



WIRELESS-TO-WIRED CONTROLLER

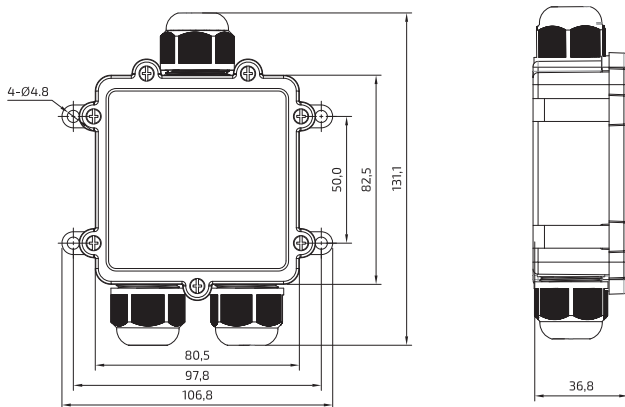
TERRA T30

A Smart Wireless-to-Wired lamp controller

Sycra®'s Terra series is a smart node, which is used to replace the wired junction box and increases the convenience of wireless control, as well as a Wireless-To-Wired converter for standard lamps.

Terra T30 is an important part of the whole Wireless mesh system as a relay node, wirelessly gathers commands from Sycra Odin station and executes these commands using its wired connection to the lamps.

Its wireless capability allows it to communicate using the latest communication protocols and send the data (collected from the wired lamps) to be processed back to the Sycra Odin station.



Note: Dimensions graph unit: mm

Features

- AC relay control (max. 8A)
- Power meter electricity
 - Measure the voltage, current RMS and active power
- Outlet power for sensors
 - Output constant voltage 24VDC
- 0-10V dimmer
 - Current sourcing or sink
 - Drive Max. 10 pcs related LED power supply with 0-10V dimming
- DALI2
 - Max. 32 DALI2 nodes connectable on the bus
- DMX
 - DMX lighting/Sensor
- Wireless Mesh
- Lower layer in IoT-System
- Fault management
 - AC input voltage and current monitoring
 - DALI-2 protocol monitoring
 - Wireless mesh fault monitoring
 - When fault detected, the device will notify the gateway

Applications

- AC wires junction box replacer
- Sensor power supply unit replacer
- Switch replacer
- Electricity meter
- Dimmer
- Wireless mesh node

Technical data

Input voltage	100-240Vac 50/60Hz
Input current	Max. 8A
Output voltage	100-240Vac 50/60Hz
Output current	Max. 8A
Aux. output constant voltage	24Vdc
Aux. output maxi. current	400mA @ Ta25°C
Max. inrush current	117A
Stand-by power	1W
Single-phase electricity meters	1W-1920W
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	+8dbm
Range	~30m (Outdoor)
Protocol	Bluetooth Mesh
Dimming controller	0-10V/ DALI2/ DMX
Operated temperature	-20~+70°C
Case temperature	85°C
Storage temperature	-30~+85°C
Relative humidity	10-90%, non-condensing
IP rating	IP67 (subject to the tight cable, specification to be advised)
Finishes	ABS black
Weight	~178g
Size	131.1mm x 106.8mm x 36.8mm
Insulation	Class II
EMC standard (EMC)	EN55015, EN61547, EN61000-3-2, EN61000-3-3
Safety standard (LVD)	EN 61347-1, EN 61347-2-11, EN62493
RED	ETSI EN300328, ETSI EN301489-1, ETSI EN301489-17
Certifications	CE, RoHS
Communication protocols	Wireless Mesh, LoRa, Zigbee Thread DALI2, 0-10v, DMX

Wiring Diagram

AC input and output cable, DC/ 0-10V/DALI /DMX output cable, their outside diameter need $\phi 8\sim 12\text{mm}$, then this could make the ingress protection rating reach IP68.

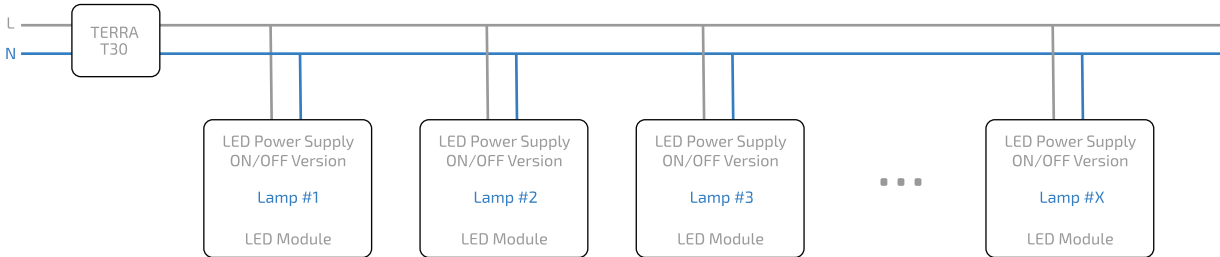
AC connector, dimmer output connector, wire diameter range: $0.2\sim 2.5\text{mm}^2 / 24\sim 14\text{AWG}$, strip length: 8~9mm.

DC output connector, wire diameter range: $0.2\sim 0.75\text{mm}^2 / 24\sim 18\text{AWG}$, strip length: 7~9mm.

1- ON/OFF Version

Through Bluetooth mesh to control relay to achieve AC output on or off.

- X depending on each power per lamp
- Total lamp power reaches 1920W maximum



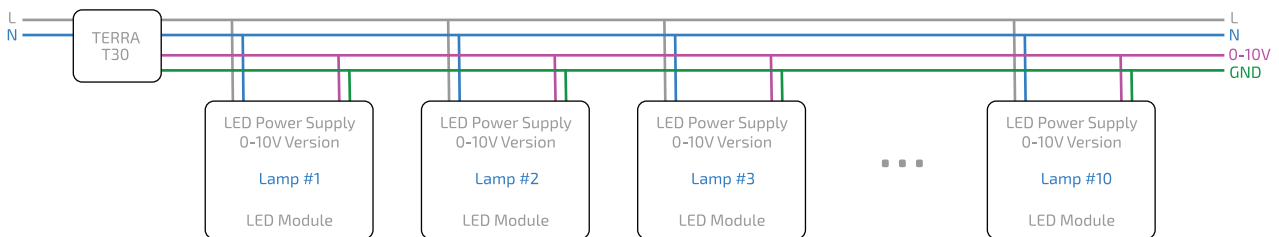
- Maximum Inrush current value allows 117A, the loads' inrush current value follows below instruction
- Loads' inrush current, different load has different inrush current, and it is related to the load stable current, so when you use Terra T30, please note the load stable current and inrush current value, their relation should take below table as reference:

Type of load	Times Irush/Ista
Resistance load.....	1
Capacitive Load.....	20-40
Fluorescent Lamp Load.....	5-10
Incandescent Lamp Load.....	10-15
Mercury Lamp Load.....	3
Solenoid Load.....	10-20
Electromagnetic contact Load.....	3-10
Moto load.....	5-10

2- 0-10V Version

Through Bluetooth mesh to control relay to achieve AC output on or off, and as a dimmer to change the light intensity of lamp.

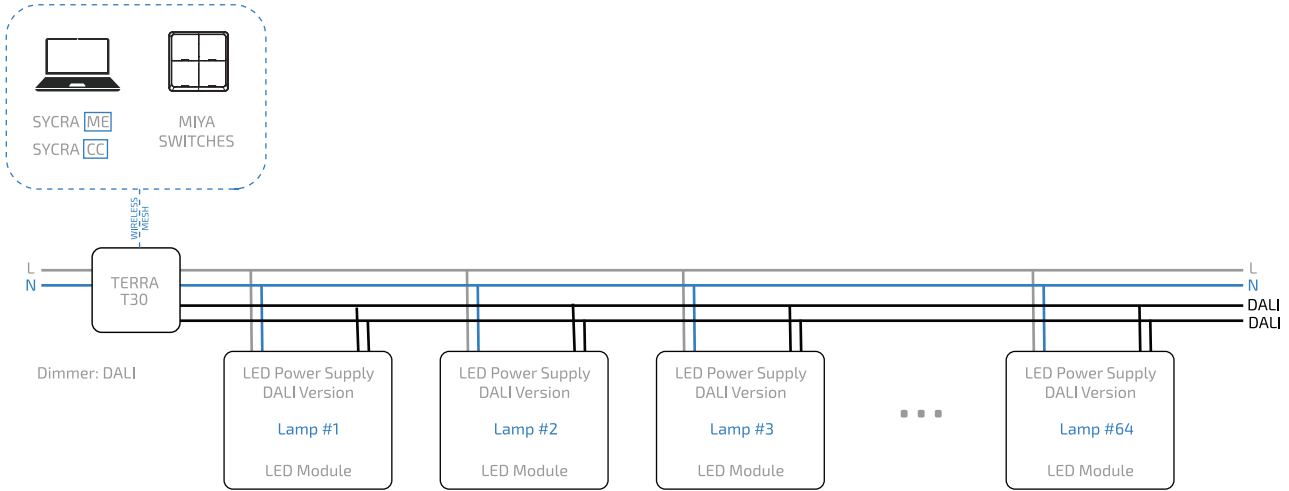
When you take it as a dimmer, the dimming port can drive current reach 20mA. It is recommended to connect no more than 10pcs 0-10V dimming LED driver supplies, the total power should not exceed 1920W, and the surge current should also be considered.



3- DALI Version

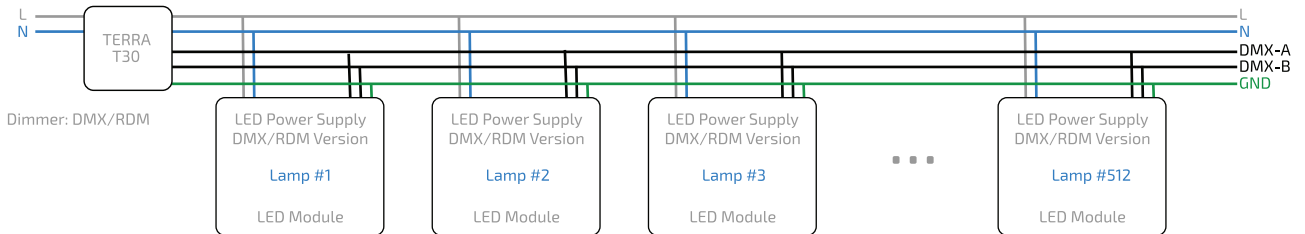
When you take it as a DALI dimmer, there is no need extra DALI power supply to power DALI bus wire, the device could drive current 80mA, and follow the DALI2 standard. It is recommended to connect no more than 32pcs DALI dimming LED driver supplies, the total power should not exceed 1920W, and the surge current should also be considered.

TERRA T30 is a Wireless DALI Dimmer and Switch with DALI Bus over supply



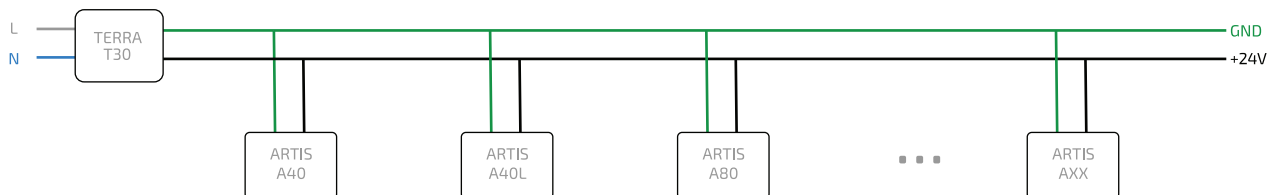
4- DMX Version

Through Bluetooth mesh to control relay to achieve AC output on or off, and as a dimmer to change the light intensity of lamp. When you take it as a DMX controller, it follows the DMX512 standard, the total power should not exceed 1920W, and the surge current should also be considered.



5- Outlet Power

It has a power output with 24Vdc/400mA at Ta 25degree, which could power supply our Artis series sensors directly.



Configuration options



E.g, Terra T30B1

Series

- T10 ON/OFF +0-10V
- T20 ON/OFF, Dimming: 0-10V, Dali
- T30 ON/OFF, Dimming: 0-10V, Dali, DMX
- T40 Wireless smart sockets controller

Dimmer

- 0 Relay ON/OFF
- 1 0-10V + ON/OFF
- 2 DALI 2 + ON/OFF
- 3 DMX + ON/OFF

Communication

- B Wireless mesh
- L LoRa
- Z Zigbee
- T Thread



SYCRA
One Step Smarter.

Germany
Stahlgruberring 36
81829 Munich,
Germany
(49) 89 215522535

Hong Kong
No.1120, Level 11, Landmark North,
39 Lung Sum Avenue, Sheung Shui,
New Territories
(852) 6850 8634

China
7 Ganli 6th rd, 2F Building 2,
Longgang district, 518000
Shenzhen, China
(86) 755 2891 1623

Sycra reserves the right to make changes to this product at any time without prior notice and such modification shall be effective immediately. For more information and details, visit www.sycratech.com or contact info@sycratech.com.

© Sycra Technologies Limited