

Overview

The TAP-31 (Task Ambient Photo) sensor is designed to provide a reliable and simple method of increasing energy savings by adding daylight harvesting to your Echoflex lighting control system.

Using standard EnOcean profiles, the latest version of Echoflex’s popular TAP sensor adds exterior light level monitoring with range up to 6,090 foot candles (65,500 lux) making the sensor suitable for both closed and open loop daylighting applications.

Batteries are not required for everyday operation due to the advanced solar energy harvesting and power management features of the sensor. After installation, the sensor will operate with exposure to light as little as 50 lux (5 FC) for 5 minutes. The TAP sensor is capable of operating over 70 hours in darkness from maximum charge levels.

The TAP sensor incorporates diagnostic and configuration features to ensure reliable communications and solar harvesting capability. The sensor supports Range Confirmation® technology whereby simple button press and hold sequences result in visual indication of signal strength via on-board LEDs. Solar energy harvesting under existing light levels is provided on demand through LED indication. Sensor light level range can be selected by the installer depending on which daylighting application is needed. An accelerated transmission mode is available when energy code compliance inspectors need to verify system operation.

Echoflex’s Simple Tap™ configuration feature allows for setting operational parameters at the sensor by “tapping” the Teach button in a prescribed sequence. These built-in features aid the installer to position the sensor and be confident of its operation without using separate light meters, signal strength indicators and configuration devices.



Features

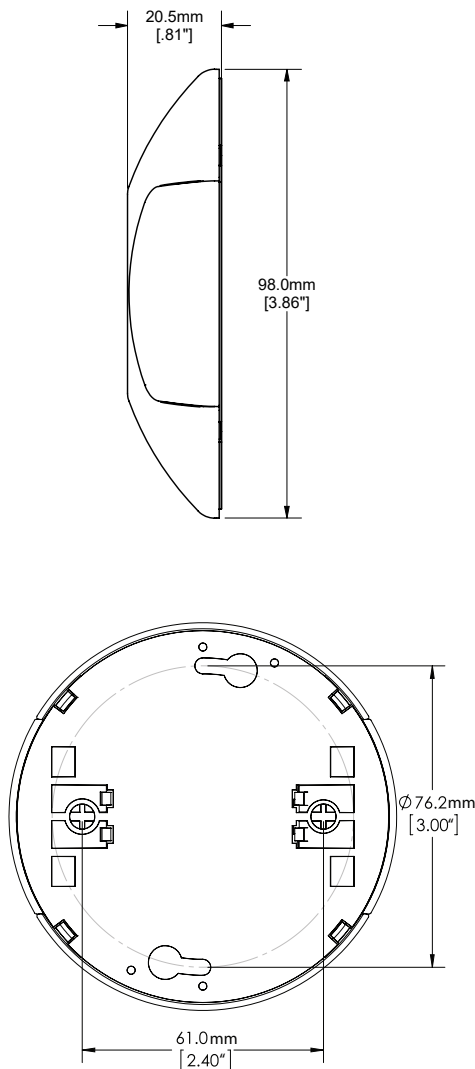
- Solar powered wireless photo sensor for daylight harvesting applications
- TAP-31 selectable ranges: 0-1024 lux (95 fc) with optional range 0-65535 lux (0-6090 fc)
- Integrated Range Confirmation® via tricolored LED indication
- Integrated Solar Harvesting Light Level via tricolored LED indication
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
- Simple Tap™ configuration of daylighting settings
- Up to 72 hours operation in complete darkness
- Batteries not required for operation, start assist battery option available
- Mounting options include integrated magnets for T-Bar or wire strap for ceiling tile. Provisions for screw mounting and double sided tape (not included)
- Energy code compliance test mode
- Quick start operation at low light level with minimal charging time

Ordering Information

Description	Model	Part Number
Wireless Light Sensor, 0-1024 lux / 0-65535 lux, 902MHz	TAP-31U	8188A1191-X-1
Wireless Light Sensor, 0-1024 lux / 0-65535 lux, 868MHz	TAP-31Y	8188A1391-X-1
Wireless Light Sensor, 0-1024 lux / 0-65535 lux, 928MHz	TAP-31J	8188A1691-X-1

TAP-31

Dimensional Diagram



Equipment Profile

EEP A5-06-02: Light sensor	DB_1: 0 - 1,020 lux (0 - 95 fc) DB_3: supply voltage 0...5.1V, linear n=0...255
EEP A5-06-04: Curtain Wall Brightness Sensor	DB0.4- DB0.7: Battery Level 0-100% DB_1 .. DB_0 0- 65,535 lux (6,090 fc) DB_3: Temperature, UNUSED

Hardware Specifications

Power Supply	Integrated solar cell
Range	Maximum range: 0-65535 lux, resolution 1 lux, accuracy +/- 10%
Operational Light Level	50 lux (5 fc) minimum
Minimum charge time to begin operation	5 minutes in 50 lux (5 fc)
Maintain charge time	3 hours per 24 hours @ 480 lux (45 fc)
Maximum charge time	7.5 hours @ 960 lux (90 fc)
Operating life at full charge	72 hours @ 0 lux
Battery - start assist	CR1632 (optional - not included)
Input	Teach button for assignment to receiver
Outputs	Test mode LEDs - red, green and amber

Communications

Radio Frequency	902 MHz (U) or 868 MHz (Y) or 928MHz (J)		
Antenna	Integrated whip		
Transmission Range	24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line of sight		
Telegram Heartbeat	Light Level	Sample Rate	Update Rate
	< 10 lux (1 fc)	128 seconds	21 min.
	< 50 lux (5 fc)	64 seconds	10 min.
	50-100 lux	32 seconds	320 seconds
	> 100 lux	16 seconds	160 seconds




Mechanical Specifications

Operating Temperature	-25°C to 65°C (-13°F to 149°F)
Relative Humidity	5% to 92% RH (non-condensing)
Weight	70g (2.4oz)
Dimensions	98.0 mm x 2.5mm (3.86 x 1.00") diameter
Mounting	Integrated magnets, wire bracket, screws (not supplied), double sided tape (not supplied)

Energy Code Compliance

California Energy Commission Title 24
Washington State Energy Code
ASHRAE 90.1-2013
IECC 2015
The TAP-31 is a RoHS compliant product

Agency Listings

902 MHz models	FCC Part 15.231 - Remote Control Transmitter IC RSS-210	
868 MHz models	CE Marking	
928 MHz models	Japanese Radio Law (special order item)	

Range Confirmation is an Echoflex Solutions Inc. Patented Technology | Simple Tap is a trademark of Echoflex Solutions, Inc.
Specifications are subject to change without notification