
Subject: **User Manual for the US Telecell**

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Operational Safety Notices

The radio equipment described in this guide emits radio frequency energy. Although the power level is low, the concentrated energy from a directional antenna may pose a health hazard. Only outdoor antennas certified with this transmitter should be used and must be installed to provide a separation distance of at least 20 cm from all persons. More information on RF exposure is available on the Internet at www.fcc.gov/oet/info/documents/bulletins.

This manual is intended to guide a professional installer to install, operate and perform basic system maintenance on the described equipment. Failure to correctly follow installation guidelines may result in a power supply short-circuit and / or damage to the equipment.

FCC Statement

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The devices are specifically designed to be used under Section 15.247 of the FCC Rules and Regulations.

Furthermore, this device is intended to be used only when installed in accordance with the instructions outlined in this manual. Failure to comply with these instructions may also void the user's authority to operate this device.

1 Specifications

1.1 Multi-volt Telecells

1.1.1 Electrical Parameters:

- Supply voltage: 102 - 276 VAC, 60Hz (multi-volt variants)
408 – 552 VAC, 60Hz (480V variants)
- Maximum switching current: 10A

1.1.2 Radio:



- Transmit Power: 100mW EIRP.

1.1.3 Operating Temperature:

- NEMA & Conduit variants: -40 to 60 °C (Ambient)

2 Telecell

The Telecell contains a radio control processor, lighting control and monitoring circuitry, together with an electricity meter. The unit is directly powered off the AC supply that it is controlling and thus requires no additional connections. The two basic types are shown below:

Model	Picture	Notes
NEMA Telecell	 A black, cylindrical NEMA socket telecell with a pointed top and two yellow electrical contacts visible at the bottom.	NEMA socket photocell replacement, to meet ANSI c136.10 mechanical requirements, with twist lock installation.
Conduit Telecell	 A white, cylindrical conduit telecell with a pointed top and a threaded section at the bottom where three colored wires (red, blue, and white) are inserted.	As NEMA but with 20mm threaded tube with wire tails instead of NEMA plug.

3 Telecell Variants

A full product breakdown is given in the following table:

Type	Description
TC-A2-NM-XX-E	NEMA Telecell, blue, multi-volt (120/240 VAC), dimming-compatible.
TC-A2-NM-XX-N	NEMA Telecell, blue, multi-volt (120/240 VAC), non-dimming.
TC-A3-NM-XX-N	NEMA Telecell, yellow, 480V, non-dimming.
TC-A2-CN-XX-E	Conduit Telecell, blue, multi-volt (120/240 VAC), dimming-compatible.
TC-A3-CN-XX-N	Conduit Telecell, yellow, 480V, non-dimming.

4 Ingress Protection Ratings

Ratings quoted are for each Telecell type and also the dimming module correctly installed in suitable mounting hardware, itself having appropriate ingress protection.

4.1 NEMA Telecell

This variant is entirely located outside the luminaire. It attaches to the luminaire using its moulded-in electrical contacts. The NEMA employs an o-ring seal and shrouding skirt to achieve an IP rating of 65.

4.2 Conduit Telecell

This variant has the same external features as the NEMA but attaches to the luminaire via a Ø20 mm hole. Ingress protection via this hole is provided by a rubber bung. The ingress protection around the external surfaces and mounting hole is IP65.

The surfaces of the Conduit Telecell accessible from the inside of the luminaire are rated to IP55. It is a requirement that the Telecell is always installed in a luminaire or other hardware with ingress protection rated for safe electrical operation in the indoor or outdoor environment for which it is intended. This provides a safe environment for the internal surfaces and connection of the Telecell.

Typical NEMA & Conduit application:



5 Installation Instructions

Instructions for the installation of each of the different variants of Telecell are given below. Figure 1 shows a wiring diagram for a standard lamp with a non-dimmable ballast. Figure 2 shows the case where there is a dimmable ballast and a dimming control module (TDM-A) is included.

5.1 NEMA Telecell

Insert unit into NEMA socket on street light ensuring the largest tab on the unit places into the largest tab on the NEMA receptacle on the street light. Turn by hand applying slight force.

5.2 Conduit Telecell

Remove the large nut on the base of the Telecell and insert the Telecell into the hole at the top of the luminaire. Fasten the nut to hold the Telecell in place and connect the power cables as shown in Figure 1/ Figure 2.

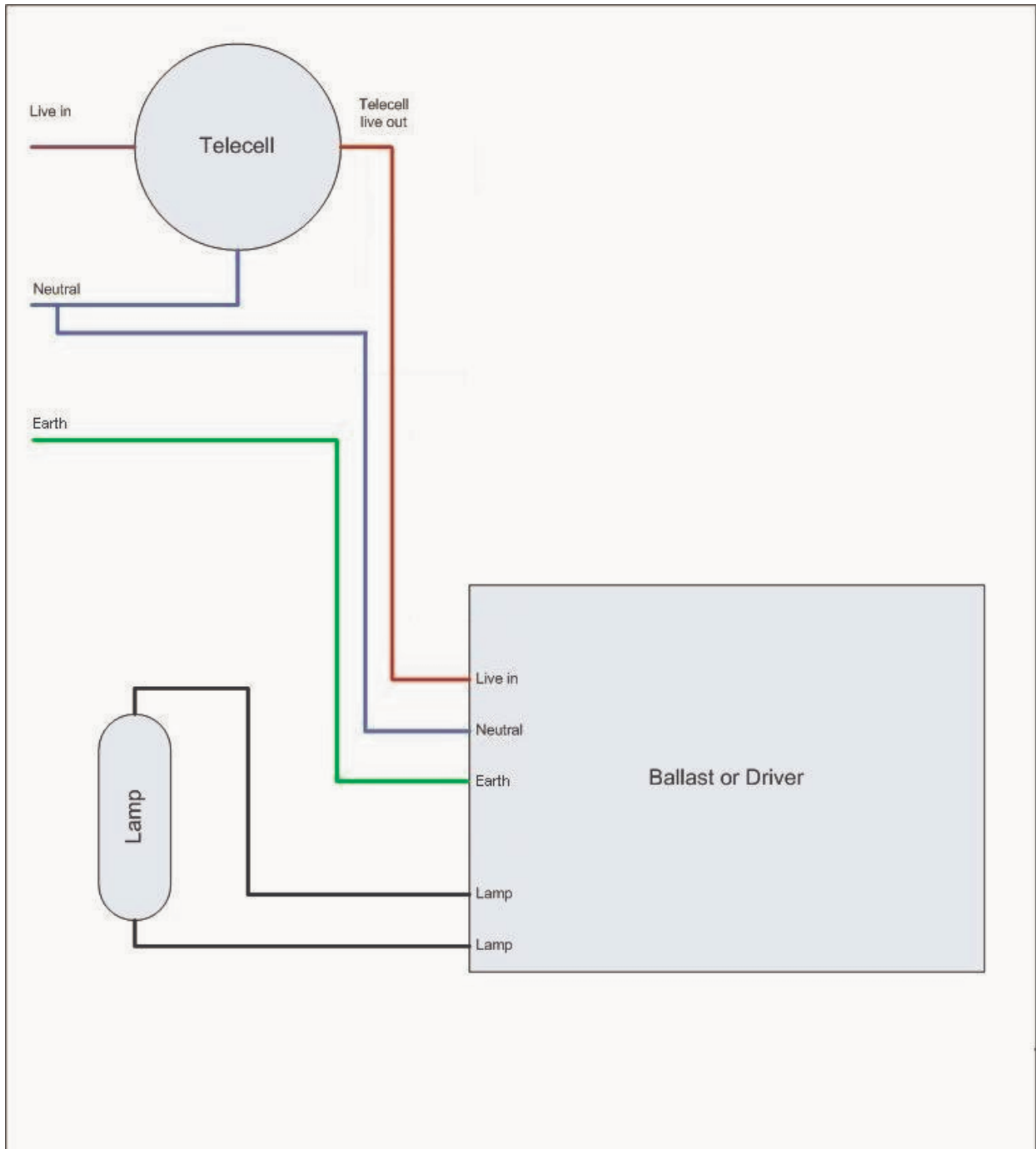


Figure 1: Wiring Diagram for Telecell (No Dimming Module)

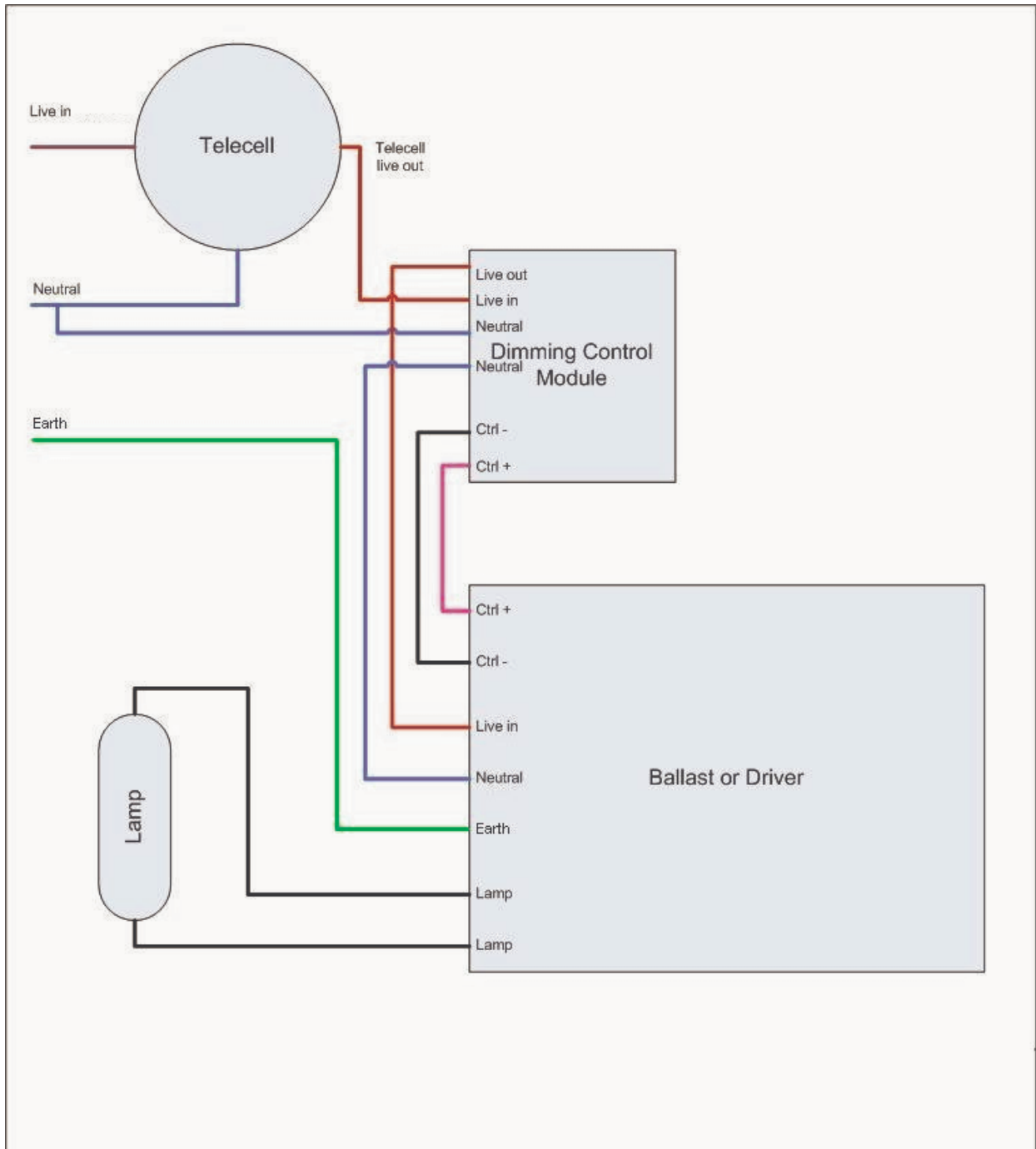


Figure 2: Wiring Diagram for Telecell (With Dimming Module)

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