

# ENCELIUM™ Energy Management System

## Energy Control Unit

### Wiring and Installation Manual

## Overview

The Energy Control Unit (ECU) is a gateway that interfaces to both IT equipment (servers, LAN, etc) and field bus devices (luminaire controllers, sensors, wall switches, etc). Communication with IT equipment and other ECUs is achieved using the Ethernet port. Additionally, two USB 2.0 ports are provided for data transfer and back-up purposes.

The ECU provides operating power together with communication signals via GreenBus II™ to the various field bus devices of the system via eight GreenBus II™ communication channels.

The ECU makes each device addressable via GreenBus II™ (e.g. each light fixture can be individually dimmed and turned on/off). Devices will obtain their addresses during the commissioning process and no actions are required during installation.

The following model(s) are available:

Indoor Locations:

EN-ECU-G4-P3D



## Important Safeguards



When using electrical equipment, basic safety precautions should always be followed including the following:

- READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
- Do not let power supply cords touch hot surfaces.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment is not recommended by OSRAM Sylvania as it may cause an unsafe condition.
- Do not use this equipment for other than the intended use.



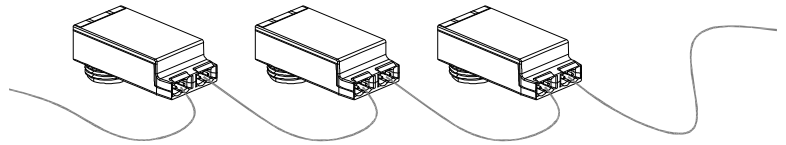
SAVE THESE INSTRUCTIONS

## GreenBus II™ Wiring

Communication Circuit (24VDC, Class 2)



GreenBus II™ is a low-cost, high reliability communication means to report sensor and wall switch information back to the ENCELIUM Energy Management System and to obtain optimum brightness settings for each individual light fixture from the system – optimized to result in minimum energy costs for any given building.

The GreenBus II™ wiring originates at an Energy Control Unit (ECU) and propagates in a daisy-chain or “T” fashion from module to module (or other compatible equipment).



GreenBus II™ uses proprietary connectors and jacks for ease of installation only.




Maximum 100 total devices

-  GreenBus II™ is a proprietary standard. Connect to ENCELIUM Energy Management System only. Do not connect to other circuits.
-  Connect to ENCELIUM Energy Management System only. Do not connect to other circuits.

GreenBus II™ must be laid out as per ENCELIUM EMS supplied drawing. If changes are required, determine an optimum wiring path utilizing the supplied prefabricated cables, based on the position of light fixtures and sensors. As the modules obtain power via the GreenBus II™, the number of modules on each chain is limited. It is suggested to leave room for future system upgrades and to limit the number of modules per chain to 100 units during initial installation.

## Energy Control Unit Installation

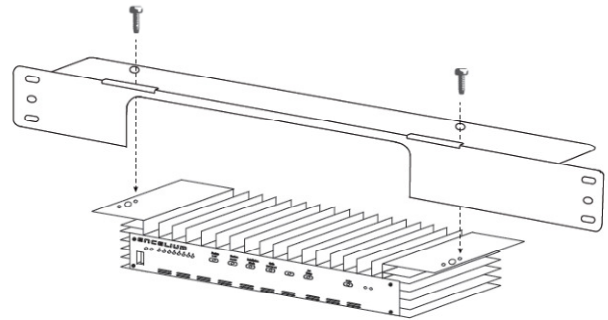
The output channels of the Energy Control Unit are Class 2 circuits.

-  To reduce the risk of electric shock, the power supply for the equipment has a grounding type plug that has a third (grounding) pin. This plug will only fit into a grounding type outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.
-  Use only the power supply provided for this equipment. Damage or adverse functionality may occur if a different power supply is used. If a replacement power supply is needed, please contact OSRAM Sylvania Inc. Do not modify the power supply cable or connector.
-  The Energy Control Unit is intended for mounting in an electrical room where access will be by authorized personnel only.

## Installation Notes

The Energy Control Unit shall be installed in dry, indoor locations ONLY. The Energy Control Unit shall be installed into a Pollution Degree 2 (or better) environment.

The Energy Control Unit may be installed into a standard 19" rack or mounted to a wall. A bracket is provided for rack installations. Using the screws provided, affix the bracket securely to the Energy Control Unit as shown.

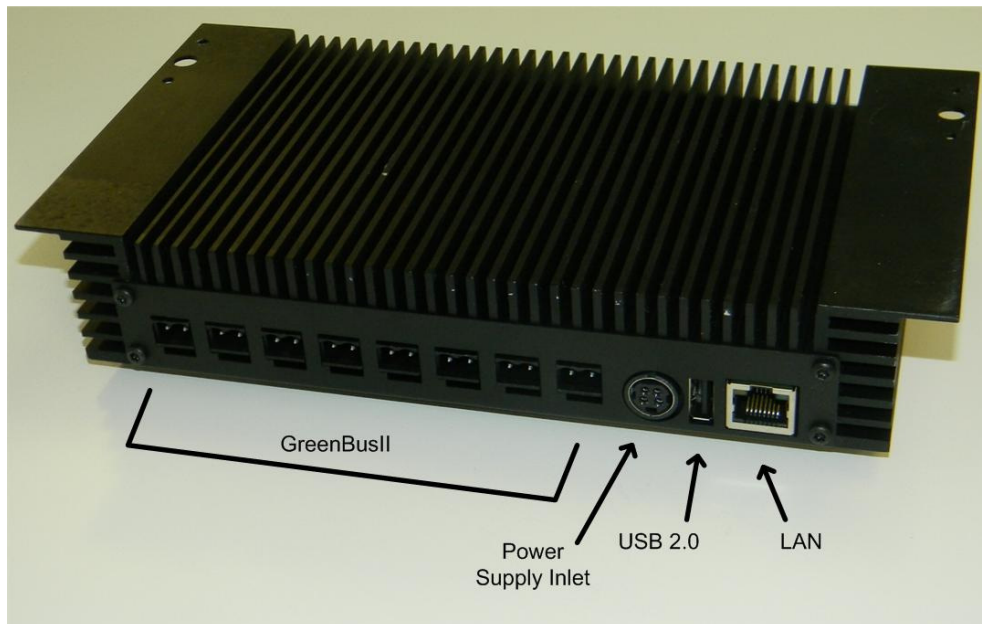


If the Energy Control Unit is to be installed onto a wall surface, use suitable screws to securely hold the unit. Install the unit with the input power, LAN, and GreenBus II™ connections facing down. The control buttons shall be facing upward. This orientation will ensure adequate cooling for the product while installed against a wall surface.

## Troubleshooting

There are no user-serviceable parts inside of the Energy Control Unit. Please return the device to OSRAM Sylvania Inc if service is required.

## Energy Control Unit Wiring



## Regulatory Approvals

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

This equipment has been tested and found to comply with Industry Canada ICES-003 Issue 5 (CAN ICES-3 (A)/NMB-3(A)).

The contents of this Wiring and Installation Manual are subject to change without notice.

**United States**  
**OSRAM SYLVANIA**  
100 Endicott Street  
Danvers, MA 01923  
1-800-LIGHTBULB

**Trade**  
Phone: 800-255-5042  
Fax: 800-255-5043

**National Accounts**  
Phone: 800-562-4671  
Fax: 800-562-4674

**OEM/Special Markets**  
Phone: 800-762-7191  
Fax: 800-762-7192

**Retail**  
Phone: 800-842-7010  
Fax: 800-842-7011

**SYLVANIA Lighting Services**  
Phone: 800-323-0572  
Fax: 800-537-0784

**Display/Optic**  
Phone: 888-677-2627  
Fax: 855-543-1043

**Canada**  
**OSRAM SYLVANIA LTD.**  
2001 Drew Road  
Mississauga, ON L5S 1S4  
1-800-LIGHTBULB

**Trade**  
Phone: 800-263-2852  
Fax: 800-667-6772

**OEM/Special Markets/Display/Optic**  
Phone: 800-265-2852  
Fax: 800-667-6772

**Retail**  
Phone: 800-720-2852  
Fax: 800-667-6772

**SYLVANIA Lighting Services**  
Phone: 800-663-4268  
Fax: 866-239-1278

**Mexico**  
**OSRAM MEXICO**  
Tultitlan/Edo de Mexico  
Phone: 011-52-55-58-99-18-50

**ENCELIUM® Products**  
**United States**  
Phone: 201-508-1570  
Fax: 201-508-1589

**Canada**  
Phone: 905-731-7678  
Fax: 905-731-1401

[www.sylvania.com](http://www.sylvania.com)



/sylvania



/sylvania

## Software End User License Agreement

This product includes third party software under license. See [www.encelium.com/licensing](http://www.encelium.com/licensing). All other software incorporated in or distributed with the product is owned by and proprietary to Osram Sylvania Inc and licensed pursuant to the terms of Osram Sylvania's end user license agreement.

## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>