



# ArcSystem Navis 100 Installation Guide

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# Table of Contents

Overview .....	1
Document Conventions .....	1
Help from ETC Technical Services .....	2
Safety .....	3
Emergency System Overview .....	4
Features .....	5
Channel Settings for RGBW Luminaires .....	6
Accessories .....	7
Installation Accessories .....	7
Before You Begin Installation .....	8
Power Disconnect Device .....	8
Installation Requirements .....	8
Wiring the Luminaires .....	10
RJ45 Pinout Information .....	10
Use of Third-Party Drivers with Daisy-Chain Luminaires .....	11
Installation .....	12
Prepare the Ceiling .....	12
Spacing for Wall Wash Luminaires .....	12
Install a Luminaire .....	12

Install a Wall Wash Luminaire .....	15
Power Up Procedure .....	16
Identify .....	17
Emergency Operation and Test .....	17
Update RGBW Luminaire Firmware .....	17
RGBW Luminaire DMX Personalities .....	17
Install Replacement Lens .....	18
Install Replacement Secondary Optic .....	20
Maintenance .....	21
Specifications and Reference .....	22
Identify Beam Angle .....	22
Compliance .....	23
FCC Compliance .....	23

# Overview

This guide provides installation instructions for the Navis 100 luminaire. Navis 100 luminaires are available for standard or emergency installations. They are intended for use with the ETC F-Drive family of drivers and accessories (including R12, W1, and B-Box) or other Class 2 or Low Voltage Limited Energy (LVLE) power supplies (48 VDC maximum). Consult the specifications and installation manual for your driver to ensure compatibility.

For more information about compatible products, see the resources below, which are available for download at [etconnect.com/Products/Power-Controls/LED-Drivers/F-Drive/Documentation.aspx](http://etconnect.com/Products/Power-Controls/LED-Drivers/F-Drive/Documentation.aspx):

- *F-Drive Series R12 Installation Manual*
- *F-Drive Series W1 Installation Manual*
- *F-Drive R12 and W1 Wiring Reference Guide*
- *F-Drive B-Box4 Installation Guide*

The F-Drive System Design Tool is available at [etconnect.com/FDriveSysDesignTool](http://etconnect.com/FDriveSysDesignTool).

## Document Conventions

This document uses the following conventions to draw your attention to important information.



**Note:** *Notes are helpful hints and information that is supplemental to the main text.*

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**CAUTION:** *A Caution statement indicates situations where there may be undefined or unwanted consequences of an action, potential for data loss or an equipment problem.*

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**WARNING:** *A Warning statement indicates situations where damage may occur, people may be harmed, or there are serious or dangerous consequences of an action.*

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**WARNING: RISK OF ELECTRIC SHOCK!** *This warning statement indicates situations where there is a risk of electric shock.*

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All ETC documents are available for free download from our website: [etconnect.com](http://etconnect.com).

Please email comments about this manual to: [TechComm@etconnect.com](mailto:TechComm@etconnect.com).

# Help from ETC Technical Services

If you have questions that are not answered by this document, try the ETC support website at [support.etconnect.com](https://support.etconnect.com) or the main ETC website at [etconnect.com](https://etconnect.com). If none of these resources are sufficient, contact ETC Technical Services directly at one of the offices identified below. Emergency service is available from all ETC offices outside of normal business hours.

When calling for help, take these steps first:

- Prepare a detailed description of the problem
- Go near the equipment for troubleshooting
- Find your notification number if you have called in previously

## **ETC, Inc.** *Americas*

Technical Services Department  
3031 Pleasant View Road  
Middleton, WI 53562  
800-775-4382 (USA, toll-free)  
+1-608 831-4116  
[service@etconnect.com](mailto:service@etconnect.com)

## **ETC Austin** *High End Systems Products*

Technical Services Department  
2105 Gracy Farms Lane  
Austin, TX 78758 USA  
800-890-8989 (USA, toll-free)  
+1-512 836-2242  
[hesservice@etconnect.com](mailto:hesservice@etconnect.com)

## **ETC Ltd** *Europe, Middle East, and Africa*

Technical Services Department  
26-28 Victoria Industrial Estate  
Victoria Road,  
London W3 6UU England  
+44 (0)20 8896 1000  
[techservltd@etconnect.com](mailto:techservltd@etconnect.com)

## **ETC GmbH** *Germany, Austria, Switzerland, Eastern Europe, and Russia*

Technical Services Department  
Ohmstrasse 3  
83607 Holzkirchen, Germany  
+49 (80 24) 47 00-0  
[techserv-germany@etconnect.com](mailto:techserv-germany@etconnect.com)

## **ETC France** *France*

Zone Urbaparc -  
Bâtiment E  
6 Boulevard de la Libération  
Saint-Denis, 93200  
+33 1 4243 3535  
[techservfrance@etconnect.com](mailto:techservfrance@etconnect.com)

## **ETC Asia** *Asia*

Technical Services Department  
Room 1801, 18/F  
Tower 1, Phase 1 Enterprise Square  
9 Sheung Yuet Road  
Kowloon Bay, Kowloon, Hong Kong  
+852 2799 1220  
[techserv-asia@etconnect.com](mailto:techserv-asia@etconnect.com)

# Safety

Read the entire guide before using this equipment.

Navis 100 luminaires are not user-serviceable and should only be serviced by qualified technicians. Contact ETC Technical Services for assistance.



**RISK GROUP 2: CAUTION for the Navis 100 RGBW luminaire.** *Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eyes.*

**GROUPE DE RISQUE 2 (RISQUE MODÉRÉ) : ATTENTION pour le luminaire Navis 100 RGBW.** *Rayonnement optique potentiellement dangereux émis par ce produit. Ne regardez pas la lampe en fonctionnement. Peut être nocif pour les yeux.*



**Note:** *The light source in the luminaire is not replaceable. When the light source reaches its end of life, replace the entire luminaire. Contact ETC Customer Support for assistance.*

## IMPORTANT SAFEGUARDS





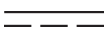
When using electrical equipment, basic safety precautions should always be followed including the following:

## READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- Do not use outdoors.
- 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 not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use.

## SAVE THESE INSTRUCTIONS

Symbols used on the product label are defined below:

	<p>The luminaire must be installed at least 0.1 m (4.0 in) away from all lighted objects.</p>	<p>Le luminaire doit être installé à au moins 0,1 m (4,0 po.) de tout objet éclairé.</p>
	<p>The luminaire is NON-IC rated and therefore NOT suitable for installation in direct contact with combustible materials or thermal insulation. Do not install insulation within 76 mm (3 in) of any part of the luminaire.</p>	<p>Le luminaire ne comporte pas de contacts isolés et n'est donc PAS adapté pour installation en contact direct avec des matériaux combustibles ou une isolation thermique. Ne pas installer d'isolation à moins de 76 mm (3 po) de toute partie de la lampe.</p>
	<p>General warning</p>	<p>Avertissement général</p>
	<p>This product meets the safety requirements specified for Class III according to IEC 60536.</p>	<p>Produit à Protection Classe III Très basse tension conforme à la norme IEC 60536.</p>
	<p>The product input or output is suitable for direct current only.</p>	<p>L'entrée et la sortie de ce produit convient uniquement au courant continu.</p>
<p><math>t_a</math> or <math>T_a</math></p>	<p>Rated maximum ambient temperature</p>	<p>Température ambiante maximale recommandée</p>

## Emergency System Overview

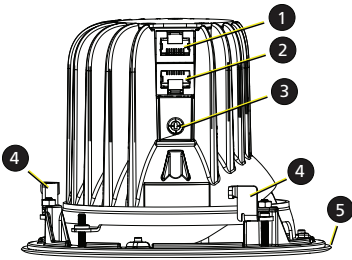
Navis 100 White and Fade to Warm luminaires, when powered by an F-Drive W1 Emergency Driver, are compliant with or conform to the applicable safety standards for emergency applications. For current and complete compliance information, view the product datasheet at [etconnect.com/ArcSystem-Navis/Documentation](http://etconnect.com/ArcSystem-Navis/Documentation). For emergency system information about the driver, see the *F-Drive Series W1 Installation Manual*.



**Note:** *The number of designated emergency lamps and their height is the responsibility of the specifier and installer in order to achieve the minimum FC levels of NFPA 101. Installation scenarios should be evaluated by the AHJ to confirm illuminance and performance requirements of ANSI/NFPA 101 and the IBC.*

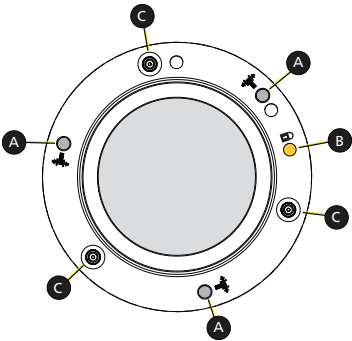


# Features






1	In port (RJ45 socket)
2	Out port (RJ45 socket)
3	Channel rotary switch*
4	Mounting clamps (quantity 3)
5	Magnetic trim plate

\* The channel rotary switch is only present on RGBW luminaires.

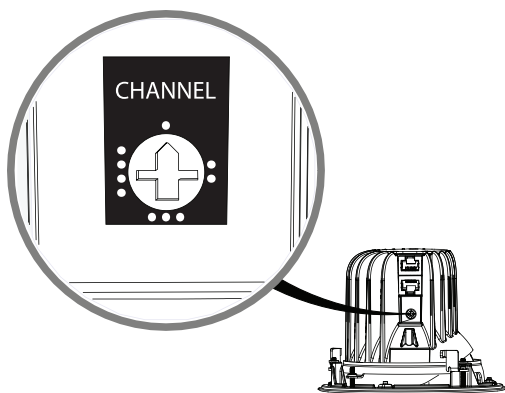


Trim plate removed

A	 2 mm hex screws or T10 Torx screws (silver) for mounting clamps
B	 2 mm hex screw or T10 Torx screw (yellow) to lock the tilt and rotation
C	 Magnets that secure the trim plate

## Channel Settings for RGBW Luminaires

The channel rotary switch on an RGBW luminaire assigns the luminaire to a control channel from the control source. (In the F-Drive series of drivers, the Chroma Card is the control source.)



When you daisy-chain multiple RGBW luminaires, you must assign each luminaire in the wiring run to a unique channel. Each luminaire will respond to output signals that are sent from the control source on the channel to which the luminaire is assigned. See the RDM information in the installation manual for your F-Drive series driver for information about configuring control channels.

To set the channel on an RGBW luminaire, use a small flatblade screwdriver to turn the rotary switch so that it points to the channel number that you want to assign to the luminaire.



**Note:** *If RGBW luminaires are not assigned to unique channels when they are daisy-chained together, you will not be able to update the firmware on the RGBW luminaires, and F-Drive Chroma Card LEDs and RDM communication may not function correctly.*



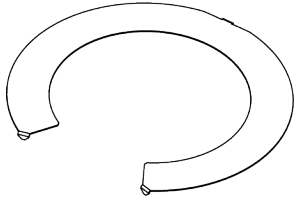
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# Accessories

For a current and complete list of accessories available for the Navis 100 luminaire, view the product datasheet at [etconnect.com/ArcSystem-Navis/Documentation](https://etconnect.com/ArcSystem-Navis/Documentation).

## Installation Accessories

Several installation accessories are available for purchase separate from the luminaire. Contact ETC or your authorized ETC dealer to purchase these accessories.

- **ArcSystem Recessed Luminaire Ceiling Bracket:** The ArcSystem Recessed Luminaire Ceiling Bracket is intended for use in new installations or when additional support is required for hanging a luminaire. The recessed ceiling bracket can be secured to the rail system in suspended ceilings or attached directly to building joists. The bracket and related hardware are designed to attach to 25 mm EMT conduit and 3/4 in EMT conduit, which is cut to size on-site and supplied by others. For more information, download the *ArcSystem Recessed Luminaire Ceiling Bracket Installation Guide* from [etconnect.com](https://etconnect.com) or scan the QR code.  

- **ArcSystem Goof Ring:** The ArcSystem Goof Ring is a trim ring that conceals gaps caused by ceiling holes that are too large for the luminaire you are installing. For more information, download the *ArcSystem Goof Ring Installation Guide* from [etconnect.com](https://etconnect.com) or scan the QR code.  

- **ArcSystem Ceiling Protection Ring:** The ArcSystem Ceiling Protection Ring provides a rigid surface for the luminaire mounting clamps when the ceiling material is too soft to support fully tightened mounting clamps. Information about using the Ceiling Protection Ring is included in the luminaire's installation procedure.  


# Before You Begin Installation

Review the following sections before you begin installing the luminaire.

## Power Disconnect Device

Before installation, make sure that you have a readily accessible input power disconnect device installed ahead of your Navis 100 luminaire and the driver.



**WARNING: RISK OF ELECTRIC SHOCK!** Circuits that are installed without an accessible power disconnect device cannot be serviced or operated safely.

**AVERTISSEMENT : RISQUE DE DÉCHARGE ÉLECTRIQUE!** Il est imprudent d'utiliser ou de réparer les circuits installés sans qu'un dispositif de déconnexion de l'alimentation ne soit accessible.

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## Installation Requirements



**WARNING:** Navis 100 luminaires are NON-IC rated and therefore NOT suitable for installation in direct contact with combustible materials or thermal insulation.

**DO NOT INSTALL INSULATION WITHIN 76 mm (3 in) OF ANY PART OF THE LUMINAIRE.**

**AVERTISSEMENT :** Les lampes Navis 100 sont classés NON-IC, ils ne conviennent donc PAS pour une installation en contact direct avec des matières combustibles ou une isolation thermique.

**NE PAS INSTALLER D'ISOLATION À MOINS DE 76 mm (3 po) DE TOUTE PARTIE DE LA LAMPE.**

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**WARNING:** The luminaire must be installed at least 0.1 m (4.0 in) away from all lighted objects.

**AVERTISSEMENT :** Le luminaire doit être installé à au moins 0,1 m (4,0 po) de tout objet allumé.

---



**WARNING:** Install RGBW luminaires with minimum spacings between:

(a) center-to-center of adjacent luminaires: 0.31 m (12 in)

(b) luminaire center to side building member: 0.31 m (12 in)

**AVERTISSEMENT :** Assurer les dégagements minimaux suivants pour les luminaires RGBW :

(a) entre l'entraxe des luminaires adjacents 0.31 m (12 po)

(b) entre le centre du luminaire et un élément de charpente latéral 0.31 m (12 po)

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**CAUTION:** *RGBW luminaires should be positioned so that prolonged staring into the luminaire at a distance of 1.0 m (3 ft 3 in) is not expected.*

**ATTENTION :** *Les luminaires RGBW doivent être positionnés de manière à éviter un regard prolongé dans le luminaire à une distance de 1,0 m (3 pi 3 po).*

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**CAUTION:** *Do not coil excess Category-type cable.*

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- Ambient operating temperature 0°C–40°C (32°F–104°F), 5%–95% non-condensing humidity.
- Ceiling material thickness 0.5–20 mm (1/32–3/4 in).
- Suitable for damp locations.
- IP20 rated.
- Suitable for use in air handling (plenum) spaces.
- Choose an installation location with sufficient air circulation to prevent overheating.
- Installation location must support the weight of the luminaire (0.63 kg [1 lb 7 oz]) and applicable mounting hardware.
- To prevent overheating, Navis 100 RGBW luminaires require 0.31 m (12 in) minimum spacing for the following:
  - center-to-center of adjacent luminaires
  - center of luminaire to side building member

There are no minimum spacing requirements for the White or Fade to Warm luminaires other than those specified in the warnings [on the previous page](#).

# Wiring the Luminaires

Luminaire power and data in and out cables terminate to RJ45 connectors. You must use 0.25 mm<sup>2</sup> (23 AWG) or larger gauge conductors in Category-type cable terminated to the T568B standard. Not all Cat5 or Cat6 cables meet this gauge requirement.

You can connect up to four luminaires along one run of cable when using RJ45 output from a compatible output card. The total cable distance for each wiring run should not exceed 100 m (328 ft). See the *F-Drive R12 and W1 Wiring Reference Guide* for more details.



**CAUTION: Possible damage to equipment. Connect only the same types of luminaires in a wiring run. Do not mix White, Fade to Warm, and RGBW luminaires in the same wiring run.**

## RJ45 Pinout Information

### RGBW

Pin	Description
1	Data +
2	Data -
3,4,5	48 VDC
6,7,8	Return

### White and Fade to Warm

#### In Port

Pin	Description
1	GND 1*
2,6	THRU 1**
3,7	THRU 2**
4,8	THRU 3**
5	PWR 1*

\*Pins 1 and 5 receive ground and power from the source or the previous luminaire in line.

\*\*These pins pass through power to the next luminaires in line.

#### Out Port

Pin	Description
1,5	THRU 1
2,6	THRU 2
3,7	THRU 3
4,8	No Connection



**Note:** Navis 100 RGBW luminaires are not self-terminating. You must terminate the last luminaire in line with a 120Ω resistor.

An RJ45 terminator is included with each F-Drive series Chroma Card or W1 Chroma driver. To purchase additional RJ45 terminators, contact your ETC customer service representative and request part number N4086.

## Use of Third-Party Drivers with Daisy-Chain Luminaires



**Note:** Navis 100 RGBW luminaires can only be controlled by the F-Drive series of drivers by ETC.

Navis 100 White and Fade to Warm luminaires can be controlled by third-party Class 2 or Low Voltage Limited Energy (LVLE) drivers that provide a maximum of 48 VDC. To daisy-chain luminaires and still have independent channel functionality, you must wire the first luminaire in the chain as described below. (The RJ45 outputs on F-Drive Constant Current (CC) and Fade to Warm drivers natively support this wiring configuration.)

Channel	Input Pins for First Fixture in Daisy-Chain	Description
1 (First fixture)	1	Ground/Earth
	5	Constant current <ul style="list-style-type: none"><li>White: 600 mA maximum</li><li>Fade to Warm: 450 mA maximum</li></ul>
2 (Second fixture)	2	Ground/Earth
	6	Constant current <ul style="list-style-type: none"><li>White: 600 mA maximum</li><li>Fade to Warm: 450 mA maximum</li></ul>
3 (Third fixture)	3	Ground/Earth
	7	Constant current <ul style="list-style-type: none"><li>White: 600 mA maximum</li><li>Fade to Warm: 450 mA maximum</li></ul>
4 (Fourth fixture)	4	Ground/Earth
	8	Constant current <ul style="list-style-type: none"><li>White: 600 mA maximum</li><li>Fade to Warm: 450 mA maximum</li></ul>

After wiring the first luminaire as noted above, you can daisy-chain up to three additional luminaires following the cable connection information in [Wiring the Luminaires on the previous page](#).

# Installation

This section provides instructions for installing the Navis 100 luminaire. See the installation manual for your driver or ETC breakout box for information about installing the driver or breakout box.



**Note:** *Installation must follow all national and local codes for electrical equipment.*

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## Prepare the Ceiling

Cut a 120 mm (4-3/4 in) diameter hole in the ceiling to accommodate the luminaire's mounting clamps.



**Note:** *Navis 100 luminaire mounting clamps can accommodate a ceiling thickness of 0.5–20 mm (1/32–3/4 in).*

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Ensure that there is sufficient cable extending down through the ceiling opening so that the luminaire can be inspected and serviced when needed. ETC recommends at least 50 cm (20 in) of cable.

## Spacing for Wall Wash Luminaires

If you are installing luminaires with a wall wash trim plate, ETC recommends that you allow minimum spacing as follows to obtain the best coverage:

- 61 cm (2 ft) between the wall and the center of a luminaire
- 91 cm (3 ft) center-to-center of adjacent luminaires

## Install a Luminaire



**Note:** *If you are installing a luminaire with a wall wash trim plate, see [Install a Wall Wash Luminaire on page 15](#) for installation instructions.*

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**Note:** *If you are using the ArcSystem Ceiling Protection Ring installation accessory, insert the ring into the hole in the ceiling before you begin the installation procedure. Press the three triangular points on the ring into the ceiling material to secure the ring in place.*

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### Tools required:

- Small flatblade screwdriver (if installing an RGBW luminaire)
- 2.0 mm hex key or T10 Torx screwdriver





**Note:** Use a maximum torque setting of 1.9 Nm (10.5 in-lb) when tightening the screws to avoid damaging the locking clamp, mounting clamps, and mounting surface.

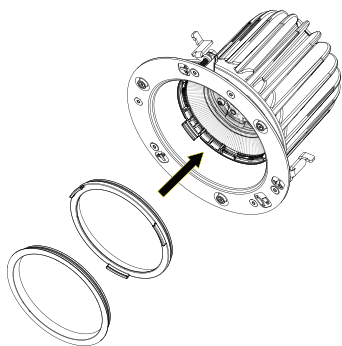
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1. Remove the magnetic trim plate from the base of the luminaire to expose the mounting clamp screws and the locking screw.
  2. If necessary, install the secondary optic, the finishing ring, or both by snapping the part into the lens holder.
- 



**Note:** The edges of the secondary optic and the finishing ring may protrude below the edge of the trim plate when you tilt the luminaire to its full extent.

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3. If installing an RGBW luminaire, use a small flatblade screwdriver to set the channel rotary switch to the channel of the luminaire (1–4). (See [Features on page 5](#) for the location of the channel rotary switch and information about channel numbers.)
  4. If you need to adjust the tilt and rotation of the luminaire:
    - a. Loosen the yellow locking screw on the base of the luminaire.
    - b. Adjust the tilt and rotation of the luminaire to the approximate final position.
    - c. Tighten the yellow locking screw to secure the tilt and rotation positions. Be careful not to over tighten the screw.
- 



**Note:** Setting the approximate tilt and rotation positions before you install the luminaire minimizes the need for large adjustments after the luminaire is installed, which helps prevent the cables from twisting or wrapping around the luminaire.

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**CAUTION: Possible damage to equipment. Connect Navis 100 Fade to Warm luminaires only to Fade to Warm output cards or a W1 Fade to Warm driver. Connect Navis 100 White luminaires only to constant current output cards or a W1 CC driver. Connect Navis 100 RGBW luminaires only to a Chroma Card or a W1 Chroma driver.**

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5. Connect a power and data in cable from the driver or ETC breakout box to the "IN" port on the luminaire.
    - If you are daisy-chaining luminaires, be careful to connect the cables to the correct "IN" and "OUT" ports. (The cable from the "OUT" port on one luminaire connects to the "IN" port of the next luminaire.) Incorrect connections will result in improper operation of the luminaires.
    - If you are installing RGBW luminaires, you must terminate the last luminaire in the line. See [Wiring the Luminaires on page 10](#).
- 



**CAUTION: Do not coil excess Category-type cable.**

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6. Insert the luminaire through the hole in the ceiling. If necessary, rotate the luminaire so that the tilt and rotation of the luminaire are oriented appropriately.
  7. Tighten the silver screw on each mounting clamp on the luminaire. As you tighten each screw, the mounting clamp rotates out to grip the ceiling. Be careful not to over tighten the screws.
  8. Confirm that the tilt and rotation of the luminaire are correct. If changes are necessary:
    - a. Loosen the yellow locking screw.
    - b. Tilt and rotate the luminaire so it is focused to its final resting position.
    - c. Tighten the yellow locking screw.
  9. Attach the magnetic trim plate to the base of the luminaire. The trim plate should be centered on the base of the luminaire and should connect firmly to the three magnets.
- 



**CAUTION: It is very important that the trim plate is firmly attached to the luminaire with all three magnets engaged so that the trim plate does not detach from the luminaire.**

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# Install a Wall Wash Luminaire

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**Note:** *Wall wash luminaires are not intended for use with the Navis 100 Pendant or the Navis 100 Surface Cylinder accessories.*

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**Note:** *If you are using the ArcSystem Ceiling Protection Ring installation accessory, insert the ring into the hole in the ceiling before you begin the installation procedure. Press the three triangular points on the ring into the ceiling material to secure the ring in place.*

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## Tools required:

- Small flatblade screwdriver (if installing an RGBW luminaire)
  - 2.0 mm hex key or T10 Torx screwdriver
- 



**Note:** *Use a maximum torque setting of 1.9 Nm (10.5 in-lb) when tightening the screws to avoid damaging the locking clamp, mounting clamps, and mounting surface.*

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1. Remove the magnetic trim plate from the base of the luminaire to expose the mounting clamp screws.
  2. If installing an RGBW luminaire, use a small flatblade screwdriver to set the channel rotary switch to the channel of the luminaire (1–4). (See [Features on page 5](#) for the location of the channel rotary switch and information about channel numbers.)
- 



**CAUTION:** *Possible damage to equipment. Connect Navis 100 Fade to Warm luminaires only to Fade to Warm output cards or a W1 Fade to Warm driver. Connect Navis 100 White luminaires only to constant current output cards or a W1 CC driver. Connect Navis 100 RGBW luminaires only to a Chroma Card or a W1 Chroma driver.*

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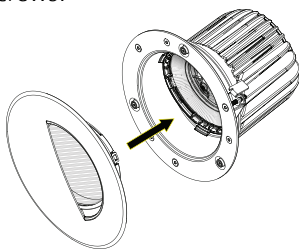
3. Connect a power and data in cable from the driver or ETC breakout box to the "IN" port on the luminaire.
    - If you are daisy-chaining luminaires, be careful to connect the cables to the correct "IN" and "OUT" ports. (The cable from the "OUT" port on one luminaire connects to the "IN" port of the next luminaire.) Incorrect connections will result in improper operation of the luminaires.
    - If you are installing RGBW luminaires, you must terminate the last luminaire in the line. See [Wiring the Luminaires on page 10](#).
- 



**CAUTION:** *Do not coil excess Category-type cable.*

---

4. Insert the luminaire through the hole in the ceiling.
5. Rotate the luminaire so that it is focused appropriately on the wall you want to light.
6. Tighten the silver screw of each mounting clamp on the luminaire. As you tighten each screw, the mounting clamp rotates out to grip the ceiling. Be careful not to over tighten the screws.
7. Attach the magnetic wall wash trim plate to the base of the luminaire so that the angled top of the trim plate fits into the angle of the luminaire. Ensure that the trim plate connects firmly with the three magnets on the base of the luminaire.



**CAUTION:** *It is very important that the trim plate is firmly attached to the luminaire with all three magnets engaged so that the trim plate does not detach from the luminaire.*

## Power Up Procedure



**Note:** *Incorrect installation of recessed luminaires may cause output to turn on and off periodically due to built-in protection against overheating. Leave the lamp on for several hours to check for overheating caused by improper installation. A luminaire's driver can overheat even if the lamp is off.*

1. Verify that each luminaire is connected to the correct driver or output card before you power up the luminaires.

There are three models of driver or card used with the different models of Navis 100 luminaires. See the installation manual for your F-Drive for more compatibility information.

- F-Drive Fade to Warm drivers and output cards are compatible with Fade to Warm luminaires.
  - F-Drive Constant Current (CC) drivers and output cards are compatible with White luminaires.
  - F-Drive Chroma drivers and output cards are compatible with RGBW luminaires.
2. If there are Navis 100 White luminaires connected to the F-Drive, use ETC Concert software to verify that each channel of each CC output card or driver is set to output 600 mA.
  3. Refer to the installation manual for the F-Drive for information about the power up procedure for the driver.

## Identify

You can send an identify command to individual channels of an R12 output card or W1 driver using ETC Concert or a third-party RDM controller. Luminaires connected to an F-Drive or an ETC breakout box will respond to an RDM identify command by blinking on and off: 500 ms on, 500 ms off, until the identify command is ended. See the F-Drive Device Package Help in Concert or the installation manual for your F-Drive for information about this RDM command.

## Emergency Operation and Test

Refer to the *F-Drive Series W1 Installation Manual* for information about testing the emergency system. All ETC documents are available for free download from our website: [etcconnect.com](http://etcconnect.com).

## Update RGBW Luminaire Firmware

Refer to the installation manual for your F-Drive series driver for information about updating the firmware for the Navis 100 RGBW luminaire.

## RGBW Luminaire DMX Personalities

Navis 100 RGBW luminaires have two personality options: direct (IRGBW) and IRGB. Navis 100 Fade to Warm luminaires have two personality options: Intensity and Warm Trim. Navis 100 White luminaires have a single personality: Intensity. The personality is set per output card.

The IRGB DMX personality provides a means for matching the output from Navis 100 RGBW luminaires to 3000 K White and Fade to Warm luminaires. When all four IRGB channels are set to 100%, the output from the RGBW luminaire is 3000 K white light.

The Warm Trim DMX personality for Navis 100 Fade to Warm luminaires enables you to scale the intensity level at which the Red Shift color temperature changes begin to occur.

For complete information about configuring RDM control channels, see the installation manual for your F-Drive.

DMX Channel	Navis RGBW Luminaires		Navis Fade to Warm Luminaires		Navis White Luminaires
	Direct (IRGBW)	IRGB (default)	Intensity	Warm Trim	Intensity
1	Intensity	Intensity	Intensity	Intensity	Intensity
2	Red	Red		Fade to Warm Scaling	
3	Green	Green			
4	Blue	Blue			
5	White				

# Install Replacement Lens

There are several beam angle options available for the Navis 100 luminaire: 15°, 25°, 40°, and 60°. You can change the beam angle of a luminaire by exchanging the lens for one with a different beam angle. For information about ordering lenses, see the product data sheet at [etcconnect.com/ArcSystem-Navis/Documentation](http://etcconnect.com/ArcSystem-Navis/Documentation). To determine the beam angle of the lens that is currently installed in the luminaire, see [Identify Beam Angle on page 22](#).

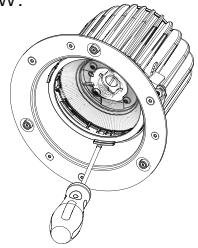


**Note:** *Navis 100 luminaires are not serviceable. If the luminaire is not functioning properly, do not remove the lens in an attempt to diagnose the problem. Contact ETC Technical Services for assistance.*

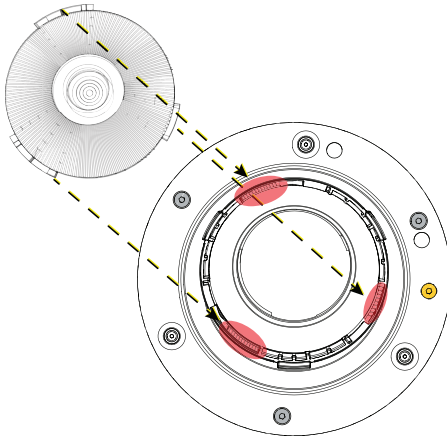
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## Tool required:

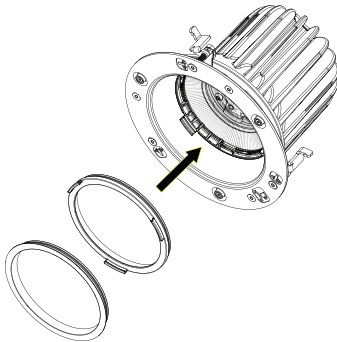
- Small flatblade screwdriver
1. Remove the magnetic trim plate from the base of the luminaire to expose the ceiling clamp screws and the locking screw.
  2. If necessary, remove the finishing ring, the secondary optic, or both from the luminaire by sliding a small flatblade screwdriver between the edge of the part and the side of the luminaire and carefully prying the part loose.
  3. Remove the existing lens from the luminaire by twisting the lens counterclockwise to unlock it from the luminaire. ETC recommends that you use a suction cup tool to remove the lens. (A suction cup tool is available from ETC, part number 7496K1011.)



4. Position the replacement lens in the luminaire. Align the tabs on the lens with the appropriate slots in the lens holder. (There are two large tabs and one small tab.)



5. Twist the lens clockwise until it locks into the lens holder.
6. If necessary, reinstall the secondary optic, the finishing ring, or both by snapping the part into the lens holder.



7. Replace the beam degree label on the base of the luminaire with the label from the replacement lens kit so that the luminaire is labeled correctly.



**CAUTION:** *It is very important that the trim plate is firmly attached to the luminaire with all three magnets engaged so that the trim plate does not detach from the luminaire.*

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8. Attach the magnetic trim plate to the base of the luminaire. The trim plate should be centered on the base of the luminaire and should firmly connect to the magnets on the luminaire.

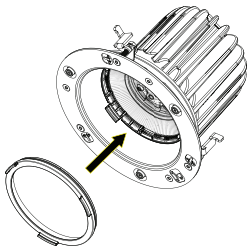
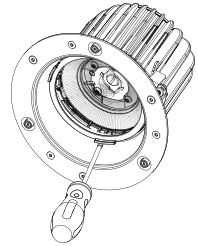
# Install Replacement Secondary Optic

There are several secondary optic accessories available for Navis 100 luminaires. For a list of accessories, view the product datasheet at [etconnect.com/ArcSystem-Navis/Documentation](http://etconnect.com/ArcSystem-Navis/Documentation).

## Tool required:

- Small flatblade screwdriver

1. Remove the magnetic trim plate from the luminaire.
2. If a finishing ring is installed in the luminaire, remove the finishing ring by sliding a small flatblade screwdriver between the edge of the finishing ring and the side of the luminaire and carefully prying the ring loose.
3. Remove the existing secondary optic by sliding a small flatblade screwdriver between one of the tabs on the secondary optic and the side of the luminaire and carefully prying the secondary optic loose.
4. Install the replacement secondary optic by snapping it into the lens holder.



5. If necessary, reinstall the finishing ring by snapping it into the lens holder.



**CAUTION:** *It is very important that the trim plate is firmly attached to the luminaire with all three magnets engaged so that the trim plate does not detach from the luminaire.*

6. Attach the magnetic trim plate to the base of the luminaire. The trim plate should be centered on the base of the luminaire and should connect firmly to the three magnets.



# Maintenance

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**WARNING:** Disconnect the luminaire from all cables and allow it to cool before performing any cleaning and maintenance.

**AVERTISSEMENT :** Débrancher le projecteur de tous les câbles et laisser le refroidir avant d'effectuer un nettoyage ou un entretien.

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**CAUTION:** *NEVER spray liquids into the luminaire.*

**NEVER spray compressed air into a luminaire that is powered on.**

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Check for excessive dust or debris in the heat-dissipating fins around the entire luminaire enclosure. Keeping the components of the enclosure clean facilitates efficient cooling and extends LED longevity.

Use a can of compressed air or oil-free air from an air compressor set at a low setting to blow air through the vent holes and remove dust or other debris. Dust buildup can cause overheating and premature shutdown.

All components can be cleaned using compressed, oil-free air as described above or a clean micro-fiber cloth. The use of any liquid cleaning solution is not recommended.

Inspect all mounting hardware for wear and, if necessary, clean using compressed, oil-free air or a soft, lint-free cloth.

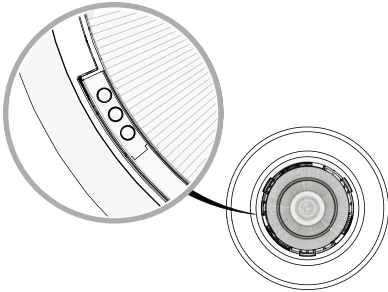
See the installation manual for your driver for information about servicing the driver.

# Specifications and Reference

For current and complete product specifications, view the product datasheet at [etconnect.com/ArcSystem-Navis/Documentation](http://etconnect.com/ArcSystem-Navis/Documentation).

## Identify Beam Angle

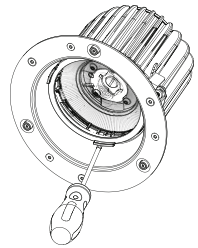
Each luminaire includes a beam degree label that identifies the beam angle of the installed lens. The label is located beneath the magnetic trim plate. You can also determine the beam angle of the installed lens by looking at the lens itself. The edge of each lens includes dots that identify the beam angle.



The number of dots indicates the beam angle of the lens.

Number of Dots	Beam Angle
1	15°
2	25°
3	40°
4	60°

To view the dots, remove any accessories used with the luminaire such as a finishing ring or secondary optic by sliding a small flatblade screwdriver between the edge of the part and the side of the luminaire and carefully prying the part loose.



# Compliance

For current and complete compliance information, view the product datasheet at [etconnect.com/ArcSystem-Navis/Documentation](https://etconnect.com/ArcSystem-Navis/Documentation). For complete product documentation, including compliance documentation, visit [etconnect.com/products](https://etconnect.com/products).

## FCC Compliance

### ArcSystem Navis 100

(For any FCC matters):

Electronic Theatre Controls, Inc.  
3031 Pleasant View Road  
Middleton, WI 53562  
+1 (608) 831-4116  
[etconnect.com](https://etconnect.com)

This device 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. Visit [etconnect.com/products](https://etconnect.com/products) for current and complete compliance information including FCC compliance.



**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 instructions, may cause harmful interference to radio communications. Any modifications or changes to this product not expressly approved by Electronic Theatre Controls, Inc. could void the user's authority to operate the product. 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 their own expense.*

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