Undercover Car Park Entrance Lighting Control (CECS)

**enLighten**
Innovation in Lighting Solutions

Installation

Twilight sensor must face the environment outside the carpark to accurately detect ambient light levels. Fix module with 4 screws to ceiling or wall surface.
For optimal operation of the wireless system, ensure all Tauro Eco luminaires are mounted at the same mounting height.

⚠️ This CECS controller should be mounted at about the same mounting height as the Tauro Eco luminaires to ensure optimal signal transmission.

Fail-Safe operation: The Tauro Eco luminaires will automatically operate at 100% power if communication with the CECS controller is lost for >1min (e.g. if the CECS box is damaged or disconnected from power). Once the communication is re-established, the system will revert to normal operation.

Fix to wall or Ceiling surface

Twilight sensor
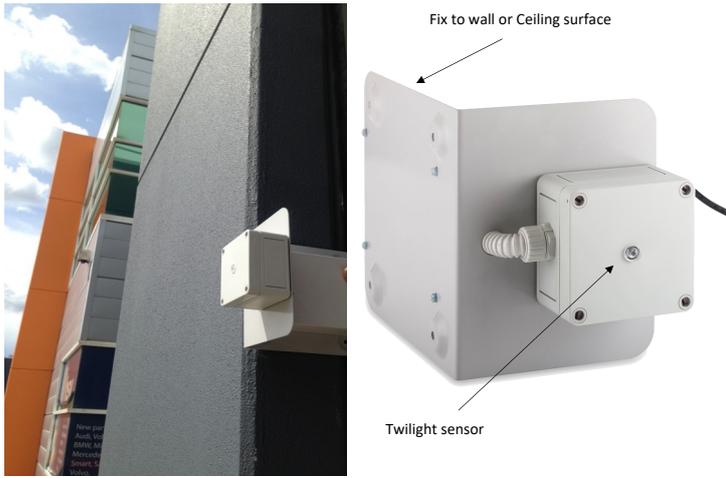
Commissioning

NOTE: The system has been pre-set to a light output of 25% during night time which is sufficient to provide average light levels of >160lux in the car park entrance.
If you wish to fine tune this setting follow the "Adjusting night time light levels" instructions below.

Adjusting night time lighting levels

This has to be done at night time.

- Switch Tauro Eco luminaires on
- Connect CECS module into mains power
- Wait for 2 minutes until the twilight switch switches to night time
- The Tauro Eco luminaires will start to dim down
- Measure light level at various locations with the lux meter. Average lux levels of at least 160lux are required in the car park entrance area during night time.
- If light level too high/low use a flat head screwdriver to turn light level adjustment dial to adjust light levels
- Allow a few seconds for luminaires to dim to new light level
- Measure light level and repeat adjustment if required
- **Once light levels are sufficient, seal adjustment hole with silicon to avoid water ingress!**

If light level too high/low use a flat head screwdriver to turn light level adjustment dial to adjust light levels
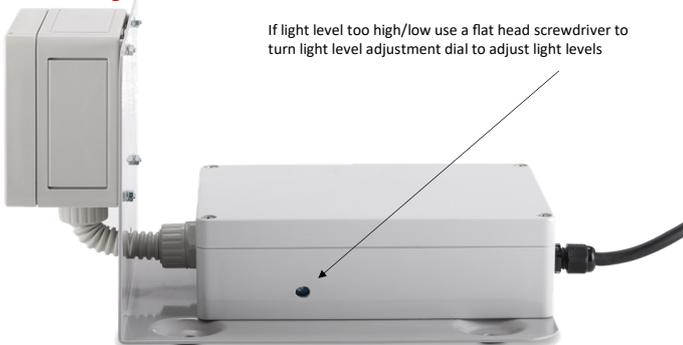
## Setting threshold between day and night mode

The sensor has been pre-set in the workshop to switch to night mode when the ambient light level is very low. If the sensor is influenced by surrounding street lighting/outdoor lighting, the sensor settings need to be adjusted.

Open twilight sensor cover by unscrewing the four screws. *The twilight sensor operates at mains voltage. Please take care when adjusting the dials*
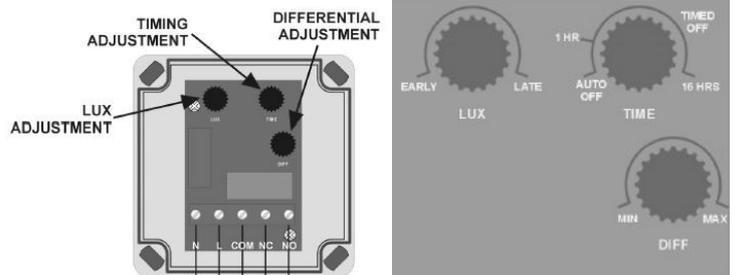

SETTING THE LUX LEVEL

- The best time to set the LUX level is when the unit is exactly when you wish to have it switch from **day-mode** to **night-mode**
- Leave the TIME and DIFF thumbwheels set as factory settings (*TIME set* to AUTO OFF and *DIFF* to half-way)
- Turn the LUX thumbwheel very slowly anti-clockwise towards the EARLY position until the lights start to dim down. Turn a little bit at a time, wait for a few seconds to see if lights dim down, turn again etc.

Switch from 800lux to 160lux
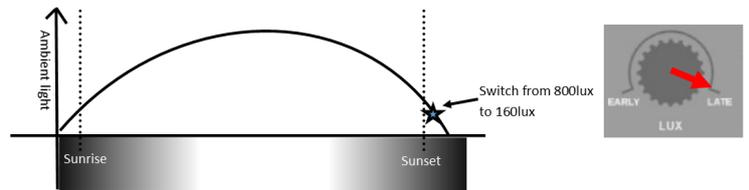
LUX Wheel switched to **LATE** ensures the light only dims to **night-mode** when the sun has well and truly set.

Switch from 800lux to 160lux
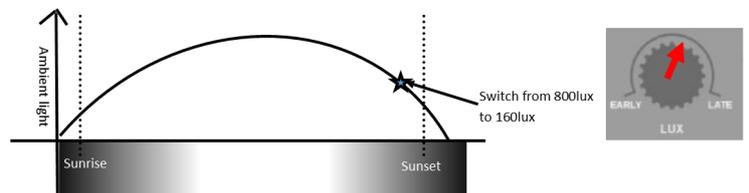
When the LUX Wheel is turned to the mid position this modifies the transition to **night-mode**. Turning the dial towards **EARLY** ensures the transition is made at dusk rather than when the sun has set.

- There is a 2 minute time delay to prevent nuisance switching. This is automatically disabled whenever the LUX thumbwheel is turned, and then re-instated automatically after a further 2 minutes.

ADJUSTING THE DIFFERENTIAL

After the unit has switched over to either **day** or **night-mode** the differential is used to determine at what level of measured light the fittings should switch back again. Increasing the differential ensures that when the light levels are at the threshold of change (ie dusk/external PE sensor/clouds) constant switching is prevented.

Technical Specifications

Electrical	
Power consumption	2.5W
Operating frequency	50 Hz
Operating voltage range	220 - 240V AC
Environmental	
IP rating	IP65
Ambient operating temperature range	-10°C to +35°C
Controls (RF)	
Switching threshold range	10lux to 1000lux
Wireless module	XBee Digimesh 2.4 S1
Maximum number of luminaires controlled by one sensor	200
Transmission power	10mW
Transmission range	10m (indoor)
RF data rate	Max 250kbps
Transmission frequency	2.4GHz

Dimensions

255 mm
205 mm
155 mm
60 mm
Control Box with Xbee module
Twilight sensor
Width 190mm