing your finger from the light switch and re-applying to change the level.
- Pushing the light switch again once will turn the lights off.
- When the light switch is pushed again the lights will come on at the same level as they were when last turned off (memory function).
- If the lights are not operating in the manner described above please refer to the fault finding section overleaf.

MOUNTING



IMPORTANT: MOUNT ON HARD, FLAT, VERTICAL SURFACE. ENSURE ADEQUATE VENTILATION.

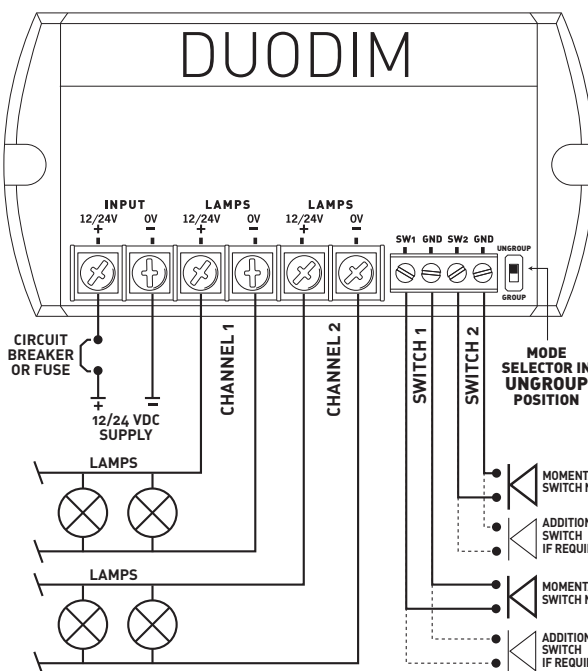
TERMINATION



IMPORTANT: USE FULLY INSULATED CRIMP TYPE CONNECTORS FOR WIRE TERMINATION

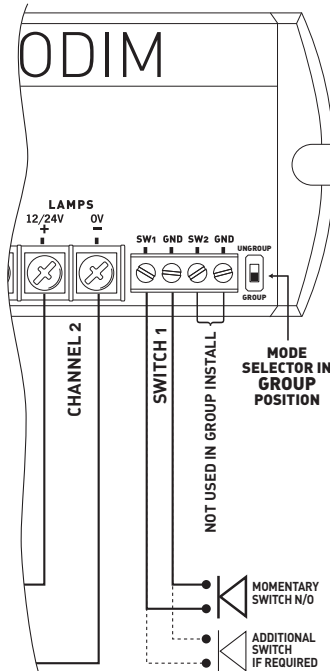
WIRING

TYPICAL INSTALLATION FOR INDEPENDENT OPERATION OF EACH CHANNEL



IMPORTANT: ENSURE ALL WIRING IS ADEQUATELY RATED FOR APPLICABLE LOADS

TYPICAL INSTALLATION FOR COMBINED OPERATION OF BOTH CHANNELS



PROTECTION

The DuoDim Lighting Dimmer is protected from a variety of connection and application errors by a range of built in devices. In most situations these errors are revealed by the diagnostic indicator and can be corrected without having caused damage to the dimmer. The DuoDim is protected in the following situations:

- **Thermal Overload.** In the event the DuoDim exceeds the factory preset temperature limit the output will be reduced by half. The output will be restored to normal when the temperature decreases to the appropriate level. This is an important safety feature as rather than shut down the lighting circuit completely and leaving the user in the dark, the lights will stay dim in order to maintain visibility.
- **Output Short Circuit.** If the output (light circuit) is short circuited the DuoDim will be disabled. When the short circuit is fixed/removed, normal output supply will be restored.
- **Output Overload.** If the output (light circuit) is continually overloaded the DuoDim will go into thermal overload (see above).
- **Input Reverse Connection.** If the input terminals are reverse connected the DuoDim will become inoperable. The input circuit is diode controlled and protected by an internal fuse which is NOT user serviceable.
- **Output Voltage.** The DuoDim is designed to control the output voltage from 10-98% of input voltage as an integral part of the soft start feature. As a result the output voltage is fully regulated.
- **Transient Input Voltage.** A purpose designed circuit will filter any undesirable, spikes, surges and transient voltages.

WARRANTY POLICY

interVOLT products are warranted for a period of 24 months against faulty materials and/or workmanship from date of last sale or a maximum of 36 months from the date of manufacture subject to the following terms and conditions:

- The goods must be installed and operated in accordance with the manufacturers recommendations and instructions set out within this guide.
- In the event of a claim the goods are returned to the original point of purchase with a copy of the merchant invoice or the relevant merchant invoice number.
- In the event of a claim any associated expenses including diagnosis, removal, and/or installation of the goods is the responsibility of the client including any freight costs.
- The warranty shall be void where the goods have been used for a purpose for which they are not intended, or altered in any way that is detrimental, or opened or tampered with by an unauthorized party, or damaged by mechanical abuse, or contaminated by water or other substances, or damaged by incorrect application.
- Save and except for the express warranty set out above and to the maximum extent permitted by law, all conditions and warranties which may at any time be implied by the common law, Trade Practices Act, Fair Trading Act or any other State or Federal Act are excluded. To the extent that these cannot be excluded and where the law permits, the manufacturer in respect of any such condition or warranty shall be limited at their option to the repair or the replacement of the goods or the supply of equivalent goods or refunding the cost of the goods.

DIAGNOSTICS AND FAULT FINDING

Indication	Status	Cause	Remedy
Green – Pulsing	System Normal	N/A	N/A
Green – Steady	Lamp Load On	N/A	N/A
Amber – Steady	Thermal Overload	Lack of ventilation Exceeding maximum load rating	Check to ensure ventilation to DuoDim is adequate. Check loads to ensure they do not exceed rating of DuoDim.
Red – Steady	Short Circuit	Short circuit on output (lighting circuit)	Remove load and check for short circuit.
No Indication	Out Of Service	No input supply Internal fault	Check circuit breaker/switch to ensure circuit is on. Return to authorised service centre.