

# Lighting Control

## Programs 011/012 - 123 and greater (option)

Lighting control includes :

- Lighting period timer
- Ambient light detection

### Timer

The timer sets the lighting period.

Light-On = start of lighting period

Light-Off = end of lighting period

Example : to allow lighting between 6am and 6pm :

Set Light-On = 06:00

Set Light-Off = 18:00

Example : to allow lighting between 6pm and 6am :

Set Light-On = 18:00

Set Light-Off = 06:00

During the lighting period, lights are switched on when ambient light is lower than the light detection preset level.

If no lighting period is set (Light-On and Light-Off set to the same value), lighting is only determined by the light detector.

### Light Level Detection

The light detector is intended for measuring when lighting is needed based on outside light levels. (It's not intended for installing inside the barn or animal shed.)

When ambient light levels are low, lighting is switched on, as long the time is within the lighting period.

The standard detector is for supplementary lighting control, and therefore does not have a linear response. It is fairly sensitive to low levels of light and insensitive to high levels of light.

In effect, it gives a measure of the relative lack of light (and therefore the requirement for supplementary lighting). This is similar to the needs of the human eye.

Typically, only one detector is needed, which is normally best connected to the Netmon. The LIGHT level reading can be viewed in the Weather menu on the Netmon, or in the Test : Sensors menu of any unit with lighting control.

The reading is between 0 (no light) and 100 (high light). As described above, this is a relative measure, and the reading changes most in the region where supplementary light may be needed.

By default, lights switch on when the reading falls below 40, and switch off when the reading rises above 60. (The "switching band" is minimise unnecessary switching cycles.)

### Installation

If light control is being installed as a timer only (without light detection), no configuration is required.

If a light detector is to be used :

1 Mount the detector where it will sense ambient light but will not be directly affected by the lights it is switching.

Keep the detector out of direct sunlight, which might affect long term stability.

2 Wire the light detector as a standard 2-wire sensor. Typically only one detector is needed on a network. This is best connected at the Netmon, as it will provide a reading for all other units.

3 In the Netmon : I/O Config : Inputs Networked, set this channel to Networked = YES. (Just as for Ext sensor readings.)

4 In each unit with Light control, configure : I/O Config : Input Devices : LIGHT = Netmon light detector channel (e.g. 30/5 - Netmon channel 5).

5 To check it is reading correctly, view the reading in Netmon : Weather and/or each unit Test : Sensors : Light.

6 The preset (default) light level settings should be adequate for most purposes. They can be adjusted in Control Settings (in each Dicam unit).

**Daylight Level** : 40 (default) : Lights switch on when light falls below this level. To get lights to switch on sooner, increase this setting (e.g. to 50).

**Daylight Band** : 20 (default) : Lights switch off when light increases by this much (e.g. From 40 to 60). To reduce the switching differential, reduce this setting.

	Time between LIGHT-ON and LIGHT-OFF	Time outside Light-On and Light-Off	Timer not set (Light-On=Light-Off)
Light above DAYLIGHT level+band	OFF	OFF	OFF
Light below DAYLIGHT level+band	ON	OFF	ON
No Light Sensor	ON	OFF	ON