RTX12-75-TPC / RTX12-100-TPC
TRANSFORMER INSTALLATION INSTRUCTIONS

Thank you for buying RAB lighting fixtures. Our goal is to design the best quality products to get the job done right. We'd like to hear your comments. Call the Marketing Department at 888-RAB-1000 or email: marketing@rabweb.com



IMPORTANT

READ CAREFULLY BEFORE INSTALLING TRANSFORMER. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

RTX12-75-TPC / RTX12-100-TPC has an input of 120VAC 60Hz 0.7A. Transformer comes with a swivel photocell and timer. RAB transformer must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

WARNING: Make certain power is OFF before installing or maintaining fixtures.

SAFETY INSTRUCTIONS

WARNING – Risk of Electric Shock. Install power unit 5 feet (1.5 m) or more from a pool, spa, or fountain. Where the power unit is installed indoors within 10 feet (3.0 m) of a pool, spa, or fountain.

Not to use an extension cord.

"CAUTION" FOR USE ONLY ON A BRANCH CIRCUIT PROTECTED BY A CLASS A TYPE GROUND FAULT CIRCUIT INTERRUPTER.

FOR USE WITH LANDSCAPE LIGHTING SYSTEMS ONLY.

THIS DEVICE IS ACCEPTED AS A COMPONENT OF LANDSCAPE LIGHTING SYSTEM WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY THE LOCAL INSPECTION AUTHORITIES HAVING JURISDICTION.

DO NOT CONNECT TWO OR MORE POWER SUPPLIES IN PARALLEL.

DO NOT MOUNT TRANSFORMER WITHIN 10 feet (3.0 m) OF A SWIMMING POOL OR SPA.

RISK OF FIRE. DO NOT PLACE INSULATION UNDER TERMINAL PLATE. CHECK CONNECTION AFTER INSTALLATION.

THE POWER UNIT SHALL BE CONNECTED TO A GFCI PROTECTED HOODED FLUSH TYPE COVER PLATE RECEPTACLE MARKED "WET LOCATION" WHILE IN USE."

FOR USE ONLY WITH LOW VOLTAGE LANDSCAPE LUMINAIRES AND FITTINGS.

RTX12-75-TPC / RTX12-100-TPC
TRANSFORMER INSTALLATION INSTRUCTIONS

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FEATURES AND CONTROLS

1. Fully enclosed Stainless steel housing with removable cover for easy access of controls and connections.
2. Integral mounting bracket for extra strength.
3. Epoxy encapsulated transformer for weather protection.
4. Inline secondary breaker for overload protection.
5. Multiple voltage taps 12V, 13V, 14V, & 15V
6. Industry standard Knockouts.
7. User configurable, Programmable timer and Swivel photocell
8. Non detachable 5 foot power cord.

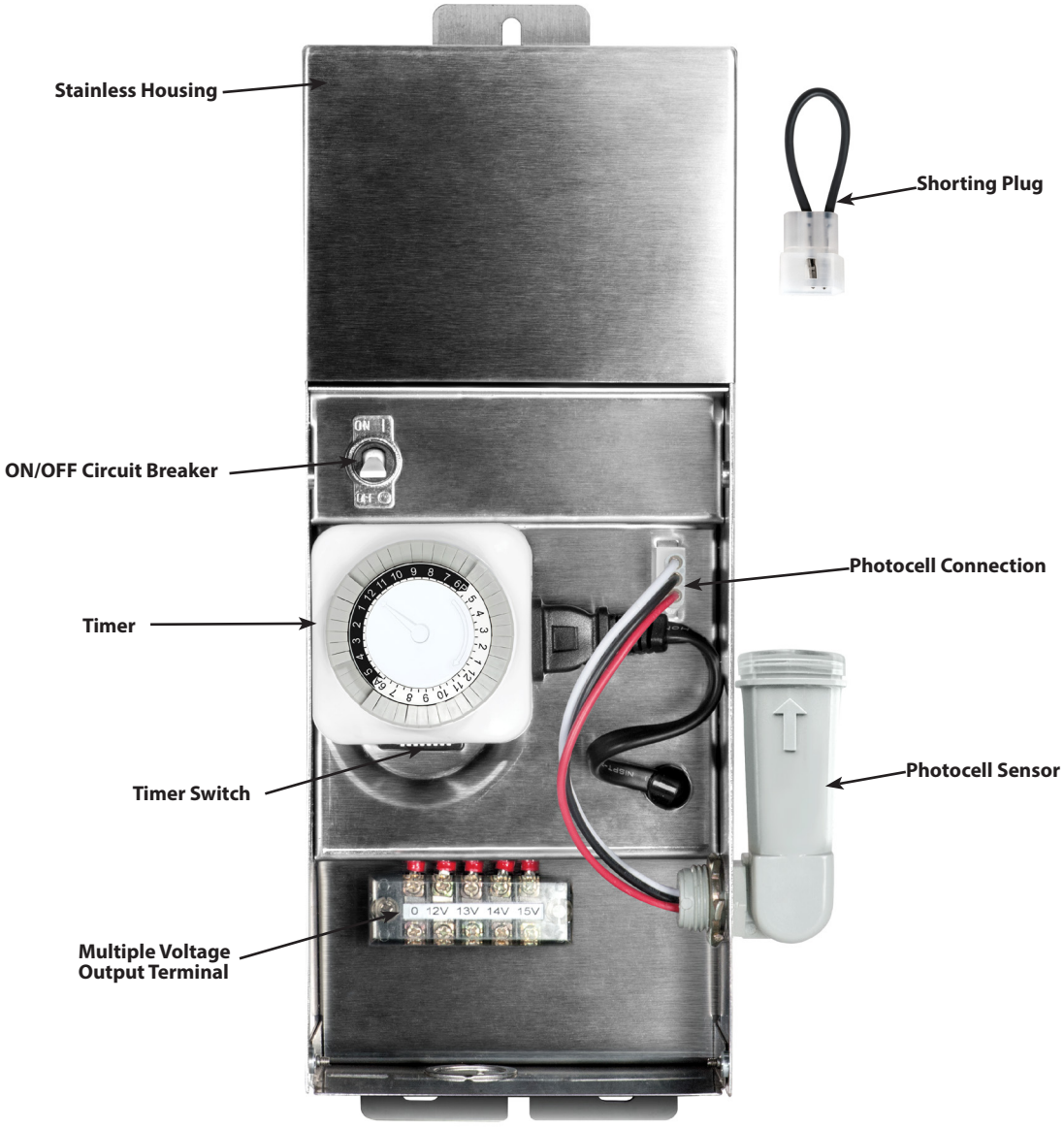


Fig. 1

RTX12-75-TPC / RTX12-100-TPC
TRANSFORMER INSTALLATION INSTRUCTIONS

Thank you for buying RAB lighting fixtures. Our goal is to design the best quality products to get the job done right. We'd like to hear your comments. Call the Marketing Department at 888-RAB-1000 or email: marketing@rabweb.com

MOUNTING INSTRUCTIONS

WARNING: Transformers must be installed in accordance with the National Electrical Code (NEC) and local codes. Failure to do so will void the warranty and may result in serious injury and/or damage to the transformer.

The Transformer is for wall mount only. Use appropriate mounting hardware suitable for the mounting surface.

1. Mount transformer to a solid surface using stainless steel screws and anchors. Refer to Fig 3. for drilling dimensions.

   CAUTION: Make sure screws are of a load bearing quality.

   CAUTION: Transformer should be mounted at least 1.5 ft from the ground for safe and convenient operation.

2. To open the cover of Transformer, unscrew four screws located on the sides of the transformer shown in Fig. 2.

   CAUTION: When reassembling cover, position all wires inside the housing and make sure no wires are pinched.

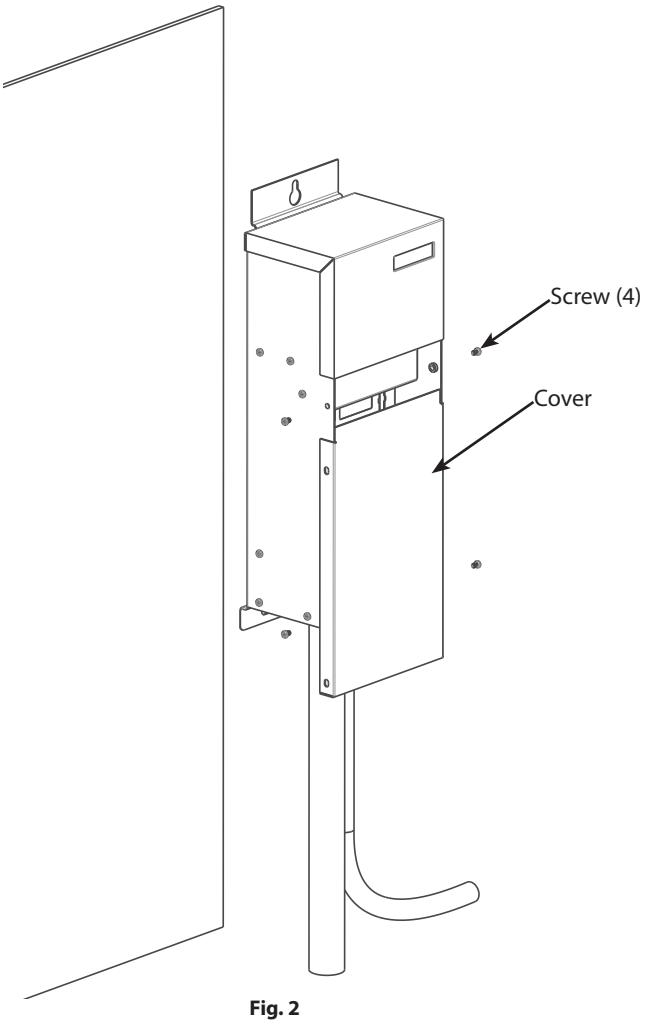


Fig. 2

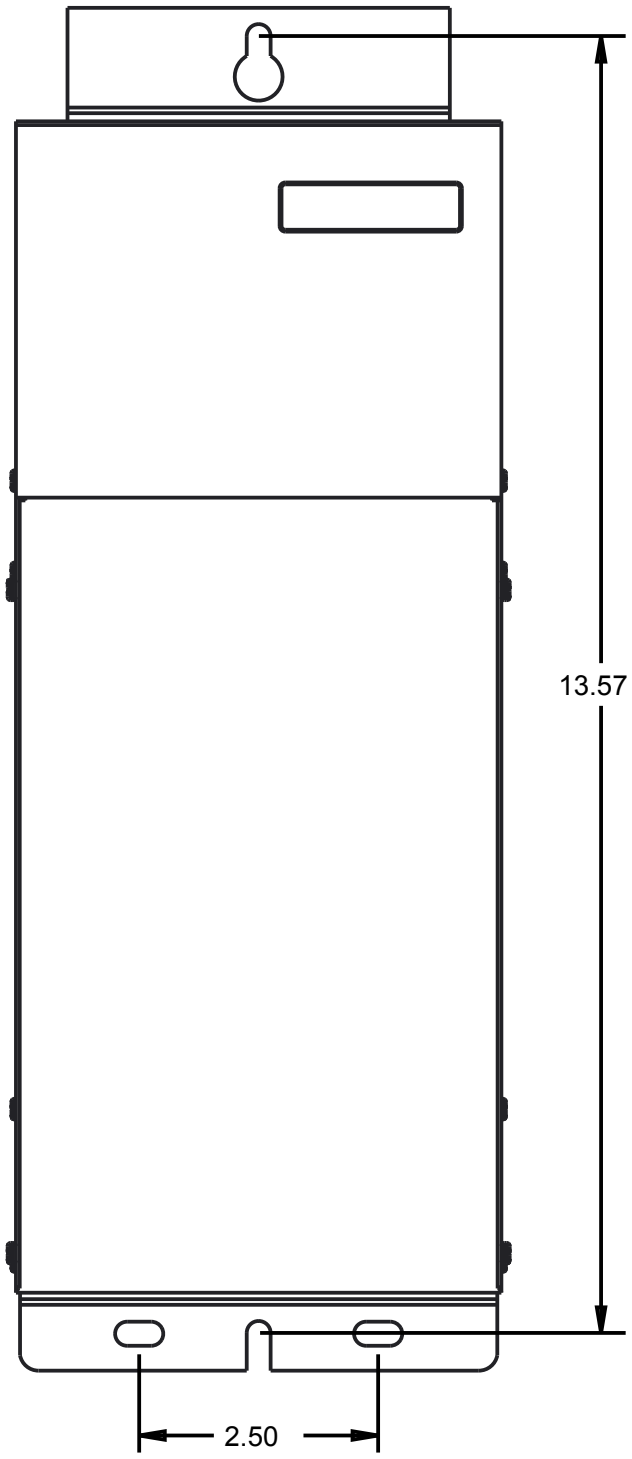


Fig. 3

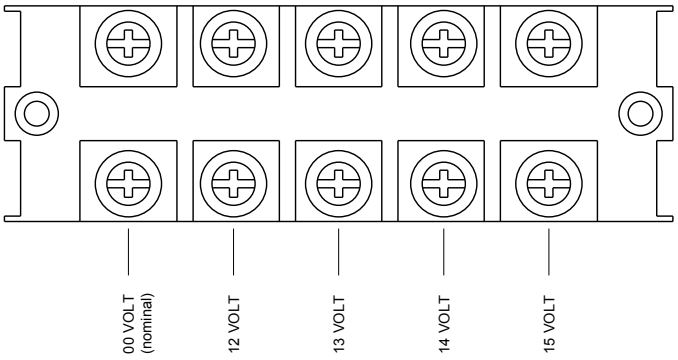
RTX12-75-TPC / RTX12-100-TPC
TRANSFORMER INSTALLATION INSTRUCTIONS

Thank you for buying RAB lighting fixtures. Our goal is to design the best quality products to get the job done right. We'd like to hear your comments. Call the Marketing Department at 888-RAB-1000 or email: marketing@rabweb.com

MULTI-TAP INSTALLATION

Multi-Tap transformers supply output voltage which exceeds 12 Volts. The transformer supplies output voltages of 12, 13, 14, and 15 Volts. Extreme care must be taken during installation to avoid fixture burnout due to high voltage. Use of a voltmeter during installation is the only way to ensure a proper voltage at the fixture. Multi-tap on the transformer can be used to correct voltage drop. Make sure the voltage test is within ±1.5V of 12V.

Connect one side of fixtures (common) up to 75/ 100 watts per circuit, using 16 AWG or larger direct burial cable. Strip 3/4" of cable insulation and twist wire strands tightly before insertion into transformer's output terminals. Tighten connector screws firmly.



TRANSFORMER SIZING

There are two transformers offered, 75W and 100W

The total lamp wattage of all fixtures connected to one transformer must not exceed 80% of the transformer wattage capacity. To determine the total number of fixture that can be connected to the transformer, follow the formula below.

75W Transformer: Maximum available Wattage = 60 Watt

100W Transformer: Maximum available Wattage = 80 Watt

For example:

If 5W fixtured are used, only 12 fixtures can be used with 75W Transformer and 16 fixtures can be used with 100W Transformer.

LOW VOLTAGE CABLE LENGTH

Low voltage cable is available in #16-2GA in multiples of 100ft.

Recommended Voltage Drop should be less than 1.5 volts. Calculate the maximum cable length using the formula:

$$\text{Voltage Drop (Volts)} = \frac{\text{Total Power for fixtures on Cable (Watts)} \times \text{Length of run (Feet)} \times 2}{\text{Cable Size Constant}}$$

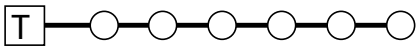
Cable Size Constant for 16AWG is 2200.

12 VOLT CABLE LAYOUT OPTIONS

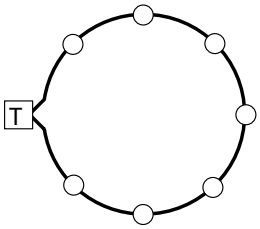
Connect one side of each lamp to COMMON terminal and the other side to 12V-15V terminal as needed.

CAUTION: Measure the closest and furthest fixture to ensure the voltage test is within ±1.5V of 12V.

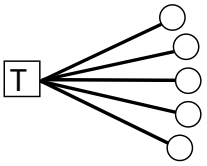
1. Straight run installation - Fixtures run in sequence directly from the transformer.



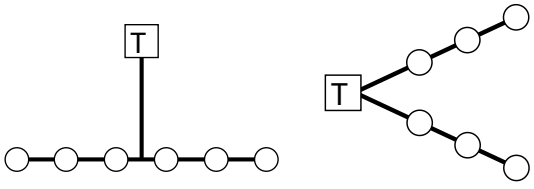
2. Loop installation - Fixtures are arranged in a looped circuit, reducing the effects of voltage drop.



3. Hub load installation or multiple cable run - Fixtures run in two or more directions from the transformer. Locating the transformer in the center of the run reduces the effects of voltage drop.



4. 'T' installation - Allows more equal distribution of power to the center of the run, or to a run some distance away. Cable running from the transformer must be of a heavier guage.



RTX12-75-TPC / RTX12-100-TPC
TRANSFORMER INSTALLATION INSTRUCTIONS

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PHOTOCELL CONTROL

Photocell and Timer may be used together. To install photocell, follow the following steps below:

1. Disconnect power to transformer.
2. Knock out side knock out hole to mount photocell.
3. Install 120V swivel photocell. Aim photocell toward the sky and tighten lock nut.
4. Remove Shorting Plug and plug the 120V swivel photocell to transformer enclosure.
5. To test in daylight hours, plug in Transformer.
6. For normal operation, remove cap from photocell.



Fig. 4

TIMER SETTING

TIMER SEGMENT BUTTONS:

Programmable timer segment buttons are located in the outer perimeter of the Timer. Timer can be set by pressing the timer buttons. Each buttons represents 30 minutes.

TIME READOUT:

Timer readout displays each day hours (6:30AM to 6:30PM) and night hours (6:30PM to 6:30AM are shown Fig. 5).

ROTATING TIMER DIAL:

Rotating timer dial can be turned only clockwise. It points to the current time of the day on the TIME READOUT.

TIMER SWITCH:

Timer switch is located on the side of the TIMER. By sliding the switch to timer clock will activate timer and sliding the switch to "ON" overrides the timer and enables normal use of the outlet. The timer switch is shown on Fig. 6.

1. Programming ON/OFF times

   Ensure all segments are pulled up before programming.

   Select a time period (or periods) you want the device turned on.
   Push down all the TIMER SEGMENT BUTTONS that fall on or within that time period. You may need to turn the dial clockwise to access the desired segments.
   Turn the ROTATING TIMER DIAL clockwise until the pointer on the face of the dial points to the current time of day.

2. Preparing the timer for use

   Plug the TIMER into the outlet on the transformer. Ensure the transformer is switched ON for automatic control as shown in Fig. 7. (The timer will not turn the light fixtures ON if the transformer is switched OFF.) To override the timer and use the transformer normally, set the MASTER SWITCH to ON position. This will deactivate timer control of the transformer. To reactivate timer control, ensure the transformer is turned ON, and set the timer MASTER SWITCH to TIMER (Fig. 6). In case of power failure, reset the time of day as explained in step 1.

RTX12-75-TPC / RTX12-100-TPC
TRANSFORMER INSTALLATION INSTRUCTIONS

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TIMER SETTING PROCEDURE (CONTD.)

1. Using the timer
   Set the MASTER SWITCH to the TIMER (picture of clock) position.
   Plug the timer into the outlet on the transformer.
   The device will turn ON and OFF at the programmed times.



Fig. 5



Fig. 6



Fig. 7

TROUBLESHOOTING

All of the lights fail to turn on

1. Check that the power switch is not in the OFF setting.
2. Check if there is a loose connection at the transfomer screw terminal.
3. Check that the transformer outlet is live and that the timer is plugged in.

ONLY SOME LIGHTS TURN ON

Check the connectors to make sure the wire stabs have pierced the transformer wire and the fixture wire.

THE LIGHTS ARE "ON" DURING THE DAY

The transformer photocell is in a dark area which triggers the photocell to turn ON the lights.

THE LIGHTS DO NOT SWITCH "ON" AT DUSK.

The transformer photocell is not in a dark area which triggers the photocell to turn ON the lights.

THE FIXTURE DOES NOT TURN ON

Ensure the transformer power switch is in the ON position.

THE LIGHT FIXTURES TURN ON/OFF DURING THE DAY INSTEAD OF NIGHT OR NIGHT INSTEAD OF DAY

Check section TIMER CONTROL for timer instructions.

CLEANING & MAINTENANCE

CAUTION: Be sure transformer temperature is cool enough to touch. Do not clean or maintain while transformer is energized.

1. Clean with non-abrasive cleaning solution.

Note: These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation operation or maintenance.

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Northvale, New Jersey 07647 USA

RTX12-XX-TPC IN 0317

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FERN™ CABLE TO CABLE INSTALLATION INSTRUCTIONS

CABLE TO CABLE CONNECTOR

Use this connector to extend or change direction of the main supply cable. Recommended wire guage to be used with connector is 18GA or 16GA. Note that cable from fixture is 18GA SPT-1W, 2.3A. To mount FERNCCC series, follow the steps below -

1. Determine the location to make electrical connection between two cables.
2. Feed one of the cable through lower channel and another through the upper channel as shown in Fig. 1.
   Note - One end of the cable has to be connected to the transformer (ordered separately).
3. Push down, rotate and tighten connector. The pins pierce through both the cables to make electrical connection between the two as shown in Fig. 2.

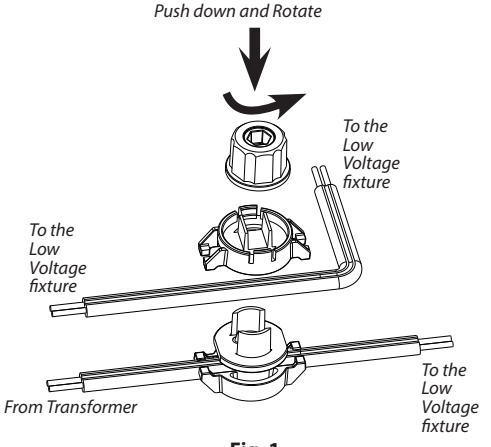


Fig. 1

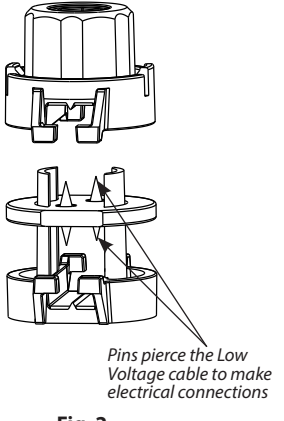


Fig. 2

IMPORTANT

READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Fixtures must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

WARNING: Make certain power is OFF before installing or maintaining fixture.

WARNING: MAX 12VAC only.

WARNING: The main low voltage cable is intended for shallow burial - less than 6 inches (152 mm).

ACCESSORIES

Following accessories should be ordered separately -

FERNFCC Fixture to Cable Connector

CORD16/12V-100 16GA SPT-2W 12V 3.7A 100FT cord

Note: These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation operation or maintenance.

FERNCCC IN 0916

FERN ™D'UN RACCORD DE CÂBLES
DIRECTIVES D'INSTALLATION

RACCORD DE CÂBLES

Utilisez ce raccord pour allonger un câble d'alimentation principal ou en modifier l'orientation. Le calibre de câble recommandé pour le raccord est de 18 ou 16. À remarquer que le câble des luminaires est de calibre 18, SPT - 1 W, 2,3 A. Suivez les étapes ci-dessous pour installer le FERNCCC en série.

1. Déterminez l'endroit où se fera le branchement des deux câbles.
2. Faites passer l'un des câbles dans le canal inférieur, puis l'autre dans le canal supérieur, comme illustré dans la Fig. 1.

   Remarque - L'une des extrémités du câble doit être branchée au transformateur (commandé séparément).
3. Poussez sur le raccord, faites-le tourner, puis serrez-le. Les tiges percent les gaines des deux câbles pour procéder à leur raccordement, comme illustré dans la Fig. 2.

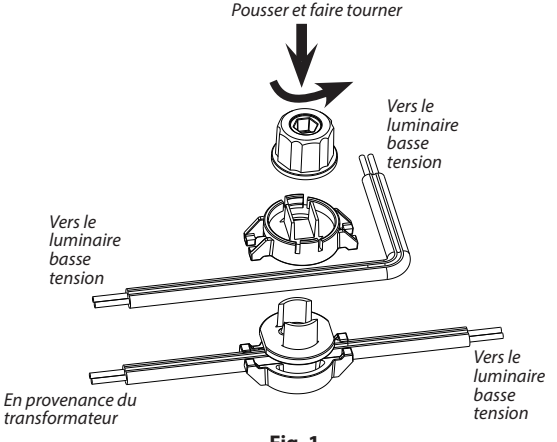
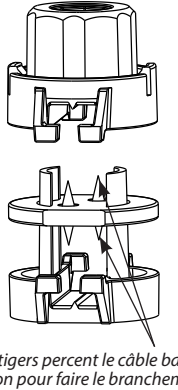


Fig. 1



Les 4 tigers percent le câble basse tension pour faire le branchement.

Fig. 2

IMPORTANT

LISEZ ATTENTIVEMENT AVANT D'INSTALLER LE LUMINAIRE CONSERVEZ CES DIRECTIVES POUR RÉFÉRENCE.

Les luminaires doivent être raccordés conformément au Code national de l'électricité et aux codes locaux en vigueur. Une mise à la terre appropriée est exigée pour assurer la sécurité. Ce produit doit être installé conformément au code d'installation applicable, par une personne familière avec la construction et le fonctionnement du produit et les dangers inhérents.

AVERTISSEMENT - Assurez-vous que le courant est coupé avant d'installer le luminaire ou d'en faire l'entretien. AVERTISSEMENT : 12 V c.a. seulement.

AVERTISSEMENT : Le câble à basse tension principal est destiné à être enfoui à faible profondeur - moins de 152 mm (6 po).

ACCESSORIES

Les accessoires suivants doivent être commandés séparément -

FERNFCC Raccord pour le câble et le luminaire

CORD16/12V-100 Cordon de 30,8 m (100 pi), 16 GA SPT-2 W 12 V 3,7 A

Remarque : Les présentes directives n'abordent pas toutes les possibilités ni toutes les variations en matière d'équipement pas plus qu'elles donnent toutes les situations pouvant être rencontrées lors de l'installation, du fonctionnement et de l'entretien.

FERNCCC IN 0916 FR

FERN™ FIXTURE TO CABLE INSTALLATION INSTRUCTIONS

FIXTURE TO CABLE CONNECTOR

Use this connector to connect the fixtures to the supply cable. Recommended wire gauge to be used with connector is 18GA or 16GA. Note that cable from fixture is 18GA SPT-1W, 2.3A. To mount FERNFCC series, follow the steps below -

1. Determine the location of your fixture to make electrical connection on a cable connected to a Transformer (ordered separately).
2. Feed the cable from Low Voltage fixture through channel in **Contact Plate** as shown in **Fig. 1**. **Note: Ensure that cable lays flat in the channel.** Firmly push the **Press Plate** and **Top Cover** onto **Contact Plate** to lock in place.
3. Feed the cable from Transformer (ordered separately) through channel in **Bottom Base** as shown in **Fig. 2**. Push against **Contact Plate**, rotate and tighten connector. The pins pierce through both the cables to make electrical connection between the two as shown in **Fig. 3.**

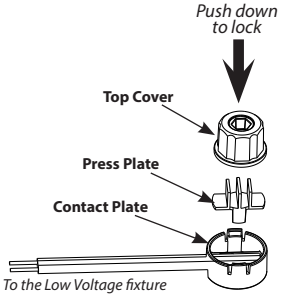


Fig. 1

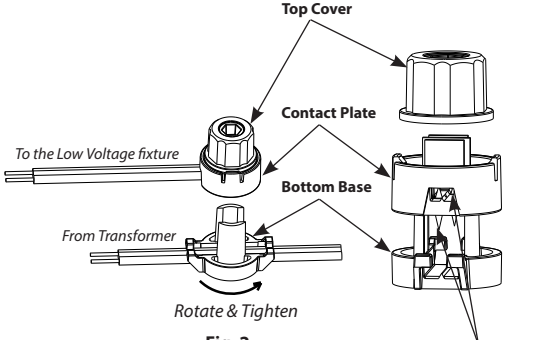


Fig. 2

Fig. 3

IMPORTANT

READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Fixtures must be wired in accordance with the National Electrical Code and all applicable local codes. Proper grounding is required for safety. This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved.

WARNING: Make certain power is OFF before installing or maintaining fixture.

WARNING: MAX 12VAC only.

WARNING: The main low voltage cable is intended for shallow burial - less than 6 inches (152 mm).

WARNING: If a tool is used to tighten the connector, DO NOT OVERTIGHTEN.

ACCESSORIES

Following accessories should be ordered separately -

FERNCCC	Cable to Cable Connector
CORD16/12V-100	16GA SPT-2W 12V 3.7A 100FT cord

Note: These instructions do not cover all details or variations in equipment nor do they provide for every possible situation during installation operation or maintenance.

FERNFCC IN 0217

FERN™ D'UN RACCORD DE CÂBLE À LUMINAIRE DIRECTIVES D'INSTALLATION

RACCORD DE CÂBLE À LUMINAIRE

Utilisez ce raccord pour bancher les luminaires au câble d'alimentation. Le calibre de câble recommandé pour le raccord est de 18 ou 16. À remarquer que le câble des luminaires est de calibre 18, SPT - 1 W, 2,3 A. Suivez les étapes ci-dessous pour installer le FERNFCC en série.

1. Déterminez l'emplacement du luminaire pour le raccordement à un câble branché à un transformateur (vendu séparément).
2. Faites passer le câble du luminaire à basse tension dans la rainure del la **plaque de contact**, comme illustré dans la **Fig. 1**. **Remarque : Assurez-vous que le câble repose à plat dans la rainure.** Appuyez fermement sur la **plaque de pression** et sur le **couvercle supérieur** pour les insérer sur la **plaque de contact** et les verrouiller en place.
3. Faites passer le câble du transformateur (vendu séparément) dans la rainure dans le **socle du bas** comme illustré dans la **Fig. 2**. Appuyez sur la **plaque de contact**, puis faites tourner le connecteur pour le serrer. Les tiges percent les gaines des deux câbles pour procéder à leur raccordement, comme illustré dans la **Fig 3**.

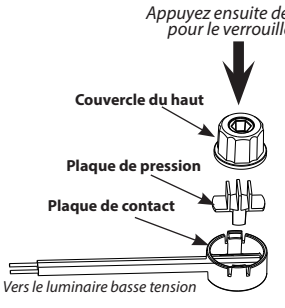


Fig. 1

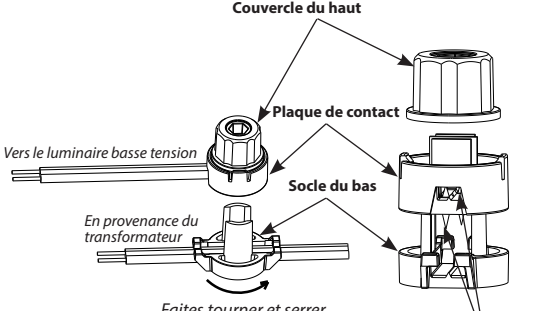


Fig. 2

Fig. 3

IMPORTANT

LISEZ ATTENTIVEMENT AVANT D'INSTALLER LE LUMINAIRE CONSERVEZ CES DIRECTIVES POUR RÉFÉRENCE.

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AVERTISSEMENT - Assurez-vous que le courant est coupé avant d'installer le luminaire ou d'en faire l'entretien. AVERTISSEMENT : 12 V c.a. seulement.

AVERTISSEMENT : Le câble à basse tension principal est destiné à être enfoui à faible profondeur - moins de 152 mm (6 po).

AVERTISSEMENT : Lorsque vous utilisez un outil pour serrer le connecteur, ÉVITEZ DE TROP LE SERRER.

ACCESSORIES

Les accessoires suivants doivent être commandés séparément -

FERNCCC	Raccord des câbles
CORD16/12V-100	Cordon de 30,8 m (100 pi), 16 GA SPT-2 W 12 V 3,7 A

Remarque : Les présentes directives n'abordent pas toutes les possibilités ni toutes les variations en matière d'équipement pas plus qu'elles donnent toutes les situations pouvant être rencontrées lors de l'installation, du fonctionnement et de l'entretien.