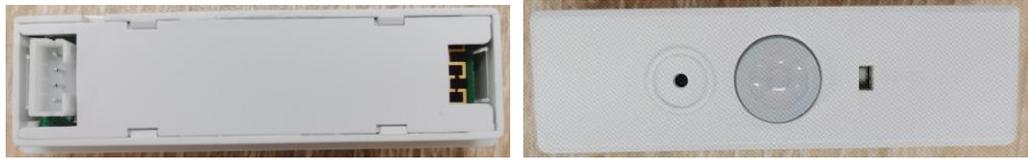


Smart Module-TPTSTSL Series



GENERAL

Smart Module-TPTSTSL Series is embedded into the indoor fixtures for energy-saving. It provides embedded wireless lighting control, digital dimming, occupancy detection and daylight harvesting capabilities. It can sense motion from mounting height of up to 3 meters. The smart module provides Passive Infrared (PIR) occupancy detection and daylight level detection in one compact low profile design. Operating with 12Vdc power supply, it controls 3.3V PWM dimming driver.

FEATURES

- ◆ Combine occupancy sensor and daylight sensor together.
- ◆ 100% digital PIR detection
- ◆ Fully dimmable via digital dimming protocols, providing the right amount of light for the application and to optimize energy savings
- ◆ Bluetooth radio provides wireless control of fixture
- ◆ Easy sensor configuration using the T-smart Light APP
- ◆ Low profile design blends into fixtures easily.
- ◆ Five-year limited warranty

APPLICATIONS

- ◆ LED Troffer
- ◆ LED Panel Light

SPECIFICATIONS

Items	Smart Module- TPTSTSLCAB	Smart Module- TPTSTSLDAB
Input Voltage	+12Vdc	+12Vdc
Input Current	35mA max	35mA max
Minimum Input voltage	+5Vdc	+5Vdc
Damage Input Voltage	DC >48V	DC >48V
Output Signal	PWM 3.3V	PWM 3.3V
Output Signal Frequency	2KHz	2KHz
Communication Protocol	Bluetooth SIG Mesh	Bluetooth SIG Mesh
Communication Frequency	2.45GHZ	2.45GHZ
Max communication distance	20 meters, line of sight	20 meters, line of sight

Occupancy detection range	Φ 4M@H3M /360° (with appropriate lens)	Φ 4M@H3M /360° (with appropriate lens)
Daylight Harvesting Intensity Range	\	\
Detection Angle	120°	120°
Required Connector Spec.	HAY200A-4Y 4P 2.0 distance	HAY200A-4Y 4P 2.0 distance
Dimensions (L*W*H)	70.5*20.5*19.2mm	70.5*20.5*19.2mm
Working Temperature	-10°C-55°C (14~131°F)	-10°C-55°C (14~131°F)
IP Rating	IP20	IP20
CCT adjustable	Yes	No

OUT-OF-BOX FUNCTIONALITY

Occupancy Control	Enabled
Hold time (1 st Time Delay)	20 minutes
Prolong time (2 nd Time Delay)	1 minute
Dim Level	50%
Daylight Control	Enabled
Daylight Level	\

Factory Reset

After factory reset, the fixture's data is cleared and the original PIR and photo sensor is working. Hold time (1st Time Delay): 20 mins; Prolong time (2nd Time Delay): 1 min; Dim level: 50%. After reset, the fixture's brightness output is 100% from power-off to power-on, and then changes as the ambient light changes. After the reset, there is no power-off; the brightness output is 100%, the same as the action from power-off to power-on 100%, and then changes with the ambient light. If many fixtures are reset, there is a phenomenon that the deleted fixtures flash inconsistent. This may cause the brightness inconsistent after the reset and before power off.

Applications: When the fixture is fail to be searched, reset the fixture. Add the fixture again until success.

Choose one of the following to restore the factory settings

1. Delete Fixtures by APP

When fixtures are on-line, delete the fixture through APP. The deleted fixtures can be factory reset.

2. Cut Off Power Supply

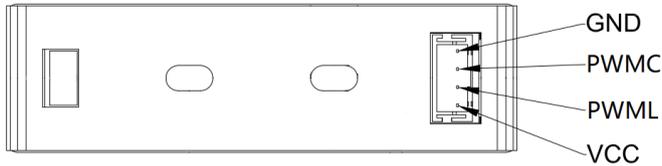
Turn on /off the fixture five times, the fixture can be factory reset. Steps are following:

- 1) Turn on the fixture for at least 30S and then turn off.
- 2) Turn the fixture on and off five times and on again. Lights flash 3 times, meaning reset successfully.
ON(1S)/OFF(5S)- ON(1S)/OFF(5S)- ON(1S)/OFF(5S)- ON(10S)/OFF(5S) - ON(10S)/OFF(5S)- ON

3. Press Reset Button

For the fixture with reset button, press and hold the reset button for more than 5 seconds to restore the factory settings.

MODEL AND PIN DESCRIPTION



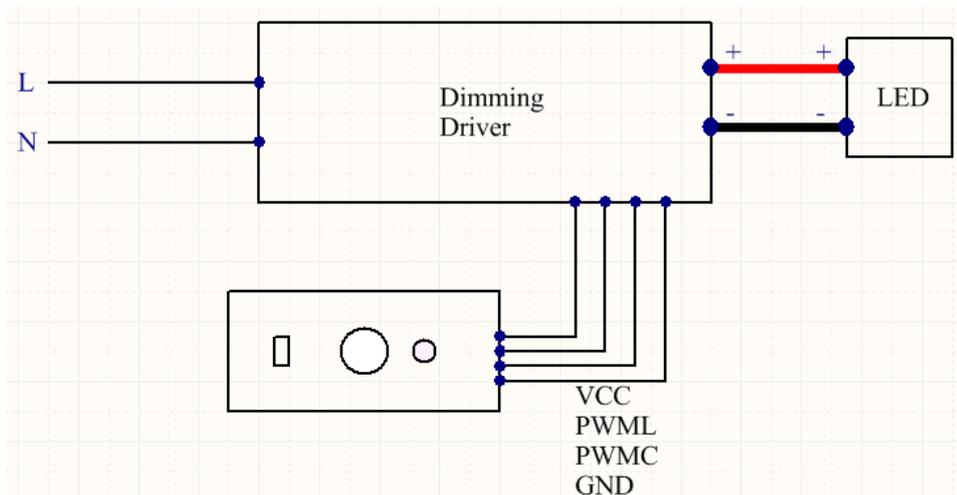
ITEM	MODEL	VCC	GND	PWML	PWMC
Smart Module-TPTSTSLCAB	PWM brightness and CCT adjustable module	Power supply+ (12Vdc)	Power supply -	Brightness PWM	CCT PWM
Smart Module-TPTSTSLDAB	PWM brightness adjustable module	Power supply+ (12Vdc)	Power supply -	Brightness PWM	/

POWER REQUIREMENTS

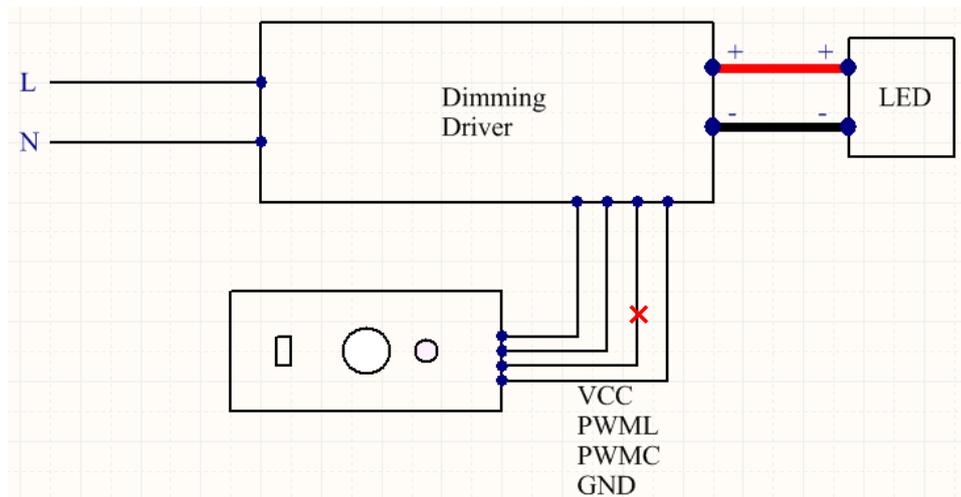
Type of dimming	PWM
Signal amplitude	3.3V
Auxiliary output voltage	5-48Vdc
Auxiliary output current	>25mA@5v,>8mA@48V

WIRING DIAGRAMS

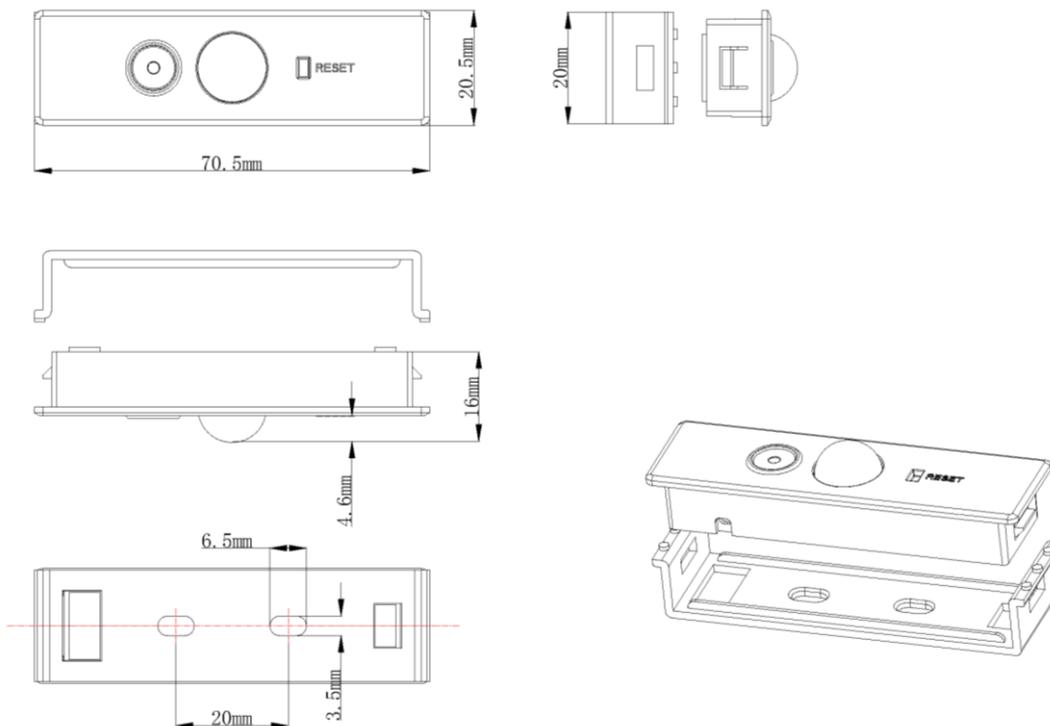
Schematic Diagram of Smart Module- TPTSTSLCAB and Dual CCT LED Driver



Schematic Diagram of Smart Module- TPTSTSLDAB and Single CCT LED Driver



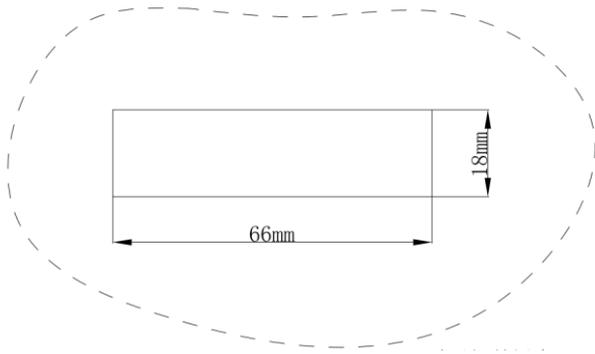
PRODUCT DIAGRAM



RECOMMENDED CUTTING SIZE

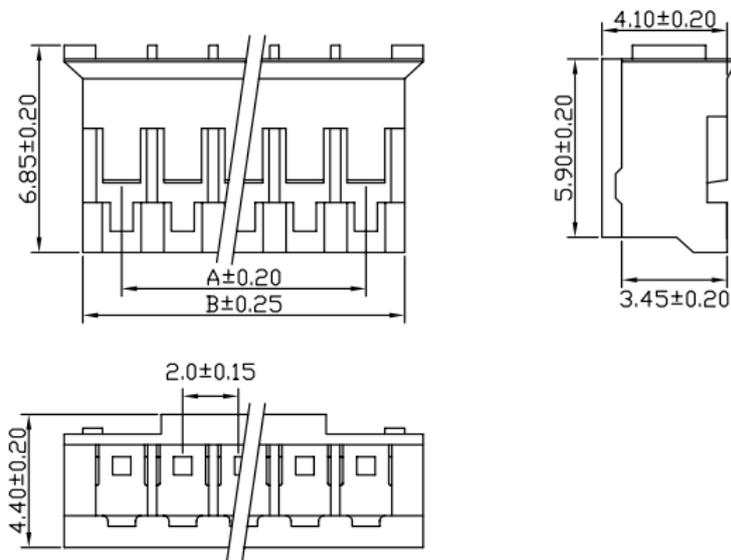
TOPBAND

CO-INNOVATING A SMARTER FUTURE



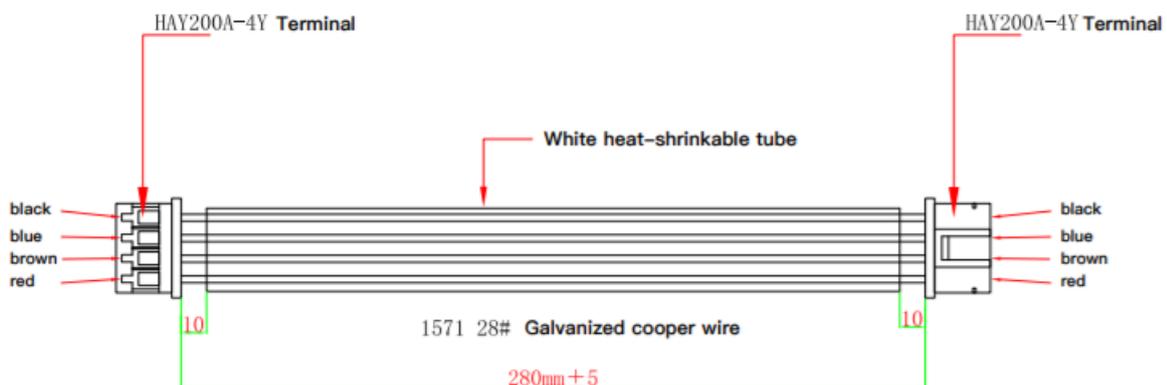
Suited sheet thickness < 1mm

DIMENSION OF ADAPTED TERMINAL BLOCK

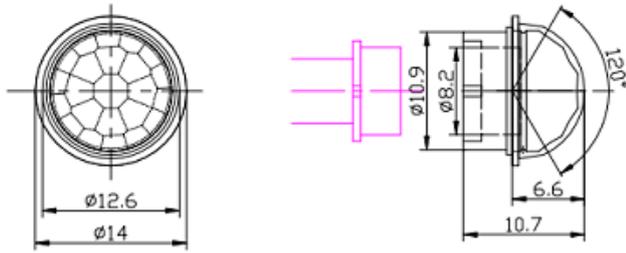


A: 6.0MM B: 8.6MM

The connected cable is not supplied, and it needs to be purchased separately. The length can be customized. The wiring method can be with two terminal blocks at both ends as follows. Or one end is with terminal block, and the other end is galvanized wire, which is convenient for welding to the power supply or plugging into the wire terminal block. The diameter range of the wire is AWG24#~32#.



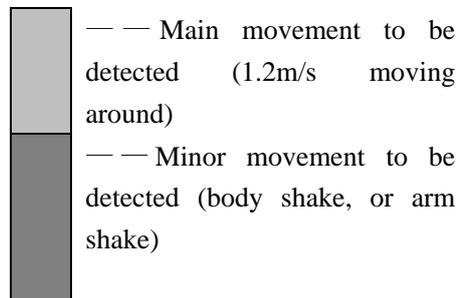
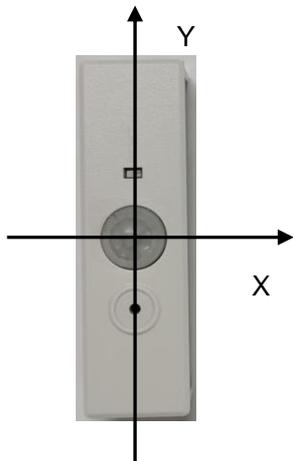
LENS (Unit: mm)



DETECTION VIEW

The installation height of fixture: 3 meters

Test environment: In an empty room, the temperature is 25°C and the humidity is 50%. The measuring staff is 1.72 meters tall.



Top View

Unit: m

Notes

1. False Triggering:

- (1) Small animals enter into the detecting coverage.
- (2) Far-infrared rays from sunlight, car headlight, filament lamps radiate to the sensor.
- (3) Temperature varies sharply because of warm/cold air or humidifier's vapor in the detecting coverage.

2. Difficult Triggering:

(1) Glass or acrylic materials hard to penetrate through the far infrared ray exist between the sensor and occupant detected.

(2) Non-moving or high speed hot objects.

3. The detected distance combining with various conditions include sensor's SNR, Fresnel lens' imaging distance, occupant's temperature, ambient temperature, ambient humidity, electromagnetic interface and more lead to the complicated relations. Thus it fails to judge the output only by single index.

4. Installation attention

PIR lens and daylight harvesting sensor need to be exposed. They can not be installed in the PC cover. The light emitting surface of the fixture should not be directly exposed to the daylight harvesting sensor.

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