

TSL200

1-Wire ambient light sensor



Short description

TSL200 is a 1-Wire ambient light sensor with high dynamic range and high-precision human-eye response, using strong IR (infra-red) filter.

The sensor measures up to 83000 lux with an automatic full-scale adjustment and 23-bit effective dynamic range.

The internal digital signal processing and full factory calibration guarantee the long-term stability and repeatability of the measurements. The full factory calibration eliminates the need for additional calibration on the customer's side.

The availability of inside unique number for each sensor allows installation in multi-sensor environmental monitoring systems.

The sensor communicates over the 1-wire interface. In order to make easier daisy-chain wiring, there is two RJ-11 connector available on the panel.

TSA200 has two RJ11 connectors, for easy daisy chain arranging of the 1-Wire bus.

Technical parameters

Supply voltage range (1-Wire bus)	4.5 to 5.5 V
Maximum supply current (1-Wire bus)	4 mA
Illuminance range	0 to 83000 lux
Resolution	1 lux
Accuracy	±5 %
Measurement drift across temperature	0.01 %/°C
Operating temperature range	0 to +40 °C
Operating relative humidity range	5 to 95 %RH (non-condensing)
Ingress protection	IP30
Dimensions	85 x 35.1 x 23.5 mm

Usage

Can be used with following TERACOM controllers:

- TCW241

- TCW220

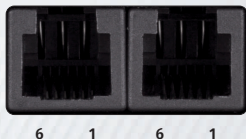
- TCG140



control solutions

TERACOM**TSL200 - 1-Wire ambient light sensor**

Pinout



Pin	Description	Corresponding UTP wires color
1	1-Wire GND	White/Brown
2	1-Wire GND	White/Green
3	1-Wire Data	Green
4	1-Wire GND	White/Orange
5	1-Wire +VDD	Orange
6	1-Wire +VDD	Brown

LED indicator

The status of the device is shown by single LED, located on the front panel:

- If the LED blinks on a period of 1 second, the sensor works properly;
- If the LED blinks on a period of 3 seconds, there isn't communication with the controller;
- If LED doesn't blink, there isn't power supply.

Sensor connection

It is strongly recommended to use only UTP/FTP cables. It is strongly recommended to use a daisy-chained (linear) topology for multiple sensors and keep total cable length up to 30 meters.



1-Wire Bus

1-Wire is a registered trademark of Maxim Integrated Products, Inc. We strongly recommend read Maxim's 1-Wire tips at <https://www.teracomsystems.com/wp-content/uploads/1-wire/guidelines-for-reliable-long-line-1-wire-networks.pdf>