



IDRATEK

INTELLIGENT AUTOMATION

LTH-001

Light Level + Temperature + Relative Humidity + 2 Digital inputs

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This module combines light level sensing, high resolution temperature and relative humidity sensing and 2 digital inputs in one package. Saving space and cost where both ALS and THS module functions may be required (eg. for lighting and climate control applications) as well as providing digital inputs for external sensors. As with other IDRATEK modules a range of 'Reflex' functions is provided to allow control of other network devices based on light level, temperature, humidity and digital input conditions.



Light Sensor Charactersitics

- Module output range: 0 (dark) - 255 (bright)
- Resolution over range: 8 bits monotonic
- Spectral response of sensor: similar to human eye (~480-650nm)
- Measurement characteristics: Logarithmic with additional internal time response damping

Temperature Sensor Specifications¹

- Range: Beyond module operating limits (of -10°C to +45°C)
- Resolution: 0.03125°C
- Accuracy: +/- 0.5°C over module range
- Internal sensor sampling period: ~4 seconds

Relative Humidity (RH) Sensor Specifications¹

- Range: Beyond module operating limits (of 5% to +95%)
- Raw data resolution: 12bit
- Accuracy: +/- 2% over module range (after linearisation)
- Internal sensor sampling period: ~4 seconds

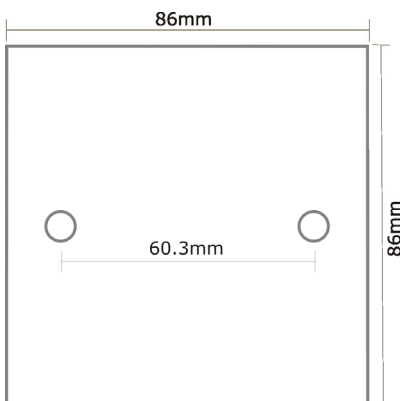
Digital Inputs

- 2 General purpose non isolated (internally pulled high to 3.3V)



Functional

- Temperature, Light level and digital input values can be interrogated at any time
- 15 independent event triggers:
 - 2 x Digital Inputs state change trigger
 - Temperature equals or exceeds user defined 'High' limit
 - Temperature equals or falls below user defined 'Low' limit
 - Temperature difference exceeds user defined 'Delta' limit (auto-datuming)
 - Temperature time interval trigger (ranges: 1-127 seconds/1-127 minutes)
 - RH equals or exceeds user defined 'High' limit
 - RH equals or falls below user defined 'Low' limit
 - RH difference exceeds user defined 'Delta' limit (auto-datuming)
 - RH Time interval trigger (ranges: 1-127 seconds/1-127 minutes)
 - Light level equals or exceeds user defined 'High' limit
 - Light level or falls below user defined 'Low' limit
 - Light level difference exceeds user defined 'Delta' limit (auto-datuming)
 - Light level Time interval trigger (ranges: 1-127 seconds/1-127 minutes)
 - Module Initialise trigger
- User defined trigger enabling pattern
- Each event trigger can generate a pre-defined response and/or several user programmable responses.
- Status indicator LED
- In-situ reprogrammable firmware



Electrical

- Operating voltage 12-15V DC
- Current consumption 9mA (nominal)

Environmental

- Operating temperature -10°C to +45°C
- Operating humidity 5% to 95% (non-condensing)

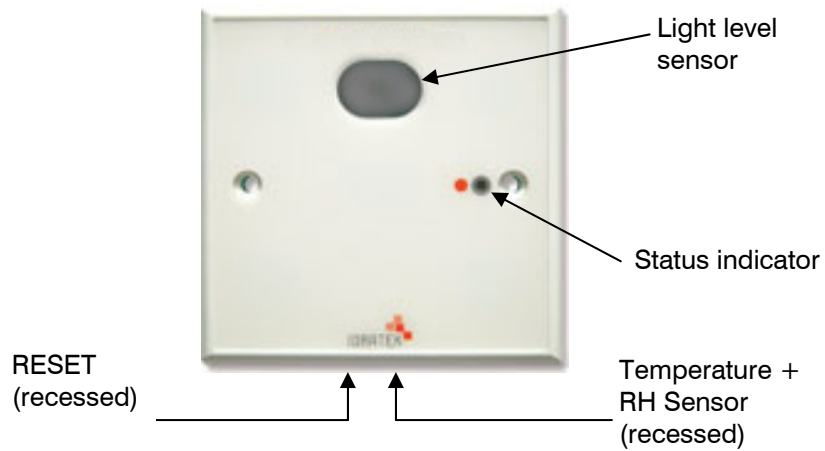
Mechanical

- Designed to fit UK standard 35mm deep electrical pattress
- 60.3mm fixing centres using standard M3.5 screws



¹ Manufacturers Data Sheet

Interfaces (front)



Interfaces (rear)

