

WIRELESS TASK AMBIENT PHOTO SENSOR

21 SERIES

TAP-21

Overview

The TAP-21 (Task Ambient Photo) sensor is designed to provide a reliable and simple method to increase energy savings by adding daylight harvesting to your wireless lighting control system.

Use the TAP-21 to control a single Echoflex lighting controller or groups of controllers for either switching or dimming zone control in relation to the natural light contribution in the space.

Batteries are not required for everyday operation due to the advanced solar energy harvesting and power management features of the sensor. Upon installation, the sensor will operate with exposure to as little as 50 Lux (5 fc) for 5 minutes. The TAP-21 is capable of operating over 80 hours in darkness from maximum charge levels.

The TAP-21 photo sensor incorporates our latest diagnostic and configuration features to ensure reliable communications and solar harvesting capability. The TAP-21 supports range confirmation technology whereby simple button press and hold sequences result in LED indication of signal strength. Solar energy harvesting level indication under existing light levels is also provided on demand through LED indication. Echoflex's Simple Tap configuration feature allows for setting operational parameters at the sensor by "tapping" the Teach button (see Functional Diagram) in a prescribed sequence. These built-in features assist the installer to position the sensor and be confident of its operation without using separate light meters, signal strength indicators and configuration devices.

Note: Range Confirmation requires an "F Series" Echoflex controller ("F" series is exclusive to 902 MHz at this time).



Features

- Solar powered wireless photo sensor for Daylight Harvesting applications
- Works in conjunction with Echoflex Lighting Controllers
- Integrated Range Confirmation via tricolored LED indication (patent pending)
- Integrated Solar Harvesting Light Level LED indication
- Transmission Range of 24m (80 ft) for interior spaces
- Simple Tap configuration of Light-On / Off or dimming settings
- Up to 80 hours operation in complete darkness
- Initial operation at low light level and minimal charging time
- Switch selectable ranges 0 - 510 lux (0 – 50 fc) and 0-1024 lux (0 – 100fc)
- Available in 902 MHz, 315MHz, 868 MHz frequencies
- Batteries not required, but start assist battery option available
- CEC- Title 24 compliant

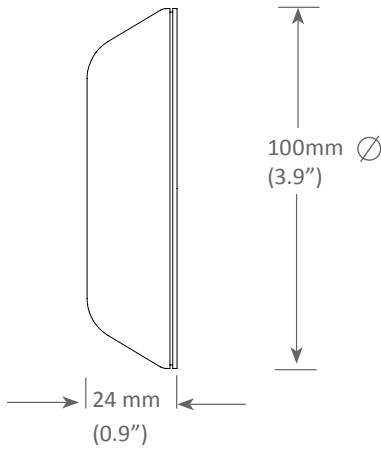
Ordering Information

| Model | Description | Part # - 902 MHz | Part # - 315 MHz | Part # - 868 MHz |
|-----------|--------------------------------------|------------------|------------------|------------------|
| TAP-21(*) | Dual Range Task Ambient Photo Sensor | 002-8367 * = U | 002-1367 * = C | 002-6367 * = Y |

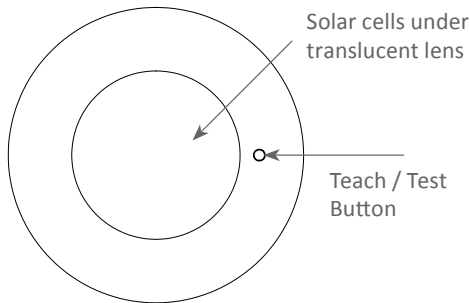


TAP-21

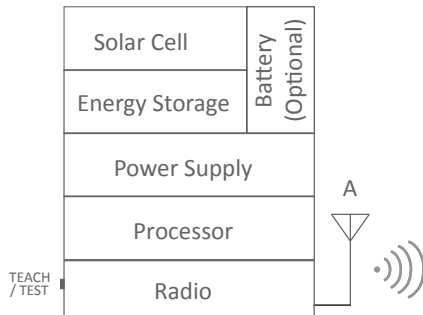
Dimensioned Diagram



Functional Diagram



Block Diagram



Equipment Profile

EEP A5-06-02: Light sensor

DB_1: 0 lux - 1024 lux (0 - 102 fc)

DB_2: 0 lux - 512 lux (0- 51 fc)

DB_3: supply voltage 0...5.1V, linear n=0...255

Hardware Specifications

Power Supply

Operational light level
Minimum charge time to begin operation
Maintain charge time
Maximum charge time
Operating life at full charge
Battery - start assist

Integrated solar cell
40 lux (4 fc) minimum
5 minutes in 50 lux (5 fc)
3 hours per 24 hours @ 480 lux (48 fc)
7.5 hours @ 960 lux (96 fc)
80 hours @ 0 lux
CR2032 (optional - not included)

Input

Teach button for assignment to receiver

Outputs

Test mode LEDs - red, green and amber

Communications

Radio frequency
Antenna
Telegram heartbeat

902 MHz(U), 315 MHz(C), 868 MHz(Y)
Integrated whip
Light Level Timer
< 50 lux (5 fc) 100 seconds
> 50 lux (5 fc) linear ramp from 60 to 10 seconds (as unit approaches full charge)
Transmission range 24 m (80 ft) - commercial office space (typical)

Mechanical Specifications

Operating temperature -25°C to 65°C (-13°F to 149°F)
Relative humidity 5% to 92% RH (non-condensing)
Weight 77 g (2.7 oz)
Dimensions 100 x 24 mm (3.9 x 0.9") diameter
Mounting screws or double sided tape (not supplied)

Listings

CEC - Title 24 compliant

FCC Part 15.231 -Remote Control Transmitter
IC RSS-210
(902 MHz and 315 MHz ONLY)



Echoflex Solutions, Inc.

#1, 38924 Queens Way | Squamish | BC | Canada | V8B 0K8
Toll Free: 888-324-6359 | Phone: (778) 733-0111 | Fax: (604) 815-0078
email: info@echoflexsolutions.com | www.echoflexsolutions.com

Specifications are subject to change without notification.
Smart Click and Simple Tap are trademarks of Echoflex Solutions, Inc.
Range Confirmation Technology - Patent pending
Document 8DC-0466 | Revision 1.1

