Lighting Controls

Date added to ETL 2001.

1. Definition of Technology

Lighting controls are products that are specifically designed to switch artificial lighting on or off, and/or to dim its output.

2. Technology Description

Lighting controls switch lighting on and off and enable artificial lighting levels within specific areas to be adjusted, as and when required by changes in daylight or occupancy, or individual activities.

A wide variety of lighting control products are available, and these range from simple manual switches to fully automatic control systems that adjust artificial lighting levels to reflect planned operating hours, occupation levels and the availability of daylight in specific areas.

The Enhanced Capital Allowance scheme aims to encourage the purchase of lighting controls that realise energy savings by automatically switching or dimming lighting in these ways.

Five different categories of lighting controls are covered by the ECA scheme:

1	Time controllers that automatically switch off lighting at predetermined times.
2	Presence detectors with associated switching controllers that monitor occupancy or movement of personnel, and automatically switch off lighting when the area is unoccupied.
3	Daylight detectors with associated switching controllers that monitor daylight availability, and automatically switch off lighting when daylight is sufficient to illuminate the area.
4	Daylight detectors with associated dimming controllers that monitor daylight availability, and automatically dim lighting, by reducing its power consumption, to the level needed to sufficiently illuminate the area.
5	Central control units that provide the facility to manage the overall operation of artificial lighting installations that include some or all of the categories of lighting controls above.

The above categories of controls may be installed either individually or in combination.

Investments in lighting controls can only qualify for Enhanced Capital Allowances if the product meets the criteria as set out below.

3. Eligibility Criteria

To be eligible, products must incorporate one or more of the categories of lighting controls set out in Tables 1 to 5 below, and comply with the specific eligibility criteria in the relevant table(s). .

Note

Products may also incorporate the facility that permits the automatic switching of lights to be overridden on a central basis for maintenance or security purposes, or to ensure the safety of occupants during particular events or activities.

Table 1 Time Controllers.

SECTION 1A –ELIGIBILITY CRITERIA

To be eligible under this category of Lighting Controls:

- The product must automatically switch the lighting off at predetermined times.

SECTION 1B –Notes

1. The product may also be set to automatically switch on the lighting at predetermined times.
2. Products may incorporate the facility for users to manually switch on and off lighting in a local area and thus to override the predetermined lighting levels at that particular time. However products that allow users to locally override subsequent predetermined times for the lighting to be automatically switched off are not eligible.
3. Time delay switches that simply switch off the lighting after a set time interval are not eligible.

Table 2 Presence detectors with associated switching controllers

SECTION 2A –ELIGIBILITY CRITERIA

To be eligible under this category of Lighting Controls:

- The product must automatically switch off the lighting after the area has become unoccupied.

SECTION 2B –Notes

1. The product may also automatically switch on the lighting when the space becomes occupied. Alternatively local users may manually switch on the lighting at the start of occupancy.
2. Products may incorporate the facility for local users to manually override the presence detector/controller and to switch the lighting off at any particular instance. However products that allow users to override the ability of the presence detector/controller to automatically switch off the lighting are not eligible.

Table 3 Daylight detectors with associated switching controllers

SECTION 3A –ELIGIBILITY CRITERIA

To be eligible under this category of Lighting Controls:

- The product must monitor the availability of daylight and automatically switch the lighting off when sufficient daylight is available to illuminate the area.

SECTION 3B –Notes

1. The product may also automatically switch on the lighting when daylight has fallen below the required level. Alternatively local users could be allowed to switch on the lighting manually, when daylight has fallen below the required level.

2. Products may incorporate the facility for users to manually override daylight detector/controller and switch the lights off at any particular instance. However products that allow users to override the ability of the daylight detector/controller to automatically switch off the lighting are not eligible.

Table 4 Daylight detectors with associated dimming controllers

SECTION 4A –ELIGIBILITY CRITERIA

To be eligible under this category of Lighting Controls:

- The product must monitor the availability of daylight and automatically dim the artificial lighting to the level just needed to sufficiently illuminate the area.
- The product must be able to reduce the power consumption of the lamps being controlled by at least 50% through dimming.

Where fluorescent lighting is being controlled, it must incorporate high frequency control gear with dimmable ballasts. Other forms of lighting may incorporate either mains frequency or high frequency control gear with dimmable ballasts.

SECTION 4B –Notes

1. The product may also automatically switch on the lighting when daylight has fallen below the required level. Alternatively local users could be required to switch on the lighting manually, as and when needed.

2. Products may incorporate the facility for users to manually override the dimming controller at any particular instance and to set the lighting to a lower level that it would be under automatic control, or switch it off. However products that allow users to override the ability of the daylight detector/controller to automatically dim the lighting are not eligible.

Table 5 Central control units (for lighting)
SECTION 5A –ELIGIBILITY CRITERIA
To be eligible under this category of Lighting Controls: • The product must be able to manage the overall operation of the artificial lighting installation that includes some or all of the categories of lighting controls set out in Tables 1 to 4 above.
SECTION 5B –Notes
1. The product may make use of pre-programmed "scenes" that configure the lighting levels in different areas for a particular activity or daylight level or occupancy status in the most energy efficient manner. However products that are only capable of manual scene setting are not eligible.

Performance criteria

Eligible products must comply with: the requirements of the following standards:

- **Either** EN61000-6-2: 2001/2005 and EN61000-6-4: 2001/2007 (in industrial environments), **or** EN61000-6-1: 2001/2007 and EN61000-6-3: 2001/2007 (in all other environments); and:

- The relevant sections of **either** EN 60669: 1998-2006, **or** EN 60730: 1992-2001.

Required test procedures

All products must be tested in accordance with the procedures and test conditions laid down in the standards specified in the performance criteria above.

4. Scope of Claim

Expenditure on the provision of plant and machinery can include not only the actual costs of buying the equipment, but other direct costs such as the transport of the equipment to site, and some of the direct costs of installation. Clarity on the eligibility of direct costs is available from HMRC.