

# Auto Detect Intelligent Universal LED dimmer

## ATE-DRT250UK



## INSTALLATION INSTRUCTION

### IMPORTANT !







It is illegal for persons other than an appropriately licensed electrical contractors or other persons authorised by legislation to work on the fixed wiring of any electrical installation.

“This dimmer shall be protected by a 6A or up to a 10A maximum miniature circuit breaker, which is special use with this dimmer.”

### WARNING : ELECTRIC SHOCK HAZARD

Hazardous voltage maybe present at the output of the dimmer despite setting the dimmer to zero brightness level. Look out and tag the input circuit before accessing the wiring connections. Failure to follow this warning can result in death or serious injury.

### ELECTRICAL SPECIFICATIONS

| Parameter  | Value   |
|--|---|
| Supply voltage & Frequency   | 220-240V ~ 50Hz   |
| Rating   | 10-350W: incandescent lamps, high voltage halogen lamps and electronic step-down converter for extra low-voltage incandescent lamps.<br><b>3-250W</b> dimmable LED lamps.   |
| Dimming Technology  | Auto Detect Trailing / Leading edge driven control<br>Also, Leading edge dimming mode can be set by user manually.  |
| Compatible loads for <b>TEauto mode</b>  |   Dimmable LED lighting with compatible Electronic Transformers |
|  |  Incandescent lighting, MV Halogen lamps   |
|  |  LV Halogen Lighting with electronic transformers  |
|  |  LV Halogen Lighting with Iron-core transformers   |
| Operating Temperature  | 0° - 35°C   |
| Operating Humidity   | 10 - 90% R.H.   |
| Mounting Centres   | 85mm UK Pattern Plate   |

#### NOTE :

Operation at elevated temperatures or voltages may cause the thermal protection circuit to operate. If this happen, decrease the connected load to prevent re-occurrence.

### THERMAL OVERLOAD PROTECTION

Build-in thermal protect circuit. Apply a re-settable thermostat component, when module temperature raise achieve 110°C will activate the protection, while temperature cool down approx. 75°C it will become normal operation. If occur frequently, please reduce loading.

### SHORT CIRCUIT PROTECTION

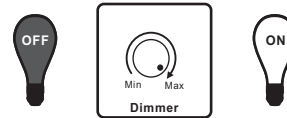
Build-in short circuit protect, once activate, the dimmer will suspend operation around 5 second after that, it will auto-ON again. If detect remain short circuit or over current, the module will suspend operation until disconnect dimmer power and Switch ON dimmer again reset to normal operation. In this case, please check the circuit with electrical technician.

### FEATURES :

- Suitable for 1-way or Multi-way full Dimming and switching.
- Minimum load down to 3W of capacitive or resistive load, such as Dimmable LED Lighting, Incandescent Lighting, MV Halogen / LV Halogen Lighting with electronic transformers.
- Lamps soft-start operation, to extend longer lifetime for the lamp.
- LED back light for indicate the dimming mode.
- User setting for the minimum dim Level.
- Build-in short circuit protect, designed to ensure the dimmer can survive in case of wiring fault or catastrophic failure of the load.
- Build-in re-settable thermal cut-off to protect the dimmer over normal operation temperature caused by overloads.
- Complies with IEC EN60669 and International safety standards.

### NORMAL OPERATION

Operation of Dimmer Knob and Push Switch :



Push knob **ON** or Push knob **OFF** the lamp.

Turn knob right to increase brightness to maximum level until RED light flash.  
Turn knob left to decrease brightness to minimum level until GREEN light flash.



### MULTI-GANG DERATING

For applications where Dimmers are multi-ganged, derate the maximum load rating of the unit according to the derating table show as below :

| Number of Dimmers | Maximum Load per Dimmer |
|-------------------|-------------------------|
| x1                | 250W                    |
| x2                | 200W                    |
| x3                | 150W                    |

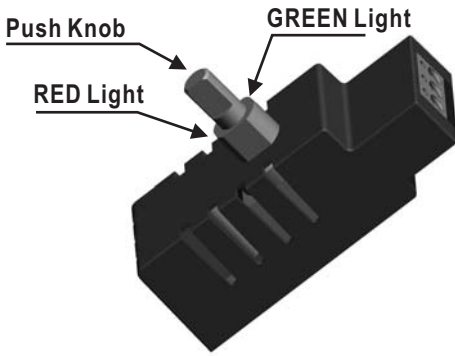
#### NOTE :

When connect with IRON-CORE transformers, Only Leading Edge mode (LE) could be applied, the TE mode can not be used in this case.

Multiple compatible loads can be used as the total lamp wattage does not exceed the maximum load rating of the dimmer.

Some lamps may exhibit unexpected performance characteristics when cold. Dimming performance should improve after the lamp warms up. Or in case of lamp appears unstable status, it could be changed to TE or LE mode.

## MINIMUM BRIGHT LEVEL SETTING



### How to set the Minimum bright level :

Lamp in ON state, press and hold "Push Knob" around 3-5 sec. until lamp will appear at half-bright level, after that, is entry minimum Brightness settings.

Set your desire min bright, press "Push Knob" once again, lamp will return to maximum bright level, it's confirmed and save setting.

**Each step must be performed within 15 seconds, if no, it will time out and auto exit program without save.**

## MODE SETTING

OFF lamp and LED indicator show as below :

**GREEN** Light - TEauto mode

**GREEN + RED** Light - TE mode

**RED** Light - LE mode

### How to set TEauto, TE or LE Mode (Factory default TEauto mode) :

Lamp in OFF state, press and hold "Push Knob" around 3-5 sec. until LED indicator light FLASHING, now is entry mode settings. Turn the knob left or right to select desire mode, until the LED indicator color show select status, then push once to confirm save and exit.

**Each step must be performed within 15 seconds, if no, it will time out and auto exit program without save.**

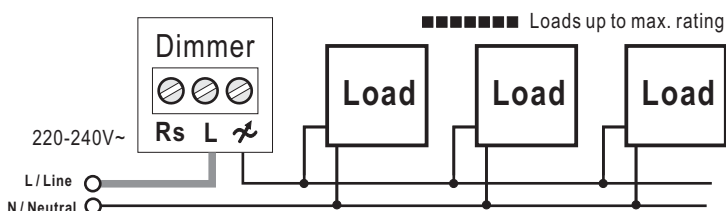
## INSTALLATION

Wiring Details :

1. Disconnect power. Lock out and tag the relevant circuit at the mains switchboard.
2. Remove existing switch from wall.
3. Connect the dimmer in accordance with the wiring diagrams.  
\*the copper conductors for the terminals is 1,0 to 1,5mm rigid wire.
4. Refit switch plate to wall and fit the dimmer knob to the shaft.
5. Reconnect power. Push ON and dim with turning knob.

## WIRING DIAGRAMS

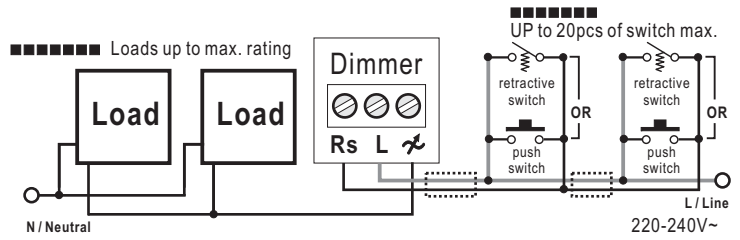
### One Way Operation



#### NOTE:

The Dimmer must always be connected to the LINE side of the load. Two or more dimmers MUST NOT be connected in parallel or series to control the same load from two different locations.

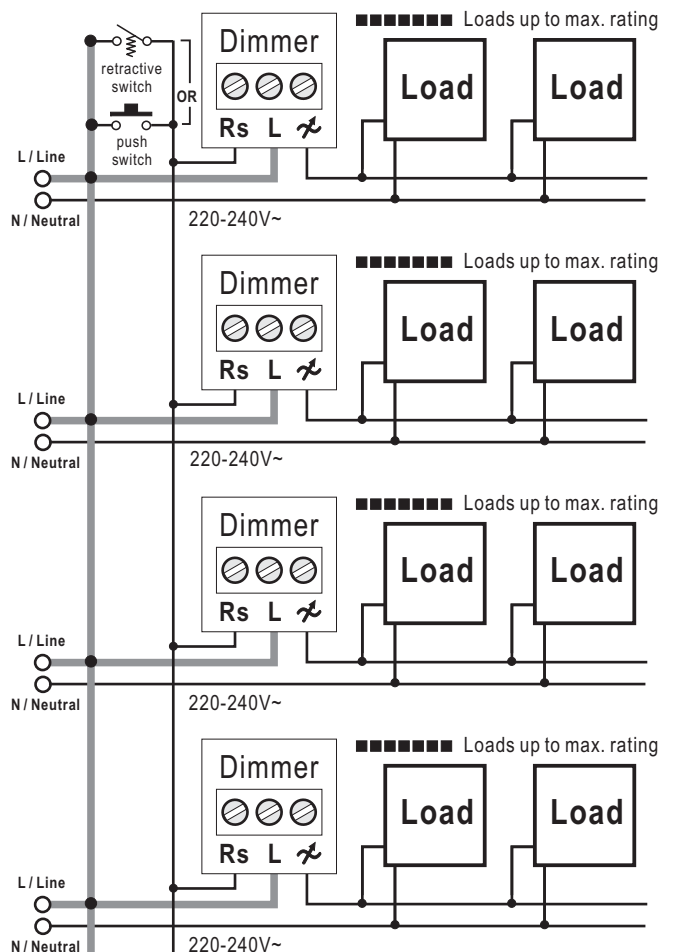
## Multi-way Operation



#### NOTE:

The Dimmer must always be connected to the LINE side of the load. Multi-way retractive switch or push switch can be control up to 20 units for UP/DOWN dim and ON/OFF function. Two or more dimmers MUST NOT be connected in parallel or series to control the same load from two different locations.

### Wiring diagrams for one retractive switch control multi-dimmer :



#### NOTE :

One retractive switch or push switch can be control up to 20 units of dimmer for UP/DOWN dim and ON/OFF at the same time.