



NORTH AMERICA EDITION

Outdoor Lighting Installation Manual

A unified field guide for low-voltage landscape, architectural, inground, underwater, wall, step and linear luminaires.

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IM-NA-01

VERSION
1.0

ISSUED
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LOCATION
Calgary, Canada

Read before installation. Keep this manual with the project records and provide a copy to the owner.

This manual consolidates the installation principles in the supplied Nerthus product instructions. It is organized by mounting method so installers can find the right workflow quickly.

03 Safety first

04 Plan before you cut or wire

05 Low-voltage wiring & waterproof connections

06 Spike, lawn & surface-mounted fixtures

07 Wall, step & ceiling-mounted fixtures

08 Inground & deck fixtures

09 Underwater fixtures

10 Wall washers & linear systems

11 RGB / RGBW controls

12 Commissioning, care & troubleshooting

13 Model reference

Which document controls?

The rating label on the delivered fixture and the approved project submittal always control. Use this manual for installation method and workmanship. If a value here differs from the fixture label, stop and contact Nerthus before energizing.

Included families

Moon, Libra, LILA09, Jupiter, Pluto, Uranus, Star, Venus, Vesta, Saturn, Mercury, Neptune, Carina and Vega.

Not a design substitute

The electrical and structural design, conductor sizing, protection devices, load calculations and code compliance remain the responsibility of the qualified project professionals.

Terminology: “Driver” and “power supply” mean the compatible constant-voltage source specified for the exact product. “Mains” means branch-circuit supply on the input side of that source.

DANGER - ELECTRIC SHOCK

Disconnect and lock out power before installation, wiring, aiming, inspection, cleaning, repair or replacement. Verify that power is off before touching conductors.

01**Qualified installation**

Installation and service must be performed by qualified personnel in accordance with all applicable electrical, building, safety, and local licensing requirements.

02**Use the exact rated voltage**

Never connect a low-voltage fixture directly to mains. Match the fixture label: AC12V, DC12V or DC24V are not interchangeable.

03**Compatible power source**

Use only the power source type specified for the fixture: an approved constant-voltage DC power supply or compatible low-voltage AC transformer, as applicable. Do not use a magnetic transformer where the product instructions prohibit it.

04**Protect the enclosure**

Do not open, modify or field-repair a sealed fixture. Keep lenses, gaskets, cable glands and factory leads intact.

05**Respect the environment**

Use the fixture only in the application allowed by its rating. IP ratings depend on correct installation and do not override drainage or immersion limits.

06**Keep heat paths clear**

Do not cover the luminaire with insulation or similar material. Maintain the clearances stated on the product drawing.

Stop installation if: the product is damaged; the label is missing; the supply voltage is uncertain; seals are cut or displaced; water is present in a connection point; or the proposed use is outside the product rating.

Plan Before You Cut or Wire



Figure 1. Confirm the product and site before permanent work begins.

Pre-installation checklist

- Fixture model, quantity and ordered light colour
- Rated input on every fixture label
- Power supply output and environmental rating
- Total connected load and circuit capacity
- Controller/decoder type for RGB or RGBW
- Cable route, junction access and service loops
- Mounting dimensions and required clearances
- Drainage below all inground sleeves
- Stable soil or structural mounting substrate
- Final aim without glare or physical obstruction

Inspect on receipt

Confirm quantities and examine lenses, housings, brackets, mounting sleeves, cables, connectors, seals and accessories. Do not install visibly damaged parts.

Dry-fit the layout

Position fixtures and route cables before drilling or pouring concrete. Confirm beam direction, spacing and access for future service.

Drainage is part of the installation

An IP-rated luminaire can still fail when installed in a low point that holds water. Provide a free-draining gravel base and a discharge path; verify drainage before setting an inground sleeve.

Low-Voltage Wiring & Waterproof Connections

Connect fixtures in parallel unless the product-specific drawing states otherwise. Every luminaire must receive its rated voltage at the fixture.

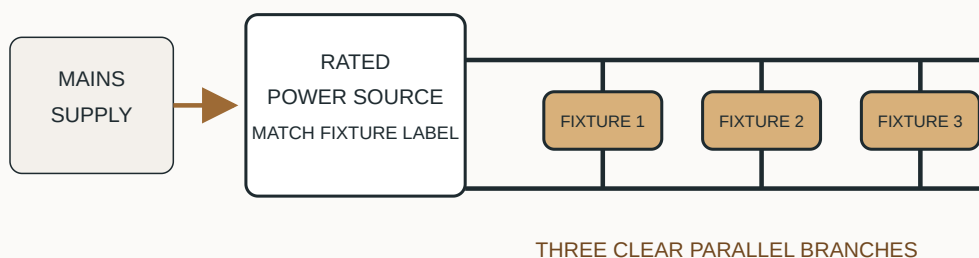


Figure 2. Typical parallel circuit. All fixtures receive the same rated voltage.

1

Isolate

Switch off and verify the mains supply remains off throughout installation.

2

Match

Confirm AC/DC type, output voltage, controller and total load before making connections.

3

Connect

Use connectors or junction enclosures rated for the environment. Observe polarity and channel labels where marked.

4

Seal

Seat gaskets fully, tighten cable glands evenly and fit the supplied end cap to the last fixture in a run.

5

Support

Provide strain relief and a service loop. Do not leave cable tension on the fixture entry or connector.

Connection placement

Keep drivers, controllers and decoders in a dry or suitably rated accessible enclosure. Do not place equipment underwater unless its own rating expressly permits that use. Do not bury or permanently conceal a connection unless the connector or enclosure is specifically rated and approved for that installation method.

Before energizing

Check every connection, unused port and end cap. Confirm no exposed copper, reversed polarity, crossed RGB/RGBW channels or unsealed enclosure remains.

Spike, Lawn & Surface-Mounted Fixtures

Typical families Moon B • Moon C • Moon P • Moon SU • Libra Mini • Libra Xspot • LILA09 • Star • Venus



Figure 3. Select the mounting method that matches the supplied base or spike.

Spike / soil installation

1. Choose stable, well-drained soil clear of buried services.
2. Route the low-voltage cable without sharp bends or tension.
3. Press the spike into the soil by holding the spike or stem - never push on the luminaire head.
4. Keep the cable entry above standing water where the design allows.
5. Aim after the fixture is stable; tighten adjustment hardware without over-torquing.

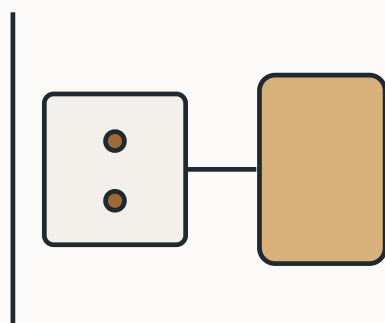
Surface-base installation

1. Mark holes using the supplied base or template.
2. Drill for the substrate and install suitable fasteners.
3. Bring the cable through the intended entry and make the protected low-voltage connection.
4. Fasten the base evenly; do not distort it.
5. Fit the luminaire, set its direction and tighten all locking screws.

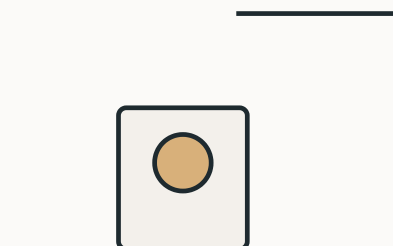
Landscape work: keep fixtures clear of irrigation spray impact, mower paths and areas where mulch or soil can bury the housing. Re-aim after landscaping is complete.

Wall, Step & Ceiling-Mounted Fixtures

Typical families Jupiter • Moon W • Uranus • Pluto • Moon Zoom CL



WALL BASE + FIXTURE



STEP / RECESSED OPENING

Figure 4. Secure the mounting base first; protect the cable entry and gasket.

1 Locate

Confirm the mounting surface is sound and the fixture will not be covered by insulation or trapped where water collects.

2 Prepare

Use the supplied drawing or mounting part to mark the cut-out and fastener positions. Provide a concealed cable route.

3 Fix the base

Use fasteners suitable for the wall, step or ceiling material. Keep the base level and do not overtighten.

4 Wire and seal

Make the rated low-voltage connection. Seat every gasket; prevent the connection from being pinched behind the fixture.

5 Attach and verify

Fit the luminaire to the base, tighten the provided screws, restore power and check operation.

Exterior wall detail

Use the project's approved weather-sealing detail around penetrations. Do not block designed drainage paths or place sealant over a removable lens, ventilation feature or service fastener.

Typical families Vesta • Saturn / Saturn RGBW • Star / Star RGB • Venus / Venus RGB / Venus RGBW

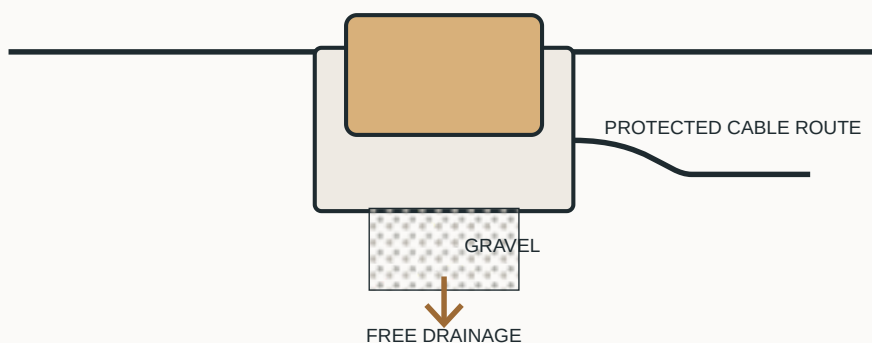


Figure 5. A mounting sleeve needs a free-draining foundation and protected cable route.

Install the sleeve

1. Confirm the cut-out and sleeve dimensions from the supplied product drawing.
2. Excavate below the sleeve and provide a compacted, free-draining gravel layer.
3. Set the sleeve level and secure it against movement during surrounding construction.
4. Route conduit/cable so water does not collect in the connection area.

Fit the luminaire

1. Make the waterproof low-voltage connection with power isolated.
2. Place the connection without sharp bends or compression.
3. Insert the fixture into the sleeve or cut-out and tighten the supplied fasteners evenly.
4. Confirm the top is flush as intended and does not create a trip edge.

DRAINAGE TEST

Before installing the luminaire, pour water into the empty sleeve. If water remains, improve drainage. Do not proceed while the sleeve can become a sump.

Typical families Mercury • Moon U • Neptune

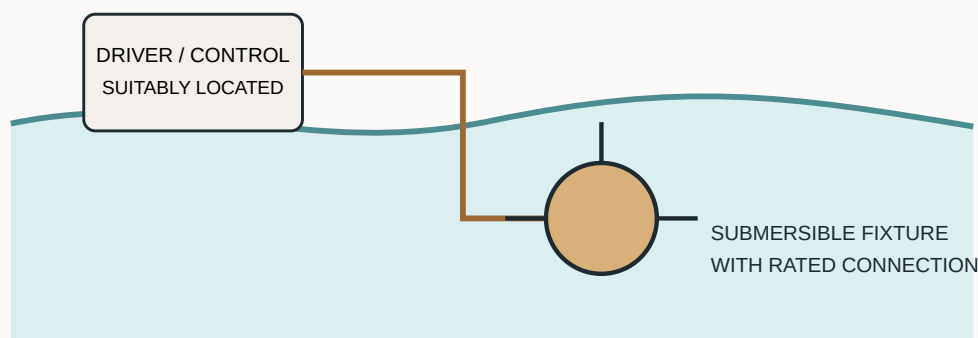


Figure 6. Keep the power source and control equipment in a location permitted by their own ratings.

Before placement

- Confirm the exact product is rated for underwater use.
- Never assume IP68 alone makes a fixture suitable for continuous underwater operation.
- Verify the ordered voltage: Mercury variants may differ; Moon U is AC12V; Neptune is DC12V in the supplied manuals.
- Follow the product drawing for depth, orientation and mounting hardware.
- Plan a cable route that avoids abrasion and allows service.

Installation sequence

1. Isolate all power.
2. Secure the fixture or mounting bracket to the prepared substrate.
3. Make the specified sealed connection and provide strain relief.
4. Locate the driver/controller as its rating and local code require.
5. Inspect the complete system before filling or immersion.

NEVER SERVICE ENERGIZED OR IN WATER

Disconnect power before touching, moving or removing any underwater luminaire. Do not open a sealed fixture in the field.

Wall Washers & Linear Systems

Typical families Carina • Vega • Neptune linear configurations

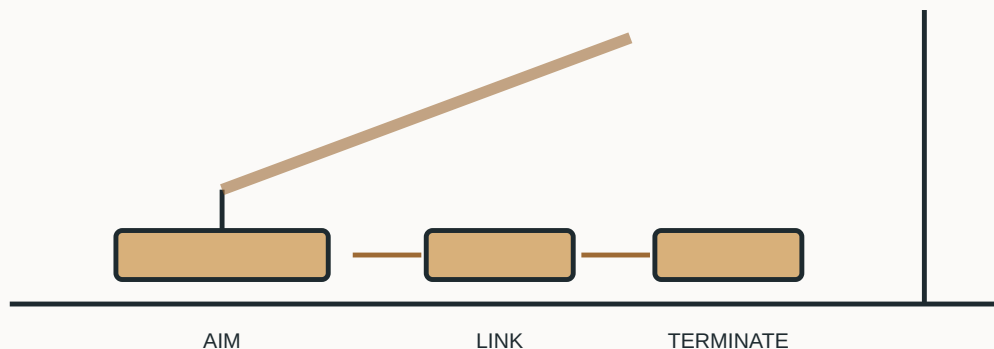


Figure 7. Align the run, connect approved links, aim consistently and seal the final end.

1 Set out the run

Mark fixture and bracket locations from the lighting plan. Confirm the wall distance, aiming direction and cable-entry side.

2 Secure brackets

Fix each bracket to a sound substrate with suitable hardware. Keep a consistent datum so the luminaires align.

3 Connect

Use the supplied waterproof connectors between fixtures. Make all links with power off and support the cable.

4 Terminate

Install the supplied end cap on the final unused connection. An open connector invalidates the intended ingress protection.

5 Aim and lock

Set the same tilt across the run, tighten pivot hardware and confirm the beam on the target surface.

Load control: group size and power-supply capacity are project-specific. Calculate the actual connected wattage from the delivered fixture labels and follow the power-supply manufacturer's loading requirements.

Colour-changing fixtures must be connected to a compatible controller or decoder. Do not apply supply power directly to colour channels.

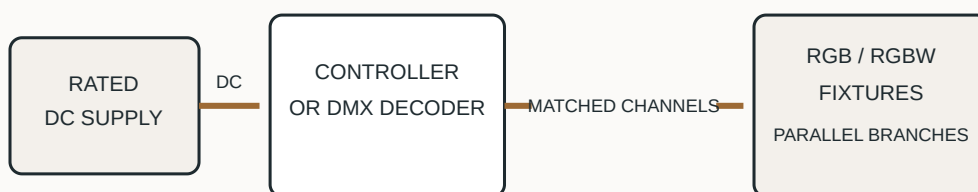


Figure 8. Typical control architecture. Follow the controller and project wiring schedules for terminal assignments.

Connection checks

- Supply voltage matches both controller and fixtures
- Controller output capacity covers connected load
- Common and colour channels match the supplied diagram
- Verify whether the delivered fixture uses common-positive or common-negative wiring before connection
- Polarity is consistent across every branch
- Fixtures are connected in the specified parallel arrangement
- DMX address and mode are recorded where used
- Controller/decoder location suits its ingress rating
- Unused ports and final connectors are sealed

Test before closing

With fixtures accessible, test red, green, blue and white individually, then test dimming and programmed scenes. Correct channel errors before sealing the enclosure.

Document the system

Record power-supply circuits, controller location, decoder addresses and cable routes in the project handover information.

Commissioning, Care & Troubleshooting

Commissioning sequence

1. Inspect mounting, drainage, seals, glands, end caps and cable support.
2. Verify source voltage and polarity before connecting fixtures.
3. Energize one circuit at a time.
4. Confirm every fixture operates and colour channels respond correctly.
5. Set final aim and tighten adjustment hardware.
6. Photograph the completed installation and record circuit details.

Routine care

- Isolate power before cleaning.
- Clean lenses with water, a mild non-abrasive cleaner and a soft cloth.
- Remove soil, leaves and debris that retain moisture or block light.
- Inspect brackets, fasteners, cables, glands, seals and drainage.
- Do not use solvents, pressure washing at close range or abrasive tools.

Symptom	Check first	Action
No fixtures operate	Branch power, protection device, power-supply input/output	Keep power isolated; correct the upstream fault.
One fixture is off	Parallel branch connection, connector seating, fixture lead	Reseat or remake the rated connection; do not open the fixture.
Flicker or dim output	Supply capacity, voltage at fixture, loose connection	Verify load and cable run; correct the electrical design as required.
Wrong RGB/RGBW colour	Channel order, polarity, controller mode/address	Match terminals to the supplied wiring schedule and retest.
Moisture at connection	Gland, junction seal, cable damage, drainage	De-energize immediately. Do not re-energize until the cause of ingress has been corrected and any compromised connector, seal, cable, or enclosure has been replaced or verified suitable for reuse.
Condensation or water in fixture	Housing, lens or cable entry	Do not energize or disassemble; contact Nerthus support.

No field disassembly. Non-qualified disassembly or repair can compromise safety, sealing and warranty eligibility.

Model Reference 1 of 2

Quick Reference Only - The values below are provided for general reference. Product configurations may vary by model, revision, or order. Always verify the delivered product label and approved project submittal before installation.

Model / series	Application	Rated input	Power	Ingress
Carina	Exterior wall washer	DC12V / DC24V	48 W	IP68
Jupiter	Wall light	AC12V	Refer to product label	IP65
LILA09	Lawn light	AC12V	9 W	IP65
Libra Xspot (LIX12)	Lawn light	AC12V	12 W	IP65
Libra Mini FA / MA	Lawn light	AC12V	3 W	IP65
Mercury	Underwater	AC12V / DC12V / DC24V*	Refer to product label	IP68
Moon B	Spike spotlight	AC12V	Refer to product label	IP67
Moon C	Garden / lawn	AC12V	5 W	IP65
Moon P	Garden / lawn	AC12V	3 W / 8 W	IP65
Moon SU	Garden / lawn	AC12V	3 W / 8 W	IP65
Moon U	Underwater, surface mount	AC12V	Refer to product label	IP68
Moon W	Wall light	AC12V*	Refer to product label	Refer to product label
Moon Zoom CL	Ceiling / downlight	AC12V	3 W / 8 W / 15 W	IP65

*** Ordered configuration applies.** Do not assume all versions of a family share the same input. Always confirm the delivered product label.

Model Reference 2 of 2

Quick Reference Only - The values below are provided for general reference. Product configurations may vary by model, revision, or order. Always verify the delivered product label and approved project submittal before installation.

Model / series	Application	Rated input	Power	Ingress
Neptune	Underwater / linear	DC12V	Refer to product label	IP68
Pluto	Step light	AC12V	2 W / 3 W	IP65
Saturn	Inground	AC12V	3 W	IP67
Saturn RGBW	Inground, colour	DC12V	3 W	IP67
Spike Light	Garden spotlight	AC12V	Refer to product label	IP67
Star	On-ground / deck / wall / step	AC12V or DC12V*	1.2 W	IP67
Star RGB	On-ground / deck / wall / step	DC12V	1.2 W	IP67
Uranus 3 / 7	Wall light	AC12V	Refer to product label	IP65
Vega	Wall washer	DC24V	Refer to product label	IP65
Venus	Inground / deck / wall / step	AC12V or DC12V*	3 W	IP67
Venus RGB	Inground / deck / wall / step	DC12V	2.5 W	IP67
Venus RGBW	Inground / deck / wall / step	DC12V	2.3 W	IP67
Vesta	Inground	AC12V	Refer to product label	IP67

*** Ordered configuration applies.** Do not assume all versions of a family share the same input. Always confirm the delivered product label.

Project Handover & Support

Before handover

- All circuits tested
- Final aiming completed
- Controller scenes verified
- Drainage paths clear
- Spare connectors and tools removed
- Power supplies and controls labelled
- DMX addresses recorded
- Installation photos filed
- Manual given to owner
- Purchase and project records retained

Project record

Project

Location

Installer

Installation date

Fixture models / quantities

Power supplies / controllers



Technical support

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