

## TSBCA2DL

### 12V BT Long-range fixture adapter



#### Description

TSBCA2DL fixture controllers are designed to increase the Bluetooth signal in a networked lighting control system, especially for outdoor applications. They feature an external long-range antenna that extends wireless coverage for outdoor motion detection linkage. Sensors are not needed if it is used as a Bluetooth node.

#### Features

- 12VDC input.
- Integrated Bluetooth module.
- Includes connection port for long-range antenna with up to 1640ft range.
- Bluetooth long-range transmission range (TSTX1 antenna included).
- Designed to integrate into luminaires for Luminaire Level Lighting Control (LLLC).
- Sensor-ready attachment port for Technilight Smart Eco Sensors (CC cable required).
- 0-10V output.
- TSCD30 cable included.

#### Requirements

- Dim to OFF driver with 12VDC output.

#### Notes

All application environments will not necessarily be able to achieve max signal range due to factors such as signal obstructions, interference, and luminaire/housing design. Testing is recommended to ensure performance for the applications.

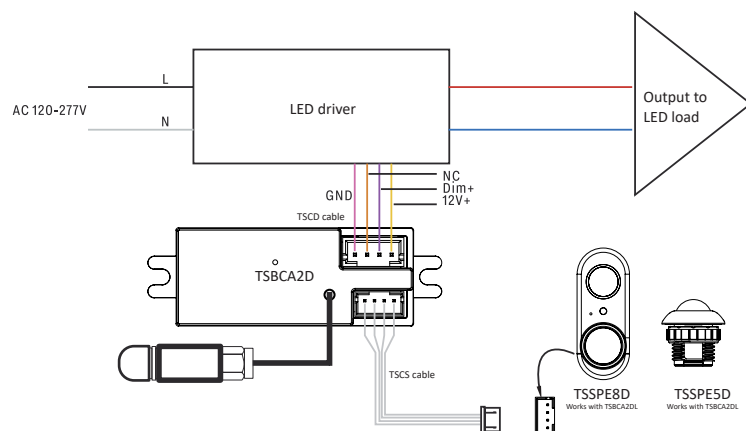
#### Specifications

Input voltage	DC 12V
Power supply source	Min 150mA
Dimming	Class 2, 0-10V DC 10mA Max
Sinking current	10mA Max
Bluetooth transmit	TX1: 860' Max TX5: 1640' Max
Radio frequency	2.4GHz ± 75MHz
Bluetooth version	5.0
Housing material	UL 94-V0
Detection range	40-80'
Mounting height	20-40'
Indoor / outdoor Use	Indoor / Outdoor Use
Operating temperature	-30°C ~ 65°C, -22°F ~ 149°F
Storage temperature	-30°C ~ 85°C, -22°F ~ 185°F
IP rating	IP20
Antenna	IP65
Color	White
Warranty	5 years
Compliance	UL8750, RoHS
Safety	cULus Recognized Component LED Controller E547370 DLC: coming soon

## Ordering information - accessories

Model	Description
<b>TSCS30</b>	2468 24AWG white 300V 80°C Length: 300mm, PH2.0-4P on both sides of the cable between the adapter and the sensor
<b>TSCS60</b>	2468 24AWG white 300V 80°C Length: 600mm, PH2.0-4P on both sides of the cable between the adapter and the sensor
<b>TSCS120</b>	2468 24AWG white 300V 80°C Length: 1200mm, PH2.0-4P on both sides of the cable between the adapter and the sensor
<b>TSCD30 (included)</b>	1007 22AWG white 300V 80°C Length: 300mm, XH2.54-4P on left side cable (to TSBCA2DL), 10mm dipped tin on right side (to LED driver)
<b>TSCD60</b>	1007 22AWG white 300V 80°C Length: 600mm, XH2.54-4P on left side cable (to TSBCA2DL), 10mm dipped tin on right side (to LED driver)
<b>TSSPE5D</b>	PIR sensor, DLH
<b>TSSPE8D</b>	PIR sensor, DLH
<b>TSTX1 (included)</b>	Antenna 2,4G-1dbi
<b>TSTX5</b>	Antenna 2,4G-5dbi

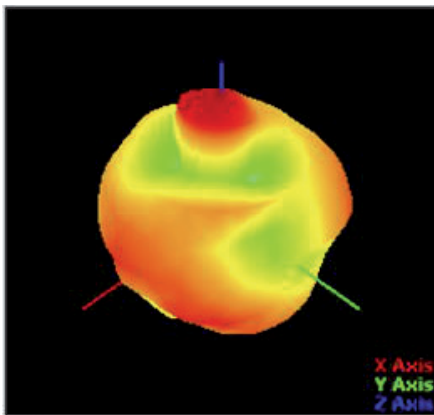
## Wiring



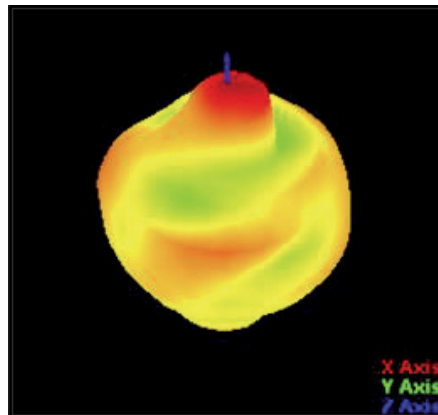
FFC (24 AWG)

WHITE	WHITE	WHITE	WHITE
GROUND	PHO	PIR	12V +

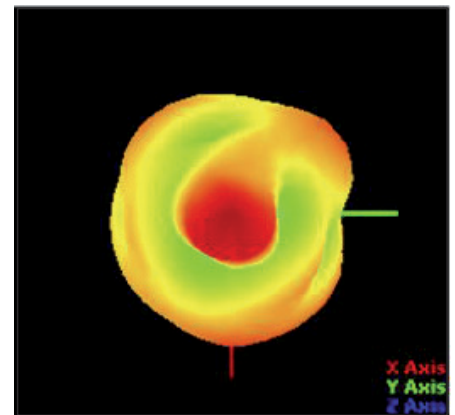
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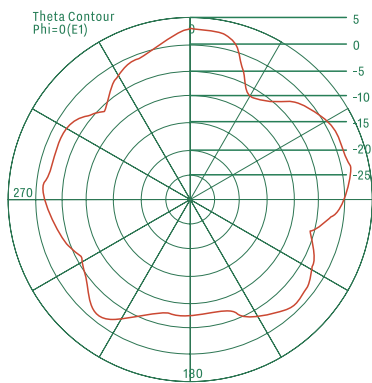
T45-P45



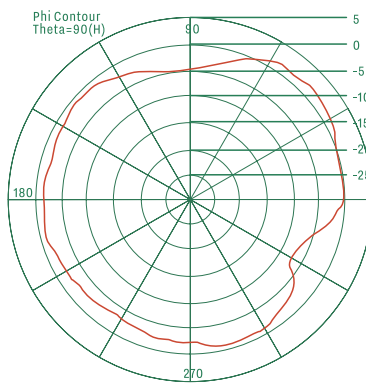
T45-P225



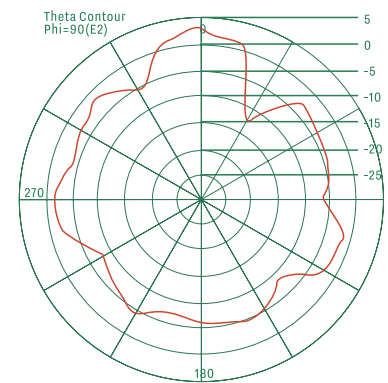
T0-P0



XOZ



XOY



YOZ

Wireless signal strength	
Transmission distance	RSSI (dbm)
164' (50 m)	-43
328' (100 m)	-45
492' (150 m)	-49
656' (200 m)	-54
820' (250 m)	-57
860' (262 m)	-58

Note: The test transmission distance of two TSBICA2DL

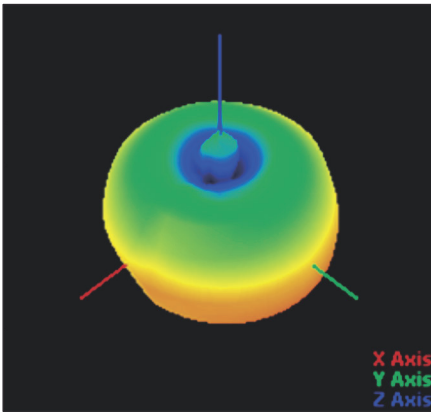


3.48  
2.5  
1.52  
0.54  
-0.44  
-1.41  
-2.39  
-3.37  
-4.35  
-5.33  
-6.31  
-7.29  
-8.27  
-9.25  
-10.23  
-11.21  
-12.19  
-13.17

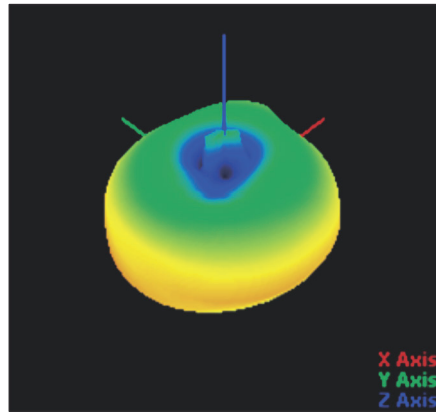
## Coordination system decription:

Line color	XYZ	Theta-Phi
Red	Axe X	Theta90-Phi0
Green	Axe Y	Theta90-Phi90
Blue	Axe Z	Theta0

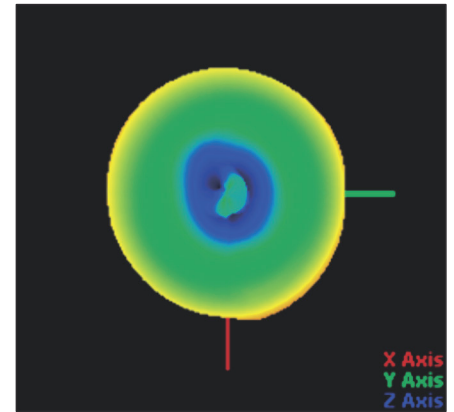
## TSTX5 transmission



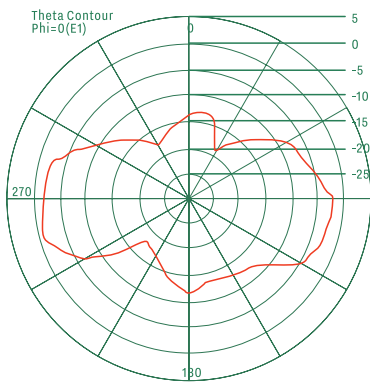
T45-P45



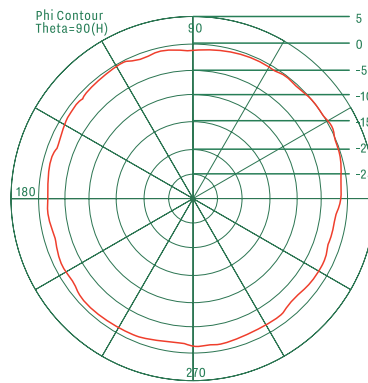
T45-P225



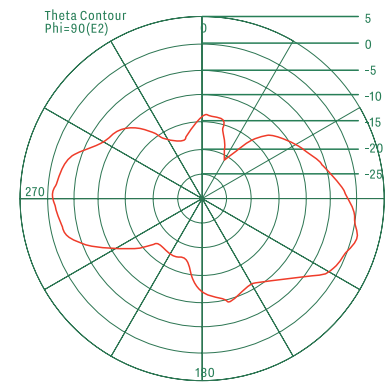
T0-P0



XOZ



XOY



YOZ

Wireless signal strength	
Transmission distance	RSSI (dbm)
328' (100 m)	-37
656' (200 m)	-47
984' (300 m)	-48
1 312' (400 m)	-59
1 640' (500 m)	-60

Note: The test transmission distance of two TSBCA2DL

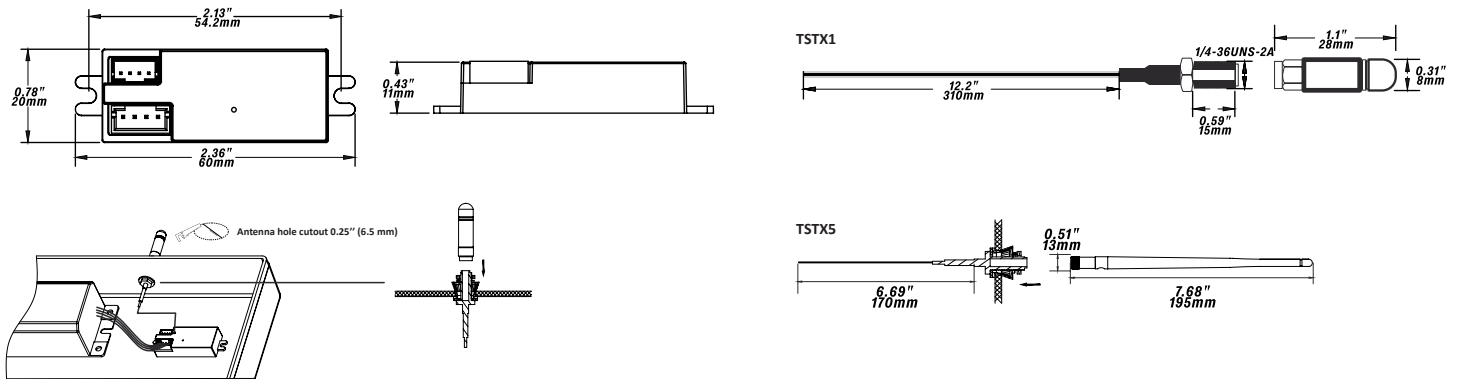


5.4  
3.89  
2.38  
0.87  
-0.65  
-2.16  
-3.67  
-5.18  
-6.69  
-8.21  
-9.72  
-11.23  
-12.74  
-14.26  
-15.77  
-17.28  
-18.79  
-20.31

### Coordination system decription:

Line color	XYZ	Theta-Phi
Red	Axe X	Theta90-Phi0
Green	Axe Y	Theta90-Phi90
Blue	Axe Z	Theta0

## Dimensions



## Label product

**Technilight**  
**SMART**

**Model: TSBCA2DL**

**Fixture Adapter**


Input: Class 2, CV, 12VDC, 45mA, 0.5W,  
Output: Class 2, 10VDC, 10mA max. 0.1W  
Input Type Class 2  
Output Type Class 2 Tc: 70°C  
Output Load Type Specific load- 0-10V interface  
Damp locations  
LONG RANGE ANTENNA

RESET

**CALUS**  
**E547370**  
LED Controller

FC Bluetooth RoHS COMPLIANT CE

WHT	WHT	WHT	WHT
GND	PHO	PIR	12V+

  
**Install Guide**

PINK	ORG	PUR	YEL
GND	NC	DIM+	12V+

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