

Data Sheet

Dimming Options

High Frequency Fluorescent Dimming Options

Ansell Lighting are able to offer dimming options for many of the fluorescent luminaires in our extensive range of products.

There are two basic types of dimmable control gear:- Analogue and Digital.

Dimmable options are all manufactured to special order and therefore non-returnable. Care should be taken at point of order to ensure that the correct type is confirmed.

In all cases, we recommend that prior to ordering dimmable luminaries that both the supplier of the dimming controllers and the installer of the equipment are consulted to ensure compatibility and that all required wiring has been allowed for.

Standard household/tungsten dimmers are unsuitable for use with High Frequency dimmable control gear.

The following pages illustrate the main types of dimmable control gear that we are able to offer.



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ANALOGUE (HFR) Dimming

Also known as High Frequency Regulating – Analogue dimming employs the use of a 1-10V DC control voltage.

A dimming range of 100% down to 3% or 1% depending on wattage/type of lamp used is available

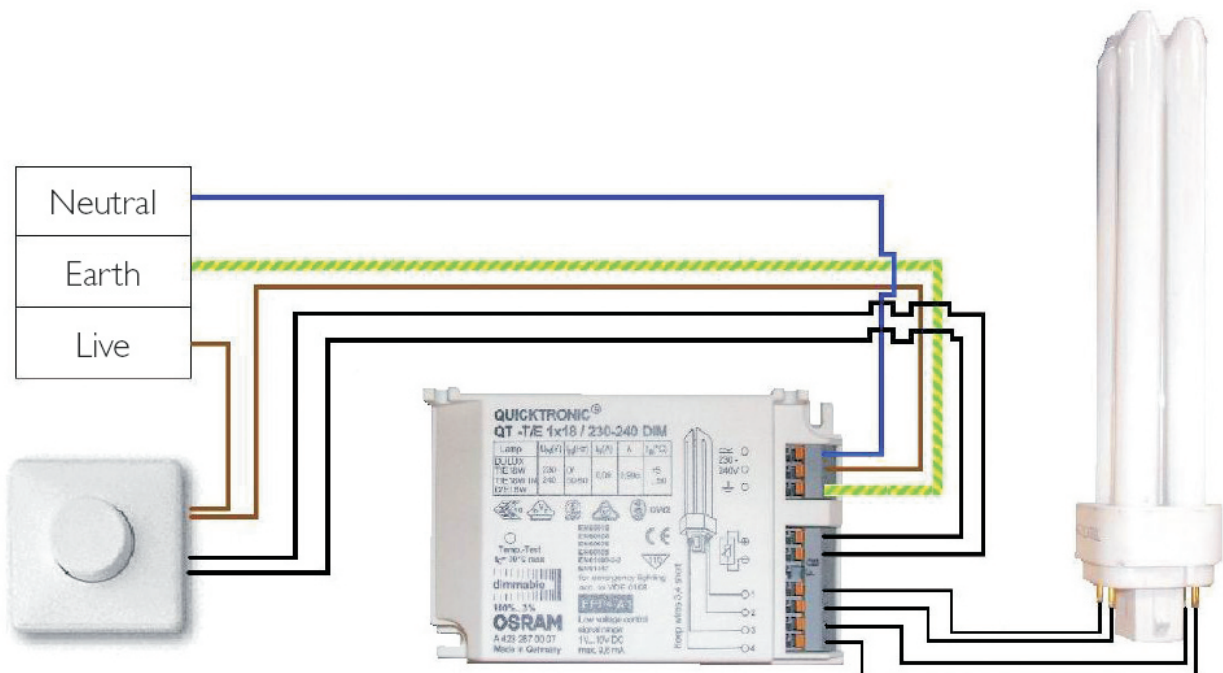
The method of control for this system is typically by means of either a rotary or slider potentiometer. Analogue (HFR) dimming ballasts can also be used with many available scene-set controllers from specialists such as Helvar, Mode, Lutron, Hamilton to name but a few.

Each luminaire requires a 3 core mains supply (L E N), and an additional 1-10V signal cable, such as 2 core 0.75mm² flexible cable. This is looped around any group of luminaires to be dimmed together – please check with the Dimming Controller supplier as there are a maximum number of ballasts which can be connected together, dependant on lamp type and wattage.

An additional Unswitched live is required if the luminaire incorporates emergency control gear.

Luminaire ranges that have dimmable options will display the **DIM** symbol.

HFR - High Frequency Analogue Dimming 1-10Volt



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DIGITAL (HFSD) Dimming

The digital ballasts employed in Ansell Lighting luminaires can be configured to operate in two modes, Digital Switch Dimming and Digital (DSI) Dimming – SwitchDIM is described below:

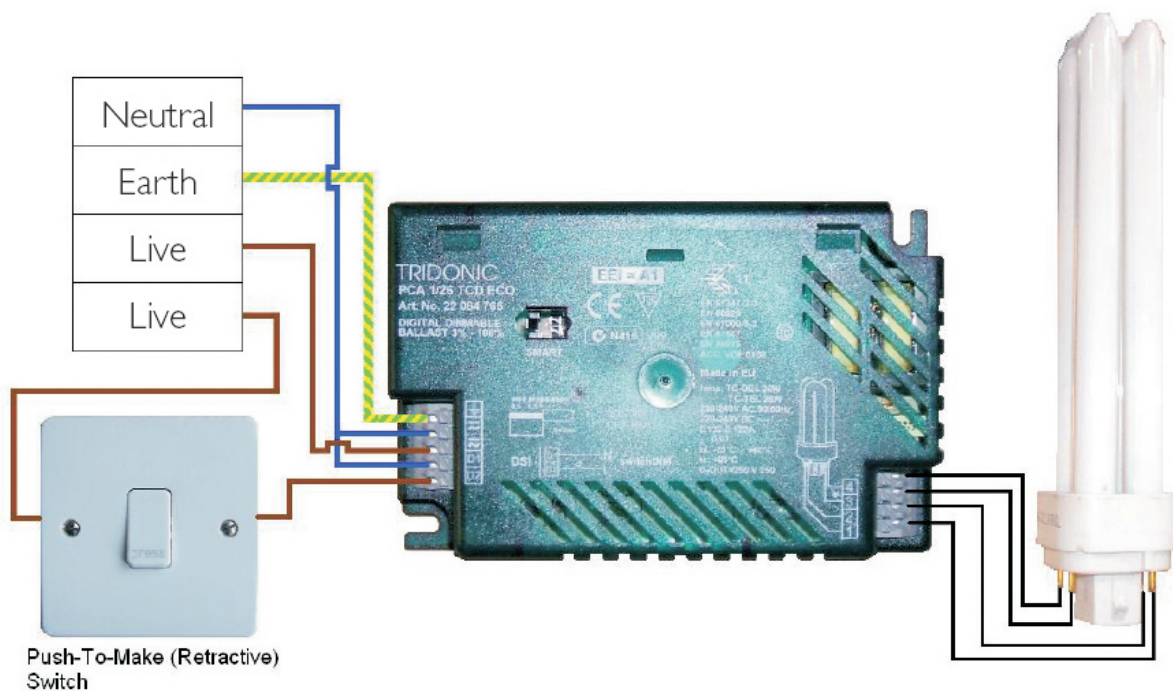
SWITCH DIM – SwitchDIM operation for ON / OFF and dimming is by means of a push-to-make (retractive) switch, and is the simplest form of dimming. A brief operation of the switch (<0.6sec), will switch ON or OFF. When the push to make switch is held, the ballasts are dimmed. On a further push, the ballasts is dimmed in the opposite direction.

For full operation, the circuit should be as shown below, using a 4 core installation (switched live, permanent live supply, neutral and earth).

An additional Unswitched live is required if the luminaire incorporates emergency control gear.

Luminaire ranges that have dimmable options will display the **DIM** symbol.

HFSD - High Frequency Digital Switch Dimming (SwitchDIM)



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DIGITAL (HFDS) Dimming

DIGITAL DIMMING (DSI) – These ballasts require a digital (DSI) signal from an external source to instruct the ballast to switch ON /OFF and dim. A Digital Serial Interface (DSI) translates the signals from the controller and operates the ballast.

This system is commonly employed in larger installations, with scene-set controllers or energy management systems. Digital dimming is also used for Infra-Red remote control, PIR presence detection and automatic daylight sensing.

Each luminaire requires a 3 core mains supply (L E N), and an additional DSI signal cable, normally a 2 core 0.75mm² flexible cable. This is looped around any luminaires to be dimmed together – please check with the Dimming Controller supplier as there are a maximum number of ballasts which can be connected together, dependant on lamp type and wattage.

An additional Unswitched live is required if the luminaire incorporates emergency control gear.

Luminaire ranges that have dimmable options will display the **DIM** symbol.

HFDS – High Frequency Digital Signal Interface Dimming (DSI)

