

NEON  
LIGHTING *lux*<sup>TM</sup>  
PRODUCTS INC.

ELECTRO *bits*<sup>TM</sup>  
Improving neon bit by bit

# LUX AND BITS 2010 COMPLETE PRODUCT CATALOG





**Neon LightingLux Products inc.**

300, St-Sacrement #218  
Montréal, Qc, Canada H2Y 1X4

**Telephone**

International : +1-514-845-BITS(2487)  
USA & Canada : 1-877-567-BITS(2487)

**Fax**

International : +1-514-842-BITS(2487)  
USA & Canada : 1-877-844-BITS(2487)

**Internet**

[www.lightinglux.com](http://www.lightinglux.com)  
[www.electrobits.com](http://www.electrobits.com)  
[www.luxandbits.com](http://www.luxandbits.com)

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Neon LightingLux Products inc. is pleased to announce to the sign industry the complete re-introduction of all Electrobits products and their associated UL files, among it's various different UL Listed, Classified or Recognized products: the famous Passthru, HVC1001, WETBITS, complete Damp & Dry UL 879 classified systems and the triple action metal free TSS3D tube support are available from your preferred local sign supplier.

All of the well known UL Electrobits products are still bearing the Electrobits brand trade name and bear the same safety UL mark and file numbers associated to them and can still be ordered using the same product codes. We are using the same production moulds, raw material and manufacturing process and facilities that Electrobits was using and we are making sure we are keeping with the same quality inspection process that Electrobits has been known for in the past.

In addition of all the Electrobits products, Neon LightingLux Products inc. is proud to introduce a brand new range of **100% silicone neon and lighting** application products: CapLux, sleeveLux, SiliLux, 3cLux, E~Tech sign ballast. All silicone products are UL pending at this time and fully comply with UL879 latest edition requirements. **E~Tech** ballast is the perfect match with 3cLux Cold Cathode Connectors to retrofit your fluorescent sign fixtures with brighter, energy saving neon tubes for all your lighting applications!

It will be a pleasure to see you at booth 2010 in Orlando!

The **LightingLux** management team

NEON  
LIGHTING *lux*<sup>TM</sup>  
PRODUCTS INC.

**Presents**  
**100% silicone**



SLEEVE *lux*<sup>TM</sup>



AVAILABLE IN  
10, 12, 13, 15, 16 18 OR 19MM  
60, 120 OR 240 MA  
5, 10 OR 15KV  
BLACK, WHITE AND CLEAR

CAP *lux*<sup>TM</sup>



*with  
their*



**AND**

ULTRA FLEXIBLE  
INTEGRAL SLEEVE  
GT05, GT010 & GT015

*lux* CLIP <sup>TM</sup>



SILI *lux*<sup>TM</sup>

Neon LightingLux Product inc.

300, St-Sacrement Street # 218 Montreal, Qc, Canada H2Y 1X4

Telephone : International +1-514-845-2487 / USA & Canada 1-877-567-2487

FAX : International +1-514-842-2487 / USA & Canada 1-877-844-2487

[www.lightinglux.com](http://www.lightinglux.com) or [www.luxandbits.com](http://www.luxandbits.com)

Lightning your life with *lux*

NEON  
 LIGHTING *lux*<sup>TM</sup>  
 PRODUCTS INC.

**Presents**  
**100% silicone**



3C *lux*<sup>TM</sup>

THE FIRST AND ONLY COLD CATHODE CONNECTORS  
 THAT ALLOW YOU TO USE LONG LIFE & ENERGY EFFICIENT  
 NEON LAMPS ON YOUR TRADITIONAL LAMP SOCKETS !



RETRO-FIT  
 WITH  
 3CLUX IN  
 3 STEPS!

AVAILABLE IN  
 15, 16 18 OR 19MM  
 60, 120 OR 240 MA

**Recommended use with**



**E~tech**  
**ballast**

Neon LightingLux Product inc.

300, St-Sacrement Street # 218 Montreal, Qc, Canada H2Y 1X4  
 Telephone : International +1-514-845-2487 / USA & Canada 1-877-567-2487  
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Lightning your life with *lux*

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## MINIMUM INSTALLATION INSTRUCTIONS

**Warning :** Risk of fire or electric shock!

Electrobits fittings, coverings and sleeveings to be used in dry and damp locations only.

**Warning :** Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle (figure 1 below).

**Warning :** Risk of fire!

GtoSleeving is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation :** GTO wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

## INSTRUCCIONES DE INTALACIÓN MINIMALES

**Cuidado :** Riesgo de fuego o choque eléctrico!

Los capuchones, forros y otros productos aislantes Electrobits se deben instalar en ambientes secos o húmedos únicamente.

**Cuidado :** Riesgo de choque eléctrico!

Los productos aislantes Electrobits pueden instalarse por dentro o por fuera cuando esten en un cajetín de anuncio ("channel letters" y otros cajetines, con cualquier material de fachada), sobre instalaciones portátiles para vitrinas y orillas decorativas, etc. Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior (figura de abajo).

**Cuidado :** Riesgo de fuego!

El forro aislante GtoSleeving esta previsto para un cable GTO-15KV máximo. El forro no se debe utilizar dentro de las paredes. El forro solo no puede servir de aislante para enlaces de cable GTO (utilizar más bien el In-line Splice connector ILS).

**Recomendación :** El cable GTO debe estar alejado de cualquier pieza metálica, incluyendo las escondidas, para reducir lo más posible la posibilidad de sobrecarga eléctrica debida al acoplamiento de capacitancias.

## INSTRUCTIONS MINIMALES D'INSTALLATION

**Attention :** Risque d'incendie ou de choc électrique!

Les embouts et les gaines isolantes Electrobits doivent être installés dans un environnement sec ou humide seulement.

**Attention :** Risque de choc électrique!

Les produits isolants Electrobits peuvent être installés à l'intérieur ou à l'extérieur dans la mesure où ils sont à l'intérieur d'un caisson ("channel letter" ou autre, avec tout type de matériaux de façade), sur des enseignes portatives à l'intérieur de vitrines, sur des enseignes intérieures de type "squelette", etc. Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent être à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle (voir figure plus bas).

**Attention :** Risque d'incendie!

La gaine isolante GtoSleeving est conçue pour isoler au maximum un fil GTO-15. Elle n'est pas prévue pour une utilisation à l'intérieur des murs. Ne jamais effectuer de raccord de fil GTO à l'intérieur de la gaine ; pour cela utiliser plutôt un connecteur en ligne ILS.

**Recommandation :** Les fils GTO devraient être tenus éloignés de tout environnement métallique, incluant les structures cachées, afin de diminuer au maximum la charge électrique provenant d'un couplage de capacités.

- For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.
- Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior.
- Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent être à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle.

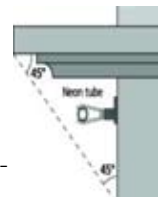


Figure 1

## GENERAL INSTRUCTIONS AND WARNINGS

### Follow the instructions given for each assembly

#### General

- Electrobits electrodes insulators are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- Do not paint any fitting, covering or sleeving.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

## INSTRUCCIONES Y PRECAUCIONES GENERALES

### Seguir las instrucciones dadas por cada tipo de instalación

#### Generalidades

- Los capuchones aislantes de electrodos Electrobits están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.
- Utilización en ambientes secos o húmedos unicamente.
- Las instalaciones eléctricas nunca deben servir de soporte para la instalación de los tubos de neón.
- No perforar, ni cortar, ni modificar ninguno de los productos de una manera diferente a la indicada en las instrucciones de instalación.
- No se deben pintar los capuchones, ni los forros ni cualquier otro producto aislante.
- Para obtener un rótulo luminoso certificado e conforme a las normas de seguridad, utilizar estos productos y sistemas unicamente con componentes también certificados.
- Siempre utilizar los capuchones correspondiendo a la dimensión del electrodo.

## INSTRUCTIONS ET PRÉCAUTIONS GÉNÉRALES

### Toujours suivre les instructions données pour chaque type d'installation

#### Généralités

- Les capuchons isolants pour électrodes Electrobits sont prévus et certifiés pour une utilisation sur un circuit de 7.5 KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par un transformateur de 15 KV avec mise à la terre au milieu.
- Utilisation en environnement sec ou humide seulement.
- Les installations électriques ne doivent en aucun cas servir de support aux tubes de néon.
- Ne pas couper, ne pas percer et ne pas modifier les produits autrement que selon les instructions d'installation fournies.
- Ne pas peindre les capuchons, ni les gaines, ni aucun autre produit d'isolation.
- Pour obtenir une enseigne certifiée, utiliser ces produits et systèmes uniquement avec des composants eux-mêmes certifiés.
- Toujours prendre soin d'utiliser la taille de capuchon appropriée aux électrodes.

## SPLICING FOR ALL PRODUCTS

■ Strip GTO cable insulation  $\frac{3}{4}$  to 1 inch maximum and bring the GTO cable to the electrode wires. All splicing must be made of at least 5 twists, bent back and flattened. If using crimps, trim the resulting stranded wires.

## ENLACE DE LOS CABLES

■ Pelar de 2 a 2.5cm (3/4 a 1 pulgada) la funda del cable GTO y enlazar el cable a los cables del electrodo tal como indicado sobre la figura aqui arriba. Todos los enlaces deben contar un mínimo de 5 vueltas antes de ser doblados y achatados. Cortar las puntas sobresaliendo con pinzas.

## RACCORDEMENT DES CÂBLES

■ Dénuder le fil GTO sur une longueur de 2 à 2,5 cm (3/4 à 1 pouce) et le raccorder aux fils de l'électrode tel qu'illustré sur la figure ci-haut. Tous les raccordements doivent être faits d'au moins 5 tours de fils enlacés, repliés puis aplatés. Couper les extrémités superflues avec des pinces.

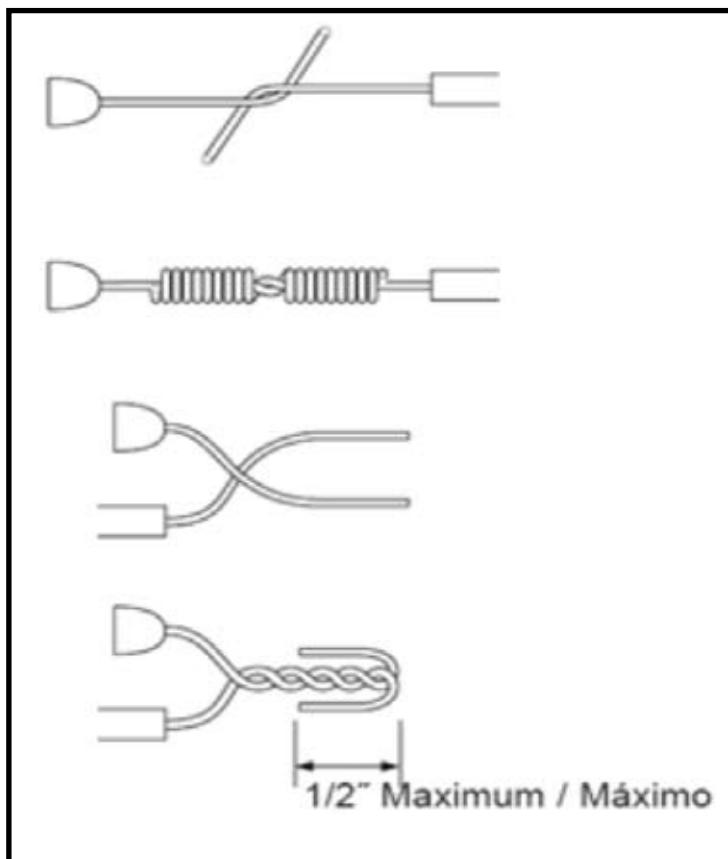


Figure 2



# SECTION A

NEW PRODUCTS & COMING SOON PRODUCTS !  
NUEVOS PRODUCTOS y PRODUCTOS PRONTO DISPONIBLES !  
NOUVEAUX PRODUITS ET PRODUITS DISPONIBLES BIENTÔT !



3C lux™



SLEEVE lux™

*with their*

lux CLIP™



CAP lux™



SILI lux™

NEON LIGHTING lux™  
PRODUCTS INC.

**NEW & AVAILABLE NOW ! - NUEVO Y YA DISPONIBLE ! - NOUVEAU ET DÉJÀ DISPONIBLES !**

## 3cLux - COLD CATHODE CONNECTORS - CONECTORES DE CÁTODO FRÍO - CONNECTEURS DE CATHODE FROIDE

- Made of 100% silicone. 3cLux are the only cold cathode connectors that allow you to use long life and energy efficient neon lamps on your traditional lamp sockets. Easy 3 steps installation !
- Echos en 100% silicona. 3cLux son los únicos conectores de cátodo frío que les permite utilizar las lámparas de neón, de duración de vida mas larga y de consumó energético mas eficiente, con sus enchufes de lámparas tradicionales. Instalación fácil en solo 3 pasos !
- Faits en 100% silicone. Les 3cLux sont les seuls connecteurs pour cathode froide qui vous permettent d'utiliser les lampes de neón, d'une durée de vie plus longue et de consommation énergétique plus efficace, avec vos douilles traditionnelles. Installation facile en 3 étapes !

### COMPLIANCE:

### RATING :

- 15 KV mid-point grounded
- 180 °C, UL 94-5VA

### APPLICATION :

- Dry, damp & wet locations



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA *
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#### SINGLE PIN SOCKET PART – 1000volts max. - Includes Electrode Top and Socket part

LUXCCCSP15W50	15mm	180°C/240mA	White	50/box	Available soon
LUXCCCSP16W50	16mm				Available soon
LUXCCCSP18W50	18mm				Available soon
LUXCCCSP19W50	19mm				\$1.50

#### RECESS PIN SOCKET PART – 1000volts max.- Includes Electrode Top and Socket part

LUXCCCRP15W50	15mm	180°C/240mA	White	50/box	Available soon
LUXCCCRP16W50	16mm				Available soon
LUXCCCRP18W50	18mm				Available soon
LUXCCCRP19W50	19mm				\$1.50

#### BI-PIN SOCKET PART– 1000volts max.- Includes Electrode Top and Socket part

LUXCCCBP15W50	15mm	180°C/240mA	White	50/box	Available soon
LUXCCCBP16W50	16mm				Available soon
LUXCCCBP18W50	18mm				Available soon
LUXCCCBP19W50	19mm				\$1.50

\* All prices in this catalog are in US dollars and subject to change with 30 days prior notice

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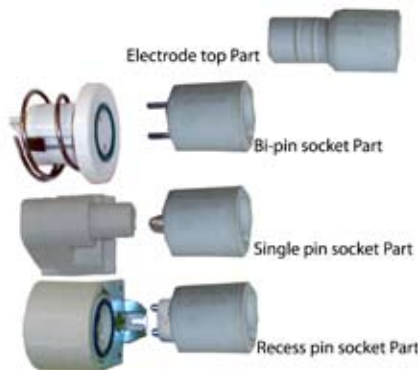
### COMPLIANCE:

### RATING :

- 15 KV mid-point grounded
- 180 °C, UL 94-5VA

### APPLICATION :

- Dry, damp & wet locations



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
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### REPLACEMENT PARTS

#### Fits all sockets parts - Electrode TOP part only

LUXTP15MMWHT	15mm	180°C/240mA	White	Per unit	Available soon
LUXTP16MMWTH	16mm				Available soon
LUXTP18MMWTH	18mm				Available soon
LUXTP19MMWTH	19mm				\$0.75

#### SINGLE PIN SOCKET PART – 1000volts max.- SOCKET part only

LUXSP240T8WHT		180°C/240mA	White	Per unit	\$1.15
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#### RECESS PIN SOCKET PART – 1000volts max. - SOCKET part only

LUXRP240T8WHT		180°C/240mA	White	Per unit	\$1.15
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#### BI - PIN SOCKET PART – 1000volts max.- SOCKET part only

LUXBP240T8WHT		180°C/240mA	White	Per unit	\$1.15
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## **E~TECH** - ELECTRONIC SIGN BALLAST - TRANSFORMADOR ELECTRONICO - TRANSFORMATEUR ÉLECTRONIQUE

- The 2CC416 E~Tech cold cathode Ballast is an electronic assembly designed to provide a high-frequency current to illuminate custom-fabricated cold cathode tubes for architectural lighting applications. Intended use is with lamp diameters between 18 and 25mm and lengths up to 8 feet/2.4 meters. It can be installed discretely in most cove constructions or can be mounted within fixtures. Ideal with 3cLux Cold Cathode Connectors!
- El lastre-ballast E~Tech 2CC416 para cátodo frío es una asamblea electrónica diseñada para producir una corriente de alta frecuencia para iluminar tubos de cátodo fríos en aplicaciones arquitecturales. Echo para utilizar con lámparas de un diametro entre 18 y 25mm por hasta 8 pies/2.4 metros de largo. Se puede instalar discretamente sobre la construcción o dentro de la caja de enchufes. Ideal con los conectores de cátodo fríos 3cLux !
- Le ballast E~Tech 2CC416 pour cathode froide est un assemblage électronique conçu pour produire un courant de haute fréquence pour illuminer les tubes de cathodes froides en applications architecturales. Ils sont prévus pour être utilisés avec des lampes d'un diamètre variant entre 18 et 25mm et d'une longueur allant jusqu'à 8 pieds/2.4 mètres. S'installe discrètement dans les creux des constructions ou peut s'installer sur le boîtier des douilles. Ideal avec les connecteurs 3cLux !

### **COMPLIANCE:**

- UL 935

### **RATING :**

- 990 volts

### **APPLICATION :**

- architectural lighting

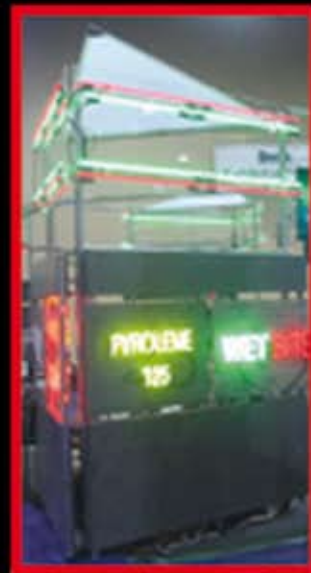


PRODUCT CODE	SIZE	RATING	PACKAGING	SUGG. TRADE / EA
E~Tech 2CC416	H:1.75" x W:2.30" x L: 8.50"	990 VOLTS	6/box	Call

Have a look at section F & G for  
Neon assembling systems  
Typical neon installations



Instruction sheets



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## **CAPLUX** - 100% SILICONE END CAP - CAPUCHON 100% SILICONA - CAPUCHON 100% SILICONE

- Ultra flexible 100% silicone neon electrode insulator with LuxClip. Resists to up to 20 pound pull test !!
- Aislador de electrodo 100% silicona ultra flexible con su Luxclip. Resiste a hasta 20 libras de tracción !
- Isolant d'électrode 100% silicone ultra flexible avec LuxClip. Résiste à une traction de jusqu'à 20 livres !

### COMPLIANCE:

- UL 879 latest edition 100% compliant !

### RATING :

- 150°C
- 240mA
- 15kv

### APPLICATION :

- Dry, damp and wet



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
LUXEC15K10MMB100	10mm	150°C/240mA	Black	100/box	\$0.45
LUXEC15K10MMB25				25/box	
LUXEC15K10MMBPB	10mm	150°C/240mA	Clear	100/polybag	\$0.45
LUXEC15K10MMC100				100/box	
LUXEC15K10MMC25	10mm	150°C/240mA	White	25/box	\$0.45
LUXEC15K10MMCPB				100/polybag	
LUXEC15K10MMW100	10mm	150°C/240mA	White	100/box	\$0.45
LUXEC15K10MMW25				25/box	
LUXEC15K10MMWPB	10mm	150°C/240mA	Black	100/polybag	\$0.45
LUXEC15K12MMB100				100/box	
LUXEC15K12MMB25	12mm	150°C/240mA	Clear	25/box	\$0.45
LUXEC15K12MMBPB				100/polybag	
LUXEC15K12MMC100	12mm	150°C/240mA	White	100/box	\$0.45
LUXEC15K12MMC25				25/box	
LUXEC15K12MMCPB	12mm	150°C/240mA	White	100/polybag	\$0.45
LUXEC15K12MMW100				100/box	
LUXEC15K12MMW25	12mm	150°C/240mA	Black	25/box	\$0.45
LUXEC15K12MMWPB				100/polybag	
LUXEC15K13MMB100	13mm	150°C/240mA	Black	100/box	\$0.45
LUXEC15K13MMB25				25/box	
LUXEC15K13MMBPB	13mm	150°C/240mA	Clear	100/polybag	\$0.45
LUXEC15K13MMC100				100/box	
LUXEC15K13MMC25	13mm	150°C/240mA	White	25/box	\$0.45
LUXEC15K13MMCPB				100/polybag	
LUXEC15K13MMW100	13mm	150°C/240mA	White	100/box	\$0.45
LUXEC15K13MMW25				25/box	
LUXEC15K13MMWPB	13mm	150°C/240mA	Black	100/polybag	\$0.45
LUXEC15K15MMB100				100/box	
LUXEC15K15MMB25	15mm	150°C/240mA	Clear	25/box	\$0.45
LUXEC15K15MMBPB				100/polybag	
LUXEC15K15MMC100	15mm	150°C/240mA	White	100/box	\$0.45
LUXEC15K15MMC25				25/box	
LUXEC15K15MMCPB	15mm	150°C/240mA	White	100/polybag	\$0.45
LUXEC15K15MMW100				100/box	
LUXEC15K15MMW25	15mm	150°C/240mA	Black	25/box	\$0.45
LUXEC15K15MMWPB				100/polybag	
LUXEC15K16MMB100	16mm	150°C/240mA	Black	100/box	\$0.45
LUXEC15K16MMB25				25/box	
LUXEC15K16MMBPB	16mm	150°C/240mA	Clear	100/polybag	\$0.45
LUXEC15K16MMC100				100/box	
LUXEC15K16MMC25	16mm	150°C/240mA	White	25/box	\$0.45
LUXEC15K16MMCPB				100/polybag	
LUXEC15K16MMW100	16mm	150°C/240mA	White	100/box	\$0.45
LUXEC15K16MMW25				25/box	
LUXEC15K16MMWPB	16mm	150°C/240mA	Black	100/polybag	

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- Ultra flexible 100% silicone neon electrode insulator with LuxClip. Resists to up to 20 pound pull test !!
- Aislador de electrodo 100% silicona ultra flexible con su Luxclip. Resiste a hasta 20 libras de tracción !
- Isolant d'électrode 100% silicone ultra flexible avec LuxClip. Résiste à une traction de jusqu'à 20 livres !

### **COMPLIANCE:**

- UL 879 latest edition 100% compliant !

### **RATING :**

- 150°C
- 240mA
- 15kv

### **APPLICATION :**

- Dry, damp and wet



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
LUXEC15K18MMB100	18mm	150°C/240mA	Black	100/box	\$0.52
LUXEC15K18MMB25				25/box	
LUXEC15K18MMBPB				100/polybag	
LUXEC15K18MMC100	18mm	150°C/240mA	Clear	100/box	\$0.52
LUXEC15K18MMC25				25/box	
LUXEC15K18MMCPB				100/polybag	
LUXEC15K18MMW100	18mm	150°C/240mA	White	100/box	\$0.52
LUXEC15K18MMW25				25/box	
LUXEC15K18MMWPB				100/polybag	
LUXEC15K19MMB100	19mm	150°C/240mA	Black	100/box	\$0.52
LUXEC15K19MMB25				25/box	
LUXEC15K19MMBPB				100/polybag	
LUXEC15K19MMC100	19mm	150°C/240mA	Clear	100/box	\$0.52
LUXEC15K19MMC25				25/box	
LUXEC15K19MMCPB				100/polybag	
LUXEC15K19MMW100	19mm	150°C/240mA	White	100/box	\$0.52
LUXEC15K19MMW25				25/box	
LUXEC15K19MMWPB				100/polybag	

**NEW & AVAILABLE NOW ! - NUEVO Y YA DISPONIBLE ! - NOUVEAU ET DÉJÀ DISPONIBLES !**

## **SLEEVELUX** - 100% SILICONE SHORT SLEEVE - MANGA CORTA 100% SILICONA - MANCHON COURT 100% SILICONE

- Ultra flexible 100% silicone neon electrode insulator with LuxClip. Resists to up to 20 pound pull test !!
- Aislador de electrodo 100% silicona ultra flexible con su Luxclip. Resiste a hasta 20 libras de tracción !
- Isolant d'électrode 100% silicone ultra flexible avec LuxClip. Résiste à une traction de jusqu'à 20 livres !

### **COMPLIANCE:**

- UL 879 latest edition 100% compliant !

### **RATING :**

- 150°C
- 240mA
- 15kv

### **APPLICATION :**

- Dry, damp and wet



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
LUXSS15K10MMB100	10mm	150°C/240mA	Black	100/box	\$0.45
LUXSS15K10MMB25				25/box	
LUXSS15K10MMBPB				100/polybag	
LUXSS15K10MMC100	10mm	150°C/240mA	Clear	100/box	\$0.45
LUXSS15K10MMC25				25/box	
LUXSS15K10MMCPB				100/polybag	
LUXSS15K10MMW100	10mm	150°C/240mA	White	100/box	\$0.45
LUXSS15K10MMW25				25/box	
LUXSS15K10MMWPB				100/polybag	
LUXSS15K12MMB100	12mm	150°C/240mA	Black	100/box	\$0.45
LUXSS15K12MMB25				25/box	
LUXSS15K12MMBPB				100/polybag	
LUXSS15K12MMC100	12mm	150°C/240mA	Clear	100/box	\$0.45
LUXSS15K12MMC25				25/box	
LUXSS15K12MMCPB				100/polybag	
LUXSS15K12MMW100	12mm	150°C/240mA	White	100/box	\$0.45
LUXSS15K12MMW25				25/box	
LUXSS15K12MMWPB				100/polybag	
LUXSS15K13MMB100	13mm	150°C/240mA	Black	100/box	\$0.45
LUXSS15K13MMB25				25/box	
LUXSS15K13MMBPB				100/polybag	
LUXSS15K13MMC100	13mm	150°C/240mA	Clear	100/box	\$0.45
LUXSS15K13MMC25				25/box	
LUXSS15K13MMCPB				100/polybag	
LUXSS15K13MMW100	13mm	150°C/240mA	White	100/box	\$0.45
LUXSS15K13MMW25				25/box	
LUXSS15K13MMWPB				100/polybag	
LUXSS15K15MMB100	15mm	150°C/240mA	Black	100/box	\$0.45
LUXSS15K15MMB25				25/box	
LUXSS15K15MMBPB				100/polybag	
LUXSS15K15MMC100	15mm	150°C/240mA	Clear	100/box	\$0.45
LUXSS15K15MMC25				25/box	
LUXSS15K15MMCPB				100/polybag	
LUXSS15K15MMW100	15mm	150°C/240mA	White	100/box	\$0.45
LUXSS15K15MMW25				25/box	
LUXSS15K15MMWPB				100/polybag	
LUXSS15K16MMB100	16mm	150°C/240mA	Black	100/box	\$0.45
LUXSS15K16MMB25				25/box	
LUXSS15K16MMBPB				100/polybag	
LUXSS15K16MMC100	16mm	150°C/240mA	Clear	100/box	\$0.45
LUXSS15K16MMC25				25/box	
LUXSS15K16MMCPB				100/polybag	
LUXSS15K16MMW100	16mm	150°C/240mA	White	100/box	\$0.45
LUXSS15K16MMW25				25/box	
LUXSS15K16MMWPB				100/polybag	



NEW & AVAILABLE NOW ! - NUEVO Y YA DISPONIBLE ! - NOUVEAU ET DÉJÀ DISPONIBLES !

## SLEEVELUX - 100% SILICONE SHORT SLEEVE - MANGA CORTA 100% SILICONA - MANCHON COURT 100% SILICONE

- Ultra flexible 100% silicone neon electrode insulator with LuxClip. Resists to up to 20 pound pull test !!
- Aislador de electrodo 100% silicona ultra flexible con su Luxclip. Resiste a hasta 20 libras de tracción !
- Isolant d'électrode 100% silicone ultra flexible avec LuxClip. Résiste à une traction de jusqu'à 20 livres !

### COMPLIANCE:

- UL 879 latest edition 100% compliant !

### RATING :

- 150°C
- 240mA
- 15kv

### APPLICATION :

- Dry, damp and wet



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
LUXSS15K18MMB100	18mm	150°C/240mA	Black	100/box	\$0.52
LUXSS15K18MMB25				25/box	
LUXSS15K18MMBPB				100/polybag	
LUXSS15K18MMC100	18mm	150°C/240mA	Clear	100/box	\$0.52
LUXSS15K18MMC25				25/box	
LUXSS15K18MMCPB				100/polybag	
LUXSS15K18MMW100	18mm	150°C/240mA	White	100/box	\$0.52
LUXSS15K18MMW25				25/box	
LUXSS15K18MMWPB				100/polybag	
LUXSS15K19MMB100	19mm	150°C/240mA	Black	100/box	\$0.52
LUXSS15K19MMB25				25/box	
LUXSS15K19MMBPB				100/polybag	
LUXSS15K19MMC100	19mm	150°C/240mA	Clear	100/box	\$0.52
LUXSS15K19MMC25				25/box	
LUXSS15K19MMCPB				100/polybag	
LUXSS15K19MMW100	19mm	150°C/240mA	White	100/box	\$0.52
LUXSS15K19MMW25				25/box	
LUXSS15K19MMWPB				100/polybag	

**NEW & AVAILABLE NOW ! - NUEVO Y YA DISPONIBLE ! - NOUVEAU ET DÉJÀ DISPONIBLES !**

## **SILILUX** - 100% SILICONE GTO CABLE - CABLE GTO 100% SILICONA - CABLE GTO 100% SILICONE

- Ultra flexible 100% silicone integral sleeve GTO cable !
- Cable GTO con forro aislante integrado 100% silicona y ultra flexible !
- Cable GTO avec gaine isolante intégrée 100% silicone et ultra flexible !

### **COMPLIANCE:**

- UL Mexico

### **RATING :**

- 150°C
- 5, 10 or 15kv

### **APPLICATION :**

- Dry, damp and wet



PRODUCT CODE	SIZE & RATING	COLOR	PACKAGING	SUGG. TRADE / EA
SILILUXGTO1518B	Silicone GTO 15 O.D. 6.3mm (0.256 ") Tinned 18 Awg	Black	100m (330 feet) roll	\$139.00
SILILUXGTO1518C	Silicone GTO 15 O.D. 6.3mm (0.256 ") Tinned 18 Awg	Clear	100m (330 feet) roll	\$139.00
SILILUXGTO1518W	Silicone GTO 15 O.D. 6.3mm (0.256 ") Tinned 18 Awg	White	100m (330 feet) roll	\$139.00
SILILUXGTO1018B	Silicone GTO 10 O.D. 5.6mm (0.220 ") Tinned 18 Awg	Black	100m (330 feet) roll	Available soon
SILILUXGTO1018C	Silicone GTO 10 O.D. 5.6mm (0.220 ") Tinned 18 Awg	Clear	100m (330 feet) roll	Available soon
SILILUXGTO1018W	Silicone GTO 10 O.D. 5.6mm (0.220 ") Tinned 18 Awg	White	100m (330 feet) roll	Available soon
SILILUXGTO518B	Silicone GTO 5 O.D. 4mm (0.157 ") Tinned 18 Awg	Black	100m (330 feet) roll	Available soon
SILILUXGTO518C	Silicone GTO 5 O.D. 4mm (0.157 ") Tinned 18 Awg	Clear	100m (330 feet) roll	Available soon
SILILUXGTO518W	Silicone GTO 5 O.D. 4mm (0.157 ") Tinned 18 Awg	White	100m (330 feet) roll	Available soon

# SECTION B

## ELECTRODE COVERS & GTO SLEEVING

## AISLANTES PARA ELECTRODOS Y FORRO GTO

## ISOLANTS D'ÉLECTRODES ET GAINÉ GTO



# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## ECR

## RESIDENTIAL END CAP - CAPUCHÓN DOMESTICO - CAPUCHON RÉSIDENTIEL

- To insulate electrode connection on residential neon signs - complete with a lock system
- Para aislar la conexión del electrodo sobre neones domésticos - completo con sistema de sierre
- Pour isoler la connexion de l'électrode sur enseignes domestiques - complet avec système de fermeture

### COMPLIANCE:

#### RATING :

- 7.5 KV mid-point grounded
- 105 °C, UL 94-5VA

#### APPLICATION :

- Dry & Damp



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
ECR0BLK	10mm	Black	25/box	\$0.41
ECR0WHT		White	100/box	\$0.39
ECR3BLK	13mm	Black	25/box	\$0.41
ECR3WHT		White	100/box	\$0.39
ECR5BLK	15mm	Black	25/box	\$0.41
ECR5WHT		White	100/box	\$0.39
ECR6BLK	16mm	Black	25/box	\$0.41
ECR6WHT		White	100/box	\$0.39

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## ECT

### LOW VOLTAGE END CAP - CAPUCHÓN BAJO VOLTAGE - CAPUCHON BAS VOLTAGE

- To insulate electrode connection on low voltage neon signs
- Para aislar la conexión del electrodo sobre neones de bajo voltage
- Pour isoler la connexion de l'électrode sur enseignes bas voltage

#### COMPLIANCE:

#### RATING :

- 6 KV mid-point grounded
- 105 °C, UL 94-5VA

#### APPLICATION :

- Dry & Damp



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
EC0TBLK	10mm	Black	25/box	\$0.41
EC0TWHT		White	100/box	\$0.39
EC3TBLK	13mm	Black	25/box	\$0.41
EC3TWHT		White	100/box	\$0.39
EC5TBLK	15mm	Black	25/box	\$0.41
EC5TWHT		White	100/box	\$0.39

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## EC REGULAR END CAP - CAPUCHÓN REGULAR - CAPUCHON RÉGULIER

- To insulate connections between electrode and high voltage GTO cable. Room for GTO cable return is provided for bend back applications.
- Para aislar la conexión del electrodo con el cable GTO alto voltage. Un espacio esta previsto para incluir el cable GTO en las conexiones de tipo "bend-back".
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage. Un espace est prévu pour le retour du câble GTO lors des connexions de type "bend-back".

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

#### APPLICATION :

- Dry & Damp



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
EC0BLK	10mm	Black	25/box	\$0.41
EC0WHT		White	100/box	\$0.39
EC3BLK	13mm	Black	25/box	\$0.41
EC3WHT		White	100/box	\$0.39
EC5BLK	15mm	Black	25/box	\$0.41
EC5WHT		White	100/box	\$0.39
EC6BLK	16mm	Black	25/box	\$0.41
EC6WHT		White	100/box	\$0.39
EC9BLK	19mm	Black	25/box	\$0.49
EC9WHT		White	100/box	\$0.45

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## ECW END CAP WIDE - CAPUCHÓN ANCHO - CAPUCHON LARGE

- To insulate connections between electrode and high voltage GTO cable. Wider room for GTO cable and sleeving return is provided for bend back applications.
- Para aislar la conexión del electrodo con el cable GTO alto voltage. Un espacio más ancho esta previsto para incluir el cable GTO con su forro aislante en las conexiones de tipo "bend-back".
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage. Un espace plus large est prévu pour le retour du câble GTO et sa gaine isolante lors des connexions de type "bend-back".

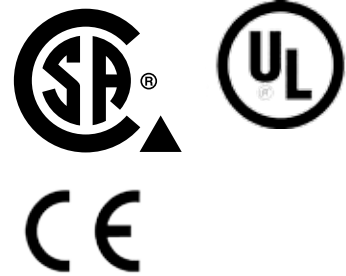
### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

#### APPLICATION :

- Dry & Damp



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
ECW0BLK	10mm	Black	25/box	\$0.41
ECW0WHT		White	100/box	\$0.39
ECW3BLK	13mm	Black	25/box	\$0.41
ECW3WHT		White	100/box	\$0.39
ECW5BLK	15mm	Black	25/box	\$0.41
ECW5WHT		White	100/box	\$0.39
ECW6BLK	16mm	Black	25/box	\$0.41
ECW6WHT		White	100/box	\$0.39

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## EC - UL879 END CAP WITH GTO CABLE ADAPTOR- CAPUCHÓN CON ADAPTADOR DE CABLE GTO - CAPUCHON AVEC ADAPTEUR POUR CABLE GTO

- To insulate connections between electrode and high voltage GTO cable. GTO cable adaptor is provided to insure a snug fit with cable and sleeving. Return room is provided for bend back applications.
- Para aislar la conexión del electrodo con el cable GTO alto voltage. Incluye un adaptador para el cable GTO con su forro. Un espacio esta previsto para la vuelta del cable en las conexiones de tipo "bend-back".
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage. Inclus un adaptateur pour cable GTO afin d'assurer une étanchéité quasi parfaite avec le cable et la gaine isolante. Un espace est prévu pour le retour du câble GTO et sa gaine isolante lors des connexions de type "bend-back".

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 30mA or 60mA

#### APPLICATION :

- Indoor, Dry & Damp



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
EC10mm30mABLK25	10mm	30mA	Black	25/box	\$0.49
EC10mm30mABLK100				100/box	\$0.45
EC10mm30mABLKPB				Poly Bag	\$0.45
EC10mm30mAWHT25	10mm	30mA	White	25/box	\$0.49
EC10mm30mAWHT100				100/box	\$0.45
EC10mm30mAWHTPB				Poly Bag	\$0.45
EC12mm60mABLK25	12mm	60mA	Black	25/box	\$0.49
EC12mm60mABLK100				100/box	\$0.45
EC12mm60mABLKPB				Poly Bag	\$0.45
EC12mm60mAWHT25	12mm	60mA	White	25/box	\$0.49
EC12mm60mAWHT100				100/box	\$0.45
EC12mm60mAWHTPB				Poly Bag	\$0.45
EC13mm60mABLK25	13mm	60mA	Black	25/box	\$0.49
EC13mm60mABLK100				100/box	\$0.45
EC13mm60mABLKPB				Poly Bag	\$0.45
EC13mm60mAWHT25	13mm	60mA	White	25/box	\$0.49
EC13mm60mAWHT100				100/box	\$0.45
EC13mm60mAWHTPB				Poly Bag	\$0.45
EC15mm60mABLK25	15mm	60mA	Black	25/box	\$0.49
EC15mm60mABLK100				100/box	\$0.45
EC15mm60mABLKPB				Poly Bag	\$0.45
EC15mm60mAWHT25	15mm	60mA	White	25/box	\$0.49
EC15mm60mAWHT100				100/box	\$0.45
EC15mm60mAWHTPB				Poly Bag	\$0.45
EC18mm60mABLK25	18mm	60mA	Black	25/box	
EC18mm60mABLK100				100/box	
EC18mm60mABLKPB				Poly Bag	
EC18mm60mAWHT25	18mm	60mA	White	25/box	
EC18mm60mAWHT100				100/box	
EC18mm60mAWHTPB				Poly Bag	
EC19mm60mABLK25	19mm	60mA	Black	25/box	
EC19mm60mABLK100				100/box	
EC19mm60mABLKPB				Poly Bag	Available soon !
EC19mm60mAWHT25	19mm	60mA	White	25/box	
EC19mm60mAWHT100				100/box	
EC19mm60mAWHTPB				Poly Bag	



**POPEC - UL879** END CAP FOR "POP" SIGNS - CAPUCHÓN PARA AVISOS DE TIPO "POP" - CAPUCHON POUR ENSEIGNES DE TYPE "POP"

- To insulate connections between electrode and 135°C rated high voltage GTO cable. Return room is provided for bend back applications.
- Para aislar la conexión del electrodo con el cable GTO alto voltage aprobado 135°C. Un espacio esta previsto para la vuelta del cable en las conexiones de tipo "bend-back".
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage approuvé 135°C. Un espace est prévu pour le retour du câble GTO et sa gaine isolante lors des connexions de type "bend-back".

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 60mA

**APPLICATION :**

- Indoor, Dry & Damp
- Use with 135°C GTO cable



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
POPEC13mm60mABLK25	13mm	60mA	Black	25/box	\$0.45
POPEC13mm60mABLK100				100/box	\$0.42
POPEC13mm60mABLKPB				Poly Bag	\$0.42
POPEC13mm60mAWHT25	13mm	60mA	White	25/box	\$0.45
POPEC13mm60mAWHT100				100/box	\$0.42
POPEC13mm60mAWHTPB				Poly Bag	\$0.42

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## SS REGULAR SHORT SLEEVE - MANGA CORTA REGULAR - MANCHON COURT RÉGULIER

- To insulate connections between electrode and high voltage GTO cable. Sleeving comes over shortsleeve; for straight connection applications.
- Para aislar la conexión del electrodo con el cable GTO alto voltage. El forro aislante se ajusta por encima de la manga; para conexiones rectilíneas
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage. La gaine isolante s'ajuste par dessus le manchon; pour connexions rectilignes.

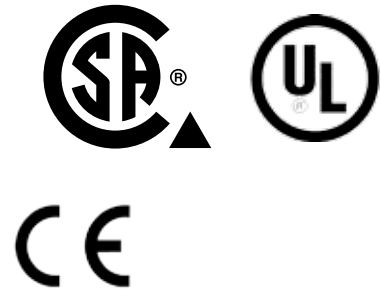
### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

#### APPLICATION :

- Dry & Damp



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
SS0BLK	10mm	Black	25/box	\$0.41
SS0WHT		White	100/box	\$0.39
SS3BLK	13mm	Black	25/box	\$0.41
SS3WHT		White	100/box	\$0.39
SS5BLK	15mm	Black	25/box	\$0.41
SS5WHT		White	100/box	\$0.39
SS6BLK	16mm	Black	25/box	\$0.41
SS6WHT		White	100/box	\$0.39
SS9BLK	19mm	Black	25/box	\$0.49
SS9WHT		White	100/box	\$0.45

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## SSW SHORT SLEEVE WIDE - MANGA CORTA ANCHA - MANCHON COURT LARGE

- To insulate connections between electrode and high voltage GTO cable. Sleeving comes inside shortsleeve; for straight connection applications.
- Para aislar la conexión del electrodo con el cable GTO alto voltage. El forro aislante se instala por dentro de la manga; para conexiones rectilíneas
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage. La gaine isolante s'installe à l'intérieur du manchon; pour connexions rectilignes.

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

#### APPLICATION :

- Dry & Damp



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
SSW0BLK	10mm	Black	25/box	\$0.41
SSW0WHT		White	100/box	\$0.39
SSW3BLK	13mm	Black	25/box	\$0.41
SSW3WHT		White	100/box	\$0.39
SSW5BLK	15mm	Black	25/box	\$0.41
SSW5WHT		White	100/box	\$0.39
SSW6BLK	16mm	Black	25/box	\$0.41
SSW6WHT		White	100/box	\$0.39

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## SS - UL879 SHORT SLEEVE WITH GTO CABLE ADAPTOR- MANGA CORTA CON ADAPTADOR DE CABLE GTO - MANCHON COURT AVEC ADAPTEUR POUR CABLE GTO

- To insulate connections between electrode and high voltage GTO cable. GTO cable adaptor is provided to insure a snug fit with cable and sleeving.
- Para aislar la conexión del electrodo con el cable GTO alto voltage. Incluye un adaptador para el cable GTO con su forro.
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage. Inclus un adaptateur pour cable GTO afin d'assurer une étanchéité quasi parfaite avec le cable et la gaine isolante.

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 30mA or 60mA

#### APPLICATION :

- Indoor, Dry & Damp



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
SS10mm30mABLK25	10mm	30mA	Black	25/box	\$0.49
SS10mm30mABLK100				100/box	\$0.45
SS10mm30mABLKPB				Poly Bag	\$0.45
SS10mm30mAWHT25	10mm	30mA	White	25/box	\$0.49
SS10mm30mAWHT100				100/box	\$0.45
SS10mm30mAWHTPB				Poly Bag	\$0.45
SS12mm60mABLK25	12mm	60mA	Black	25/box	\$0.49
SS12mm60mABLK100				100/box	\$0.45
SS12mm60mABLKPB				Poly Bag	\$0.45
SS12mm60mAWHT25	12mm	60mA	White	25/box	\$0.49
SS12mm60mAWHT100				100/box	\$0.45
SS12mm60mAWHTPB				Poly Bag	\$0.45
SS13mm60mABLK25	13mm	60mA	Black	25/box	\$0.49
SS13mm60mABLK100				100/box	\$0.45
SS13mm60mABLKPB				Poly Bag	\$0.45
SS13mm60mAWHT25	13mm	60mA	White	25/box	\$0.49
SS13mm60mAWHT100				100/box	\$0.45
SS13mm60mAWHTPB				Poly Bag	\$0.45
SS15mm60mABLK25	15mm	60mA	Black	25/box	\$0.49
SS15mm60mABLK100				100/box	\$0.45
SS15mm60mABLKPB				Poly Bag	\$0.45
SS15mm60mAWHT25	15mm	60mA	White	25/box	\$0.49
SS15mm60mAWHT100				100/box	\$0.45
SS15mm60mAWHTPB				Poly Bag	\$0.45
SS18mm60mABLK25	18mm	60mA	Black	25/box	\$0.49
SS18mm60mABLK100				100/box	\$0.45
SS18mm60mABLKTPB				Poly Bag	\$0.45
SS18mm60mAWHT25	18mm	60mA	White	25/box	\$0.49
SS18mm60mAWHT100				100/box	\$0.45
SS18mm60mAWHTPB				Poly Bag	\$0.45
SS19mm60mABLK25	19mm	60mA	Black	25/box	\$0.59
SS19mm60mABLK100				100/box	\$0.55
SS19mm60mABLKPB				Poly Bag	\$0.55
SS19mm60mAWHT25	19mm	60mA	White	25/box	\$0.59
SS19mm60mAWHT100				100/box	\$0.55
SS19mm60mAWHTPB				Poly Bag	\$0.55

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## POPSS - UL879 SHORT SLEEVE FOR "POP" SIGNS - MANGA CORTA PARA AVISOS DE TIPO "POP" - MANCHON COURT POUR ENSEIGNES DE TYPE "POP"

- To insulate connections between electrode and 135°C rated high voltage GTO cable.
- Para aislar la conexión del electrodo con el cable GTO alto voltage aprobado 135°C.
- Pour isoler la connexion entre l'électrode et le cable GTO haut voltage approuvé 135°C.

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 60mA

#### APPLICATION :

- Indoor, Dry & Damp
- Use with 135°C GTO cable



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
POPSS13mm60mABLK25	13mm	60mA	Black	25/box	\$0.45
POPSS13mm60mABLK100				100/box	\$0.42
POPSS13mm60mABLKPB				Poly Bag	\$0.42
POPSS13mm60mAWHT25	13mm	60mA	White	25/box	\$0.45
POPSS13mm60mAWHT100				100/box	\$0.42
POPSS13mm60mAWHTPB				Poly Bag	\$0.42

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## LS - LONG SLEEVE - MANGA LARGA - MANCHON LONG

- To insulate the connection between two electrodes placed within 1 to 3 inches away from each other.
- Para aislar la conexión entre dos electrodos separadas de 1 a 3 pulgadas de distancia.
- Pour isoler la connexion entre deux électrodes lorsqu'elles sont à entre 1 et 3 pouce de distance l'une de l'autre.

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 60mA

#### APPLICATION :

- Indoor, Dry & Damp



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
LS13mm60mABLK25	13mm	60mA	Black	25/bag	\$ 1.10
LS13mm60mAWHT25			White		\$ 1.10
LS15mm60mABLK25	15mm	60mA	Black	25/box	\$ 1.10
LS13mm60mAWHT25			White		\$ 1.10

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## WBECW - WETBITS END CAP WIDE 3 PIECES- CAPUCHÓN PARA EL EXTERIOR 3 PARTES - CAPUCHON POUR L'EXTÉRIEUR 3 PARTIES

- To insulate the connection between the electrode and the GTO cable in outdoors or wet exposed conditions. Comes in three pieces: top, bottom and bushing; only the top part comes in different size.
- Para aislar la conexión entre el electrodo y el cable GTO en ambientes mojados o al exterior. Echo en tres partes: cabeza, fondo y tapón; solo la cabeza tiene diferentes tamaños.
- Pour isoler la connexion entre l' electrode et le cable GTO dans des environnement humides ou à l'extérieur. Fait de trois parties: tête, corps et bague; seule la tête vient en différentes grandeurs.

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 60mA

#### APPLICATION :

- Outdoor, wet locations



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
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#### WETBITS END CAP WIDE (3 pieces –Top / Bottom / Bushing)

WBECW13MMBLK25	13mm	60mA	Black	25/box	\$1.89
WBECW15MMBLK25	15mm				\$1.89
WBECW16MMBLK25	16mm				\$1.89
WBECW13MMWHT25	13mm	60mA	White	25/box	\$1.89
WBECW15MMWHT25	15mm				\$1.89
WBECW16MMWHT25	16mm				\$1.89

#### WETBITS END CAP WIDE TOP (TOP PART ONLY / REPLACEMENT PART)

WBECW13MMTOPBLK	13mm	60mA	Black	10/box	\$0.95
WBECW15MMTOPBLK	15mm				
WBECW16MMTOPBLK	16mm				
WBECW13MMTOPWHT	13mm	60mA	White	10/box	\$0.95
WBECW15MMTOPWHT	15mm				
WBECW16MMTOPWHT	16mm				

#### WETBITS END CAP WIDE BOTTOM (BOTTOM PART ONLY / ONE SIZE FITS ALL / REPLACEMENT PART)

WBECWBOTTOMBLK	fits all	60mA	Black	10/box	\$0.95
WBECWBOTTOMWHT			White		\$0.95

#### WETBITS BUSHING (BUSHING PART ONLY / ONE SIZE FITS ALL / REPLACEMENT PART)

WBSBLK	fits all	60mA	Black	10/box	\$0.45
WBSWHT			White		\$0.45

# ELECTRODE COVERS - AISLANTES PARA ELECTRODOS - ISOLANTS D'ÉLECTRODES

## WBSSW - WETBITS SHORT SLEEVE WIDE 3 PIECES- MANGA CORTA PARA EL EXTERIOR 3 PARTES - MANCHON COURT POUR L'EXTÉRIEUR 3 PARTIES

- To insulate the connection between the electrode and the GTO cable in outdoors or wet exposed conditions. Comes in three pieces: top, bottom and bushing; only the top part comes in different size.
- Para aislar la conexión entre el electrodo y el cable GTO en ambientes mojados o al exterior. Echo en tres partes: cabeza, fondo y tapón; solo la cabeza tiene diferentes tamaños.
- Pour isoler la connexion entre l'électrode et le cable GTO dans des environnement humides ou à l'extérieur. Fait de trois parties: tête, corps et bague; seule la tête vient en différentes grandeurs.

### COMPLIANCE:

#### RATING :

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA
- 60mA

#### APPLICATION :

- Outdoor, wet locations



PRODUCT CODE	SIZE	RATING	COLOR	PACKAGING	SUGG. TRADE / EA
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### WETBITS SHORT SLEEVE WIDE (3 pieces –Top / Bottom / Bushing)

WBSSW13MMBLK25	13mm	60mA	Black	25/box	\$1.89
WBSSW15MMBLK25	15mm				\$1.89
WBSSW16MMBLK25	16mm				\$1.89
WBSSW18MMBLK25	18mm				\$1.99
WBSSW19MMBLK25	19mm				\$1.99
WBSSW13MMWHT25	13mm	60mA	White	25/box	\$1.89
WBSSW15MMWHT25	15mm				\$1.89
WBSSW16MMWHT25	16mm				\$1.89
WBSSW18MMWHT25	18mm				\$1.99
WBSSW19MMWHT25	19mm				\$1.99

### WETBITS SHORT SLEEVE WIDE TOP (TOP PART ONLY / REPLACEMENT PART)

WBSSW13MMTOPBLK	13mm	60mA	Black	10/box	\$0.95
WBSSW15MMTOPBLK	15mm				\$0.95
WBSSW16MMTOPBLK	16mm				\$0.95
WBSSW18MMTOPBLK	18mm				\$1.05
WBSSW19MMTOPBLK	19mm				\$1.05
WBSSW13MMTOPWHT	13mm	60mA	White	10/box	\$0.95
WBSSW15MMTOPWHT	15mm				\$0.95
WBSSW16MMTOPWHT	16mm				\$0.95
WBSSW18MMTOPWHT	18mm				\$1.05
WBSSW19MMTOPWHT	19mm				\$1.05

### WETBITS SHORT SLEEVE WIDE BOTTOM (BOTTOM PART ONLY / ONE SIZE FITS ALL / REPLACEMENT PART)

WBSSWBOTTOMBLK	fits all	60mA	Black	10/box	\$0.95
WBSSWBOTTOMWHT			White		

### WETBITS BUSHING (BUSHING PART ONLY / ONE SIZE FITS ALL / REPLACEMENT PART)

WBSBBLK	fits all	60mA	Black	10/box	\$0.45
WBSBWHT			White		\$0.45



**GTO SLEEVING** - GTO CABLE INSULATOR- FORRO AISLANTE PARA CABLE GTO - GAINES ISOLANTES POUR CABLE GTO

- To insulate the the GTO cable in all conditions.
- Para aislar el cable GTO en todo tipo de ambientes.
- Pour isoler le cable GTO dans tout type d'environnement.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA

**APPLICATION :**

- Indoors, outdoors, dry, damp and wet locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
<b>GTO SLEEVING</b>	<b>For Dry, Damp &amp; Wet locations</b>			
WB3760BLK50	in Ø 0.3"	Black	050'/roll	\$89.00
WB3760WHT50	out Ø 0.42"	White		\$89.00
WB3760BLK100	in Ø 0.3"	Black	100'/roll	\$139.00
WB3760WHT100	out Ø 0.42"	White		\$139.00

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ELECTRO *bits*<sup>TM</sup>  
Improving neon bit by bit

## SECTION C GTO CABLE - CABLE GTO



# GTOFLEX 5KV - GTO CABLE- CABLE GTO - CABLE GTO

- Very flexible copper or tinned copper GTO cable.
- Cable GTO de cobre o de cobre enlatado muy flexible.
- Cable GTO brins de cuivre ou cuivre étamé très flexible.

**COMPLIANCE:**

**RATING :**

- 5 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
12-112BLK1	18G	Black	250'/roll	CALL
12-112WHT1		White		
12-111BLK1	14G	Black	250'/roll	CALL
12-111WHT1		White		
12-112BLK2	18G	Black	1000'/roll	CALL
12-112WHT2		White		
12-111BLK2	14G	Black	1000'/roll	CALL
12-111WHT2		White		

# GTOFLEX 10KV - GTO CABLE- CABLE GTO - CABLE GTO

- Very flexible copper or tinned copper GTO cable.
- Cable GTO de cobre o de cobre enlatado muy flexible.
- Cable GTO brins de cuivre ou cuivre étamé très flexible.

**COMPLIANCE:**

**RATING :**

- 10 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
12-112BLK1	18G	Black	250'/roll	CALL
12-112WHT1		White		
12-111BLK1	14G	Black	250'/roll	CALL
12-111WHT1		White		
12-112BLK2	18G	Black	1000'/roll	CALL
12-112WHT2		White		
12-111BLK2	14G	Black	1000'/roll	CALL
12-111WHT2		White		

# GTOFLEX 15KV - GTO CABLE- CABLE GTO - CABLE GTO

- Very flexible copper or tinned copper GTO cable.
- Cable GTO de cobre o de cobre enlatado muy flexible.
- Cable GTO brins de cuivre ou cuivre étamé très flexible.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
12-112BLK1	18G	Black	250'/roll	CALL
12-112WHT1		White		
12-111BLK1	14G	Black	250'/roll	CALL
12-111WHT1		White		
12-112BLK2	18G	Black	1000'/roll	CALL
12-112WHT2		White		
12-111BLK2	14G	Black	1000'/roll	CALL
12-111WHT2		White		

**GTOFULLFLEX 15KV** - GTO CABLE WITH SLEEVING 3760- CABLE GTO CON EL FORRO 3760 - CABLE GTO AVEC LA GAINE 3760

- Very flexible copper or tinned copper GTO cable.
- Cable GTO de cobre o de cobre enlatado muy flexible.
- Cable GTO brins de cuivre ou cuivre étamé très flexible.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
3760/11-0021BLK 3760/11-0021WHT	18G	Black White	100'/roll	CALL
3760/11-0011BLK 3760/11-0011WHT	14G	Black White	100'/roll	CALL

**GTOFULLFLEX 15KV-** GTO CABLE WITH SLEEVING 3760 IN ALUMINIUM 1/2" FLEXIBLE METALLIC CONDUIT- CABLE GTO CON EL FORRO 3760 DENTRO DE UN TUBO METALLICO FLEXIBLE 1/2"- CABLE GTO AVEC GAINE 3760 DANS UN TUBE METALLIQUE FLEXIBLE 1/2"

- Very flexible copper or tinned copper GTO cable, presleeved in sleeving 3760 and 1/2" metallic conduit to reduce your installation time..
- Cable GTO de cobre o de cobre enlatado muy flexible, ya dentro del forro aislante 3760 y del conducto metallico 1/2" para reducir su tiempo de instalación.
- Cable GTO brins de cuivre ou cuivre étamé très flexible déjà gainé avec la gaine 3760 et inséré dans un conduit métallique flexible 1/2" .

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
3760/11-2121BLK 3760/11-2121WHT	18G	Black White	100'/roll	CALL
3760/11-2111BLK 3760/11-2111WHT	14G	Black White	100'/roll	CALL



**GTOFULLFLEX 15KV-** GTO CABLE WITH SLEEVING 3760 IN LIQUID-TIGHT 1/2" STEEL FLEXIBLE METALLIC CONDUIT- CABLE GTO CON EL FORRO 3760 DENTRO DE UN TUBO DE ACERO HERMÉTICO Y FLEXIBLE 1/2"- CABLE GTO AVEC GAINÉ 3760 DANS UN CONDUIT EN ACIER ÉTANCHE ET FLEXIBLE 1/2"

- Very flexible copper or tinned copper GTO cable, presleeved in sleeving 3760 and 1/2" metallic conduit to reduce your installation time..
- Cable GTO de cobre o de cobre enlatado muy flexible, ya dentro del forro aislante 3760 y del conducto metallico 1/2 " para reducir su tiempo de instalación.
- Cable GTO brins de cuivre ou cuivre étamé très flexible déjà gainé avec la gaine 3760 et inséré dans un conduit métallique flexible 1/2" .

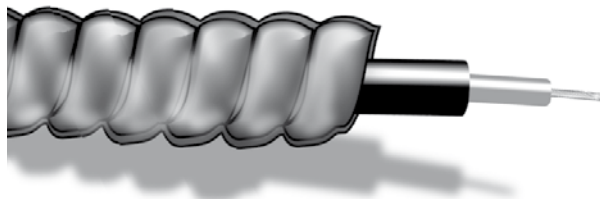
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 125 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp and wet locations



PRODUCT CODE	SIZE	COLOR	PACKAGING	SUGG. TRADE / EA
3760/11-2321BLK 3760/11-2321WHT	18G	Black White	100'/roll	CALL
3760/11-2311BLK 3760/11-2311WHT	14G	Black White	100'/roll	CALL

# SECTION D CONNECTING PRODUCTS CONNECTORES CONNECTEURS



**PASSTHRU** - WIRING ASSEMBLY CONDUIT KIT- CONDUCTO PARA ENSEMBLAGE DE CABLES - CONDUIT POUR RACCORDEMENT DES CABLES

- Used to protect the passage of GTO cables through walls, ceilings, raceways, channel letters and sign enclosures. Use only with neon transformer or power supply secondary circuit high voltage wiring.
- El PASSTHRU sirve para proteger el pasaje de los cables GTO dentro de paredes, techos, cajetines o letras de canal. utilizar unicamente con los cables de alto voltaje del circuito secundario de los transformadores para neón
- Le PASSTHRU sert à protéger les câbles GTO lors de leurs passages dans les murs, les plafonds, les boîtiers d'enseignes et les lettres canalisées. À utiliser uniquement avec les câbles haut voltage du circuit secondaire des transformateurs pour néon.

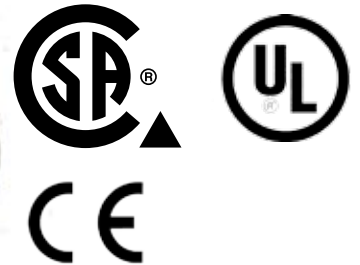
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	SIZE	PACKAGING	SUGG. TRADE / EA
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PT2 incl. 3 LNUTS, 1 PBushing, 1 USSB	2"	25/box	\$2.50
PT4 incl. 3 LNUTS, 1 PBushing, 1 USSB	4"	10/box	\$3.25
PT6 incl. 3 LNUTS, 1 PBushing, 1 USSB	6"	10/box	\$4.00
PT8 incl. 3 LNUTS, 1 PBushing, 1 USSB	8"	10/box	\$4.80
PT10 incl. 3 LNUTS, 1 PBushing, 1 USSB	10"	10/box	\$5.60
PT12 incl. 3 LNUTS, 1 PBushing, 1 USSB	12"	10/box	\$6.35
PT16 incl. 3 LNUTS, 1 PBushing, 1 USSB	16"	10/box	\$7.90
PT18 incl. 3 LNUTS, 1 PBushing, 1 USSB	18"	10/box	\$8.70
PT24 incl. 3 LNUTS, 1 PBushing, 1 USSB	24"	10/box	\$11.00
PT36 incl. 3 LNUTS, 1 PBushing, 1 USSB	36"	10/box	\$15.65
PT- KITS Includes all for 5 x 24" passthru		1 kit/box	\$55.05

\* Also available with grounding ring to comply with CSA requirements.

\* OUTPT kit for outdoor applications available separately.

**OUTPT KIT - BUSHING KIT FOR PASSTHRU OUT DOOR APPLICATIONS- JUEGO DE ANILLOS Y TAPONES PARA EL USO DEL PASSTHRU EN EL EXTERIOR - JEUX DE BAGUES ET ANNEAUX POUR L'UTILISATION DU PASSTHRU EN EXTÉRIEUR**

- Outdoor use upgrading kit for passthru
- Juego de anillos y tapones para el uso del passthru en el exterior.
- Jeux de bagues et anneaux pour l'utilisation du Passthru à l'extérieur.

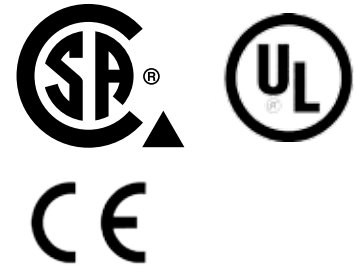
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp & wet locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
OutPTki	Includes 1 metallic bushing, 1 USSB, 1 sealing ring and 1 locknut	10kit/bag	\$2.85

**GENERAL BUSHING - STRAIGHT CONNECTOR MALE- CONECTADOR MACHO RECTILINEO - CONNECTEUR MÂLE DROIT**

- Straight connector male with attachment ring and screwable plastic bushing. To connect with 1/2" flexible metallic conduit.
- Conector rectilineo macho con anillo de amare y anillo plastico atornable. Para conectar con el conducto metallico flexible 1/2".
- Connecteur mâle avec bague d'attache et anneau de plastique vissable. Pour raccorder au conduit métallique flexible 1/2".

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
GB12	Metallic 1/2" male connector with attachment ring and screwable plastic bushing	25/box	\$1.75
GBWB12	Metallic 1/2" male connector with attachment ring, screwable plastic bushing and butterfly nut	25/box	\$1.95

**MALE CONNECTORS - MALE CONNECTORS- CONECTADORES MACHOS - CONNECTEURS MÂLES**

- Straight connector male. To connect with 1/2" OR 3/8" flexible metallic conduit.
- Conector rectilineo macho. Para conectar con el conducto metalico flexible 1/2" O 3/8".
- Connecteur mâle. Pour raccorder au conduit métallique flexible 1/2" OU 3/8".

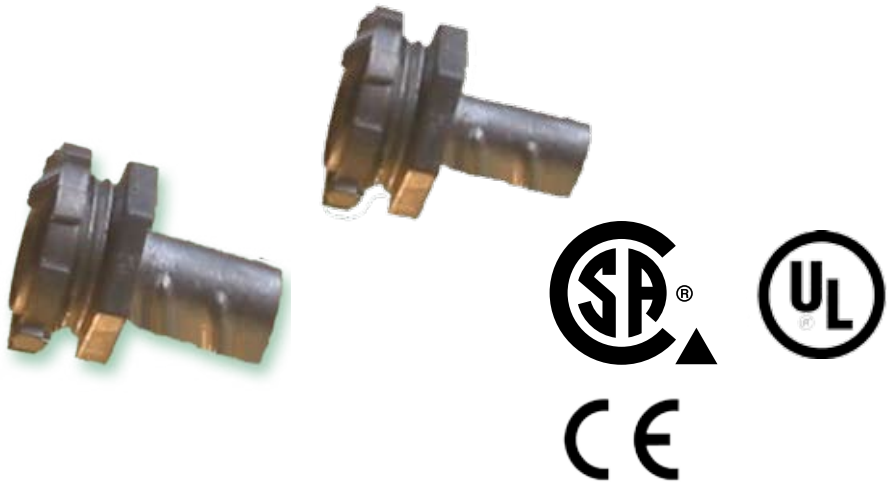
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
SC12	Metallic 1/2" male connector	25/box	\$0.95
SC38	Metallic 3/8" male connector	25/box	\$0.95

**FEMALE CONNECTORS - FEMALE CONNECTORS- CONECTADORES HEMBRA - CONNECTEURS FEMELLES**

- Female connectors. To link Passthru with flexible metallic conduit.
- Conectores hembra. Para unir el Passthru con el conducto metallico flexible.
- Connecteur femelle. Pour raccorder le Passthru au conduit métallique flexible.

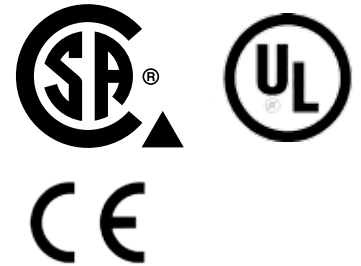
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
SCF12	Metallic 1/2" female connector	25/box	\$1.95
SCF38	Metallic 3/8" female connector	25/box	\$1.95
90CF12	90° Metallic 1/2" female connector	25/box	\$2.55

# LIQUID-TIGHT CONNECTORS - LIQUID-TIGHT CONNECTORS CONNECTADORES IMPERMEABLES - CONNECTEURS ÉTANCHES

- Liquid-Tight male 1/2" connectors. To link transformer with flexible metallic conduit.
- Conectores impermeables machos 1/2". Para unir el transformador con el conducto metallico flexible.
- Connecteur étanche mâle 1/2". Pour raccorder le transformateur au conduit métallique flexible.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp & wet locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
LQ12	Liquid-tight 1/2" connector male	25/box	\$3.50
LQSR12	Liquid-tight 1/2" connector male/sealing ring	25/box	\$4.10



**ACCESSORIES FOR CONNECTING PRODUCTS - ACCESSORIES-  
ACCESORIOS PARA CONEXIONES - ACCESOIRES DE CONNECTIONS**

- Accessories.
- Accesorios.
- Accessoires.

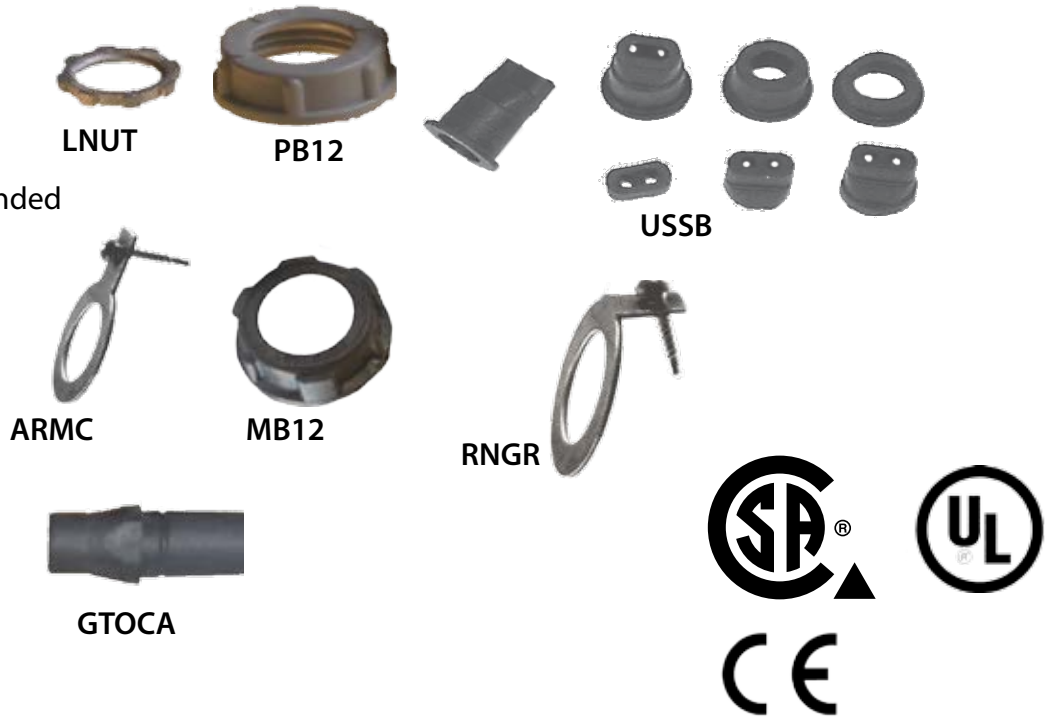
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded

**APPLICATION :**

- Dry & damp locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
LNUT	Lock nut 1/2" for Passthru	100/bag	\$0.35
RNGR	Grounding ring for Passthru	10/bag	\$0.85
ARMC	Attachment ring for metallic conduit	050/bag	\$0.80
PB12	Plastic bushing for Passthru	100/bag	\$0.30
USSBBLK	Universal Sign Sealing Bushing black Fits all wires & sleeving for Neon,LED and Ballast	100/bag	\$0.55
USSBWHT	Universal Sign Sealing Bushing white Fits all wires & sleeving for Neon,LED and Ballast	100/bag	\$0.55
SW12	1/2" Sealing Washer with Lock Nut	50/bag	\$0.55
MB12	1/2" Metallic Bushing	100/bag	\$1.95
GTOCA260BLK	GTOcable Adaptor for cable O.D. 0.260 to 0.315 Black	100/box	\$0.20
GTOCA260WHT	GTOcable Adaptor for cable O.D. 0.260 to 0.315 White		
GTOCA130BLK	GTOcable Adaptor for cable O.D. 0.130 to 0.230 Black	100/box	\$0.20
GTOCA130WHT	GTOcable Adaptor for cable O.D. 0.130 to 0.230 White		

# HVC1001 - HIGH VOLTAGE CONNECTOR - CONNECTADOR ALTO VOLTAGE - CONNECTEUR HAUT VOLTAGE

- HVC 1001 insulates splice between two GTO cables. When routed through listed sign enclosures, GTO cables should be covered with GtoSleeving or GtoCovering. When routed outside listed sign enclosures, GTO cables should be covered with GtoSleeving and routed through flexible or rigid metallic conduit.
- El conectador HVC 1001 aísla la conexi3n entre dos cables GTO. Cuando instalados dentro de un aviso llevando la marca Listed, los cables GTO deben ser cubiertos con los forro GTOSleeving o GTOCovering. Cuando instalados por fuera del aviso, los cables GTO deben ser cubiertos con GTOSleeving y insertados dentro de conductos metálicos flexibles o rígid.
- Le connecteur de haut voltage HVC1001 isole la connexion entre deux câbles GTO. Lorsqu'installées à l'intérieur d'une enseigne portant la marque Listed, les câbles GTO doivent être recouverts des gaines GTOSleeving ou GTOCovering. Lorsqu'installés à l'extérieur de l'enseigne, les câbles GTO doivent être recouverts de GTOSleeving et insérés dans des conduits métalliques flexibles ou rigides.

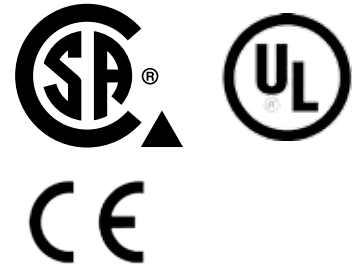
**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp & wet locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
HVC1001	1/2" High Voltage Connector Accepts 1/2" metallic conduits	10/box	\$5.45

**LB-BOX** - DISCONNECT SWITCH - INTERRUPTOR DE CONNEXION-  
INTERRUPTEUR DE CONNEXION

- Compact disconnect switch assembly for use in channel letters and sign enclosures.
- Interruptor de connexion para avisos de tipo canales o encajados.
- Interrupteur de connexion pour enseignes de type lettres canalisées ou dans des boîtiers.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp & wet locations



PRODUCT CODE	DESCRIPTION	PACKAGING	SUGG. TRADE / EA
LB-Box	Primary junction box and disconnect switch	5/box	\$12.25

**ILS2000 - HIGH VOLTAGE IN LINE SPLICE CONNECTOR - CONECTADOR ALTO VOLTAGE DE ENLACES ALINEADOS- CONNECTEUR HAUT VOLTAGE POUR CABLES ALIGNÉS**

- ILS 2000 In-line Splice Connectors are used to insulate the splice of GTO cables in indoor or outdoor sign bodies and portable window signs. GTO cables must always be covered with GTOSLEEVEING 3760. May be at zero clearance to grounded metal. The BX version provides connectors and grounding path to link with flexible metallic conduit.
- ILS 2000 Sirve para aislar el enlace de dos cables GTO en avisos interiores o exteriores y en avisos portátiles de vitrina. Los cables GTO siempre deben estar cubiertos con GTOSleeving 3760. Se puede utilizar aún cerca de de una superficie metálica con tal que este puesta a tierra. La version BX incluye conectadores y camino de tierra para unir al conducto metallico flexible.
- ILS 2000 Sert à isoler la connexion de deux câbles GTO sur des enseignes intérieures ou extérieures et des enseignes portatives de vitrines. Les câbles GTO doivent toujours être recouverts de la gaine isolante GTO-Sleeving 3760. Peut-être utilisé à proximité des surfaces métalliques dans la mesure où elles sont reliées à la terre. La version BX fournie les connecteurs et le chemin de mise à la terre pour relier aux conduits métalliques flexibles.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp & wet locations



PRODUCT CODE	DESCRIPTION		PACKAGING	SUGG. TRADE / EA
ILS2000BLK	For in-line GTO splice	Black	25/box	\$4.30
ILS2000WHT	For in-line GTO splice	White	25/box	\$4.30
ILS2000BXBLK	For in-line GTO splice Accepts 1/2" metallic conduits	Black	25/box	\$6.60
ILS2000BXWHT	For in-line GTO splice Accepts 1/2" metallic conduits	White	025/box	\$6.60

NEON  
LIGHTING *lux*<sup>TM</sup>  
PRODUCTS INC.

ELECTRO *bits*<sup>TM</sup>  
Improving neon bit by bit

# SECTION E

## TUBE SUPPORTS & NEON INKS

### SOPORTES PARA TUBOS Y TINTAS PARA NEON

### TAQUETS SUPPORT POUR TUBES

### ET ENCRES POUR NÉON

RUBY  
RED



PTC  
PATENT  
PENDING



SHAMROCK  
GREEN



BROMO  
BLUE

WHITE



BLACK



NOVIAL  
GOLD



EMERALD  
GREEN

# TS1000 - PLASTIC TUBE SUPORT - SOPORTE PLASTICO- TAQUETS SUPPORT EN PLASTIQUES

- Used to attach neon tubing to sign frames and to keep GTO cable and sleeving away from surface. Made of UV stabilized polycarbonate.
- Se utiliza para atar los tubos de neón al cuadro del aviso. También sirve para alejar el cable GTO y los forros GTOsleeving del cuadro. Echo de polycarbonato estabilizado para los UV.
- Sert à fixer les tubes de néon au cadre de l'enseigne. Il sert aussi à éloigner les gaines GTOsleeving et le cable GTO du cadre. Fait de polycarbonate stabilisé contre les UV.

**COMPLIANCE:**

**RATING :**

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

**APPLICATION :**

- Dry, damp & wet locations



PRODUCT CODE	SIZE	COLOR (Base only)	PACKAGING	SUGG. TRADE / EA
TS1000BLK	Fits 12, 13 and 15mm tubes. 2" long	Black	100/box	\$0.40
TS1000WHT		White		
TS1000CLR		Clear		

# TUBE SUPPORTS - SOPORTES PARA TUBOS - TAQUETS SUPPORTS POUR TUBES

## TSS3D - TRIPPLE ACTION TUBE SUPORT - SOPORTE PLASTICO TRIPLE ACTION- TAQUETS SUPPORT TRIPLE ACTION

- Used to attach neon tubing to sign frames and to keep GTO cable and sleeving away from surface. Metal free, 360° rotative prongs, up, down and full rocking motions. Made of UV stabilized polycarbonate.
- Se utiliza para atar los tubos de neón al cuadro del aviso. También sirve para alejar el cable GTO y los forros GTOsleeving del cuadro. Sin metal, cabeza de pincas rotativa 360°, movimiento por arriba, por abajo y por los lados. Echo de polycarbonato estabilizado para los UV.
- Sert à fixer les tubes de néon au cadre de l'enseigne. Il sert aussi à éloigner les gaines GTOsleeving et le cable GTO du cadre. Sans métal. Tête et pinces rotatives 360°, mobilité haut, bas et côtés. Fait de polycarbonate stabilisé contre les UV.

### COMPLIANCE:

### RATING :

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

### APPLICATION :

- Dry, damp & wet locations



PRODUCT CODE	SIZE	COLOR (Base only)	PACKAGING	SUGG. TRADE / EA
TSS3D8mm14CL100	8mm 1,4"	Clear	100/box	\$0.35
TSS3D10mm14CL100	10mm 1,4"			
TSS3D12mm14CL100	12mm 1,4"			
TSS3D15mm14CL100	15mm 1,4"			
TSS3D18mm14CL100	18mm 1,4"			
TSS3D8mm14BL100	8mm 1,4"	Black	100/box	\$0.35
TSS3D10mm14BL100	10mm 1,4"			
TSS3D12mm14BL100	12mm 1,4"			
TSS3D15mm14BL100	15mm 1,4"			
TSS3D18mm14BL100	18mm 1,4"			
TSS3D8mm14WH100	8mm 1,4"	White	100/box	\$0.35
TSS3D10mm14WH100	10mm 1,4"			
TSS3D12mm14WH100	12mm 1,4"			
TSS3D15mm14WH100	15mm 1,4"			
TSS3D18mm14WH100	18mm 1,4"			
TSS3D8mm19CL100	8mm 1,9"	Clear	100/box	\$0.35
TSS3D10mm19CL100	10mm 1,9"			
TSS3D12mm19CL100	12mm 1,9"			
TSS3D15mm19CL100	15mm 1,9"			
TSS3D18mm19CL100	18mm 1,9"			
TSS3D8mm19BL100	8mm 1,9"	Black	100/box	\$0.35
TSS3D10mm19BL100	10mm 1,9"			
TSS3D12mm19BL100	12mm 1,9"			
TSS3D15mm19BL100	15mm 1,9"			
TSS3D18mm19BL100	18mm 1,9"			
TSS3D8mm19WH100	8mm 1,9"	White	100/box	\$0.35
TSS3D10mm19WH100	10mm 1,9"			
TSS3D12mm19WH100	12mm 1,9"			
TSS3D15mm19WH100	15mm 1,9"			
TSS3D18mm19WH100	18mm 1,9"			

## TUBE SUPPORTS - SOPORTES PARA TUBOS - TAQUETS SUPPORTS POUR TUBES

# TSS3D - TRIPPLE ACTION TUBE SUPORT - SOPORTE PLASTICO TRIPLE ACTION- TAQUETS SUPPORT TRIPLE ACTION - CONTINUED - CONTINUACIÓN - SUITE

- Used to attach neon tubing to sign frames and to keep GTO cable and sleeving away from surface. Metal free, 360° rotative prongs, up, down and full rocking motions. Made of UV stabilized polycarbonate.
- Se utiliza para atar los tubos de neón al cuadro del aviso. También sirve para alejar el cable GTO y los forros GTOsleeving del cuadro. Sin metal, cabeza de pincas rotativa 360°, movimiento por arriba, por abajo y por los lados. Echo de polycarbonato estabilizado para los UV.
- Sert à fixer les tubes de néon au cadre de l'enseigne. Il sert aussi à éloigner les gaines GTOsleeving et le cable GTO du cadre. Sans métal. Tête et pinces rotatives 360°, mobilité haut, bas et côtés. Fait de polycarbonate stabilisé contre les UV.

### COMPLIANCE:

### RATING :

- 15 KV mid-point grounded
- 105 °C, UL 94-5VA

### APPLICATION :

- Dry, damp & wet locations



PRODUCT CODE	SIZE	COLOR (Base only)	PACKAGING	SUGG. TRADE / EA
TSS3D8mm24CL100	8mm 2,4"	Clear	100/box	\$0.39
TSS3D10mm24CL100	10mm 2,4"			
TSS3D12mm24CL100	12mm 2,4"			
TSS3D15mm24CL100	15mm 2,4"			
TSS3D18mm24CL100	18mm 2,4"			
TSS3D8mm24BL100	8mm 2,4"	Black	100/box	\$0.39
TSS3D10mm24BL100	10mm 2,4"			
TSS3D12mm24BL100	12mm 2,4"			
TSS3D15mm24BL100	15mm 2,4"			
TSS3D18mm24BL100	18mm 2,4"			
TSS3D8mm24WH100	8mm 2,4"	White	100/box	\$0.39
TSS3D10mm24WH100	10mm 2,4"			
TSS3D12mm24WH100	12mm 2,4"			
TSS3D15mm24WH100	15mm 2,4"			
TSS3D18mm24WH100	18mm 2,4"			

The TSS3D Tube Support are Iso available in 500pcs and 1000pcs/ box

Los soportes para tubos TSS3D también son disponible en cajas de 500 o 1000 piezas

Les taquets support pour tubes sont aussi disponibles en emballage de 500 et 1000 pièces par boîte



**NEON INK** - AIR DRY NEON INK - TINTA SECANDO AL AIRE- ENCRE SÉCHANT À L'AIR

- A water base air dry system formulated specifically for coating the external surface of neon glass used in the neon sign industry. This air dry neon ink formula meets and exceeds the California Air Quality Management and EPA for the clean air act. Uniform application: free of fish eye, air bubbles, wrinkles and other anomalies associated with glass coatings. Excellent mechanical properties. Colloidal particles with excellent mechanical and thermal stability. Good chemical resistance. Excellent adhesion to glass. Approximative coverage: 300 average size units per gallon. Application: Dipping and pouring or brush on.
- Una formula especialmente concebida para la industria del neón, a base de agua y secando al aire. Estas tintas encuentran y sobrepasan las reglas establecidas por el EPA y el California Air Quality Management sobre la limpieza del aire. Tinta con larga vida y secamiento rápido, ofreciendo una aplicación uniforme, sin ojos de pescado, burbujas de aire, arrugas o otros defectos frecuentes en tintas de vidrio. Propiedades mecánicas excelentes. Partículas coloidales con estabilidad mecánica y térmica. Excelente adherencia al vidrio. Cubre: por medio de 300 avisos de tamaño mediano por 4 litros. Aplicación: remojo o pincel.
- Cette encre a été spécialement élaborée pour l'industrie du néon. Faite à base d'eau et séchant rapidement à l'air, elle rencontre les règles de respect de l'environnement de l'EPA et du California Air Quality Management. Durée de vie importante et séchage rapide, sans formation d'œil de poisson ou de rides, elle offre une application uniforme. Propriétés mécaniques excellentes. Particules colloïdales avec stabilisation mécanique et thermique, excellente adhésion au verre. Pouvoir couvrant : Environ 300 enseignes de taille moyenne pour 4 litres. Application : Trempage ou pinceau.

PRODUCT CODE	COLOR	PACKAGING	SUGG. TRADE / EA
14-210-Q	Black / block out / air dry	32 oz / 1 litre	\$22.50
14-210-G	Black / block out / air dry	1 gal / 4 litres	\$50.00
14-220-Q	White / block out / air dry	32 oz / 1 litre	\$22.50
14-220-G	White / block out / air dry	1 gal / 4 litres	\$52.50
14-230-Q	Grey / block out / air dry	32 oz / 1 litre	\$22.50
14-230-G	Grey / block out / air dry	1 gal / 4 litres	\$52.50
14-240-Q	Ruby red / air dry	32 oz / 1 litre	\$45.00
14-240-G	Ruby red / air dry	1 gal / 4 Litres	\$135.00
14-250-Q	Novial gold / air dry	32 Oz / 1 litre	\$45.00
14-250-G	Novial gold / air dry	1 gal / 4 litres	\$135.00
14-260-Q	Shamrock green / air dry	32 oz / 1 litre	\$45.00
14-260-G	Shamrock green / air dry	1 gal / 4 litres	\$135.00
14-270-Q	Emerald green / air dry	32 oz / 1 litre	\$45.00
14-270-G	Emerald green / air dry	1 gal / 4 litres	\$135.00
14-280-Q	Bromo blue / air dry	32 oz / 1 litre	\$45.00
14-280-G	Bromo blue / air dry	1 gal / 4 litres	\$135.00
14-290-Q	Purple blue / air dry	32 oz / 1 litre	\$45.00
14-290-G	Purple blue / air dry	1 gal / 4 litres	\$135.00

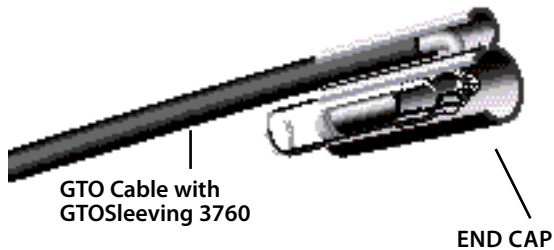


## SECTION F

### NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### BEND-BACK INSTALLATION - DRY AND DAMP LOCATIONS



- 1- Choose appropriate model of End Cap according to your application and match with proper electrode size.
- 2- Cut GTOsleeving 3760 long enough to extend from inside End Cap to at least 2 inches into Electrobits PASSTHRU or EMT. We recommend that GTOsleeving 3760 extends to transformer, in order to prolong GTO cable's life.
- 3- Slide GTOsleeving 3760 on GTO cable.
- 4- Strip GTO cable 1 inch and make connection between electrode and cable.
- 5- Slide End Cap over electrode, cable and sleeving, (as per drawing), until you reach the bottom of the End Cap. In damp locations, make sure that the closed end of the End Cap is higher than the wired end to prevent water from entering.

### INSTALACION CON ELECTRODO RECOSTADO- AMBIENTES SECOS O HUMEDOS

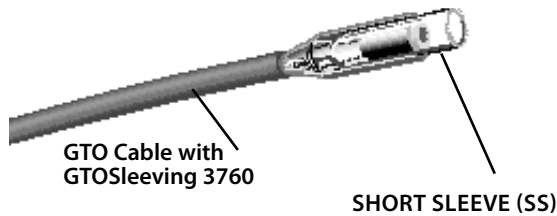
- 1- Escoger el modelo de End Cap Wide segun su aplicacion y correspondiendo a la dimensión del eléctrodo.
- 2- Cortar un trozo de forro aislante GTOSLEEVIING 3760 sufficientemente largo para penetrar hasta por los menos 2 pulgadas dentro del PASSTHRU o EMT desde el interior del EC. Le recomendamos cubrir el cable GTO hasta el transformador para prolongar su duración.
- 3- Insertar el cable en el forro GTOSLEEVIING 3760.
- 4- Pelar de 1 pulgada la funda del cable y conectar el cable con eléctrodo.
- 5- Deslizar hasta el fondo el capuchón sobre el eléctrodo y el cable GTO. En ambientes húmedos, asegurarse que la parte cerrada del capuchón este más alta que la otra para evitar infiltración de agua.

### INSTALLATION ÉLECTRODE COUCHÉE- ENVIRONNEMENTS SECS ET HUMIDES

- 1- Choisir le capuchon End Cap du modèle approprié à votre installation et corespondant à la taille de l'électrode.
- 2- Couper une section de gaine isolante GTOSLEEVIING 3760 suffisamment longue pour aller depuis le EC jusqu'à au moins 2 pouces à l'intérieur du PASSTHRU ou EMT. Nous recommandons toutefois de couvrir le câble GTO sur toute sa longue pour en prolonger la durée.
- 3- Insérer le câble GTO dans la gaine GTOSLEEVIING 3760.
- 4- Dénuder le câble GTO sur 1 pouce et faire la connexion avec l'électrode.
- 5- Glisser jusqu'au fond le EC sur l'électrode et la gaine GTOSLEEVIING 3760. En environnement humide, s'assurer que la partie fermée du capuchon pointe vers le haut afin d'éviter les infiltrations d'eau.

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### STRAIGHT CONNECTION INSTALLATION - DRY AND DAMP LOCATIONS



GTO Cable with GTOsleeving 3760



- 1- Choose appropriate model of Short Sleeve according to your application and match with proper electrode size.
- 2- Cut GTOsleeving 3760 long enough to extend from inside SS to at least 2 inches into Electrobits PASSTHRU or EMT. We recommend that GTOsleeving 3760 extends to transformer, in order to prolong GTO cable's life.
- 3- Slide GTOsleeving 3760 on GTO cable. Slide Short Sleeve on GTO cable, narrow end first.
- 4- Strip GTO cable 1 inch and make connection between electrode and cable.
- 5- Slide Short Sleeve back over electrode (as per drawing), until you reach the internal ring, pull back the sleeving over the Short Sleeve as far as possible with SS or insert sleeving inside SSW.

### INSTALACION CON ELECTRODO RECTO- AMBIENTES SECOS O HUMEDOS

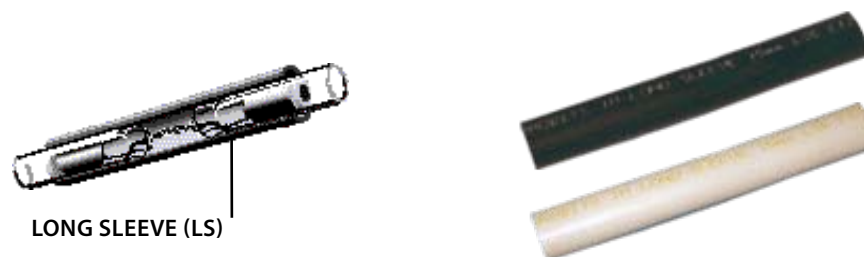
- 1- Escoger el modelo de Manga Corta según su aplicación y correspondiendo a la dimensión del electrodo.
- 2- Cortar un trozo de forro aislante GTOSLEEVIING 3760 suficientemente largo para penetrar hasta por los menos 2 pulgadas dentro del PASSTHRU o EMT desde el interior del SS. Le recomendamos cubrir el cable GTO hasta el transformador para prolongar su duración.
- 3- Insertar el cable en el forro GTOSLEEVIING 3760. Deslizar la Manga Corta SS sobre el cable GTO, la apertura la mas pequeña primero.
- 4- Pelar la funda del cable sobre 1 pulgada y conectar el cable con electrodo.
- 5- Deslizar hasta el anillo interior la manga SS sobre el electrodo y el cable GTO. El forro por encima del SS o por dentro del SSW .

### INSTALLATION ÉLECTRODE DROITE- ENVIRONNEMENTS SECS ET HUMIDES

- 1- Choisir le manchon court Short Sleeve (SS) approprié au type d'installation et correspondant à la taille de l'électrode.
- 2- Couper une section de gaine isolante GTOSLEEVIING 3760 suffisamment longue pour aller depuis le ECW jusqu'à au moins 2 pouces à l'intérieur du PASSTHRU ou EMT. Nous recommandons toutefois de couvrir le câble GTO sur toute sa longueur pour en prolonger la durée.
- 3- Insérer le câble GTO dans la gaine GTOSLEEVIING 3760. Glisser le Manchon Court sur le cable GTO, la petite ouverture en premier.
- 4- Dénuder le câble GTO sur 1 pouce et faire la connexion avec l'électrode.
- 5- Glisser le SS sur l'électrode jusqu'à l'anneau intérieur. La gaine s'installe sur le manchon SS ou se glisse dans le manchon SSW.

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### ELECTRODE TO ELECTRODE INSTALLATION - DRY AND DAMP LOCATIONS



- 1- Match Long Sleeve (LS) with proper electrode size.
- 2- Slide the Long Sleeve on one electrode far enough on the glass tubing in order to be able to make connection.
- 3- Make connection between the two electrodes, as system assembled on the figure above.
- 4- Slide Long Sleeve back on electrodes and secure fitting wrapping both ends of Long Sleeve to electrodes. Secure in place with two wraps of electrical tape, such as tape n° 33 in black or n° 35 in any color, manufactured by 3M or equivalent.

### INSTALACION DE ELECTRODO CON ELECTRODO - AMBIENTES SECOS O HUMEDOS

- 1- Escoger la manga larga Long Sleeve (LS) correspondiendo a la dimensión del electrodo.
- 2- Deslizar la manga Long Sleeve sobre uno de los electrodos y el tubo de vidrio de tal forma que se puede hacer el enlace con el segundo electrodo.
- 3- Hacer el enlace entre los dos electrodos.
- 4- Deslizar la manga Long Sleeve de regreso sobre el enlace y los dos electrodos y asegurar la manga Long Sleeve utilizando cinta eléctrica de tipo n° 33 negra o n° 35 en cualquier color de marca 3M o equivalente.

### INSTALLATION D'ÉLECTRODE A ÉLECTRODE - ENVIRONNEMENTS SECS ET HUMIDES

- 1- Choisir le manchon Long Sleeve (LS) approprié à la taille des électrodes.
- 2- Faire glisser le manchon Long Sleeve sur une des deux électrodes et le tube de verre de façon à pouvoir effectuer la connexion entre les deux électrodes.
- 3- Effectuer la connexion entre les électrodes.
- 4- Faire glisser le manchon Long Sleeve de nouveau sur les électrodes et sécuriser l'assemblage à l'aide de ruban électrique n° 33 noir ou n° 35 en n'importe quelle couleur de marque 3M ou équivalent.

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### BEND-BACK TO BEND-BACK INSTALLATION - DRY AND DAMP LOCATIONS



- 1- Match End Cap Wide (ECW) with proper electrode size.
- 2- Cut GTOsleeving 3760 long enough to extend from inside End Cap Wide to at least 2 inches into Electrobits PASSTHRU or EMT. We recommend that GTOsleeving 3760 extends to transformer, in order to prolong GTO cable's life.
- 3- Slide GTOsleeving 3760 on GTO cable.
- 4- Strip GTO cable 1 inch and make connection between electrode and cable.
- 5- Slide End Cap Wide over electrode, cable and sleeving, (as per drawing), until you reach the bottom of the End Cap Wide. In damp locations, make sure that the closed end of the End Cap Wide is higher than the wired end to prevent water from entering.

### INSTALACION RELE DE ÉLECTRODOS RECOSTADOS - AMBIENTES SECOS O HUMEDOS

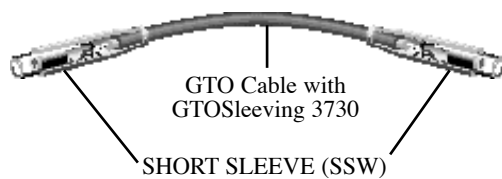
- 1- Escoger el End Cap Wide (ECW) correspondiendo a la dimensión del electrodo.
- 2- Cortar un trozo de forro aislante GTOSLEEVIING 3760 11/2 pulgada más corto que el cable GTO necesario para conectar los dos electrodos.
- 3- Insertar el cable en el forro GTOSLEEVIING 3760.
- 4- Pelar de 1 pulgada la funda del cable en cada extremidad y conectar el cable con los electrodos.
- 5- En cada extremidad, deslizar hasta el fondo el capuchón sobre el electrodo y el cable GTO. En ambientes húmedos, asegurarse que la parte cerrada del capuchón este más alta que la otra para evitar infiltración de agua.

### INSTALLATION RELAIS D'ÉLECTRODES COUCHÉES - ENVIRONNEMENTS SECS ET HUMIDES

- 1- Choisir le capuchon End Cap Wide (ECW) approprié à la taille de l'électrode.
- 2- Couper une section de gaine isolante GTOSLEEVIING 3760 11/2 pouce plus courte que la longueur de câble GTO nécessaire pour relier les deux électrodes.
- 3- Insérer le câble GTO dans la gaine GTOSLEEVIING 3760.
- 4- Dénuder le câble GTO sur 1 pouce de chaque côté et faire la connexion avec les électrodes.
- 5- De chaque côté, glisser jusqu'au fond le capuchon ECW sur l'électrode et la gaine GTOSLEEVIING 3760. En environnement humide, s'assurer que la partie fermée du capuchon pointe vers le haut afin d'éviter les infiltrations d'eau.

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### STRAIGHT CONNECTION WIDE TO STRAIGHT CONNECTION WIDE INSTALLATION - DRY AND DAMP LOCATIONS



GTO Cable with GTOsleeving 3760



- 1- Match the Short Sleeves Wide (SSW) with proper electrode size.
- 2- Total length of GTOsleeving 3760 should be 2 1/4 inches less than length of GTO cable needed to link electrodes.
- 3- Slide GTO cable inside GTOsleeving 3760 and strip 1 inch at both ends.
- 4- At both ends, slide a Short Sleeve Wide over the GTOsleeving 3760, (as system assembled figure above), and make connection between electrodes and GTO cable.
- 5- Slide each Short Sleeve Wide back on its electrode until you reach internal ring.

### INSTALACION RELE DE ELÉCTRODOS RECTOS - AMBIENTES SECOS O HUMEDOS

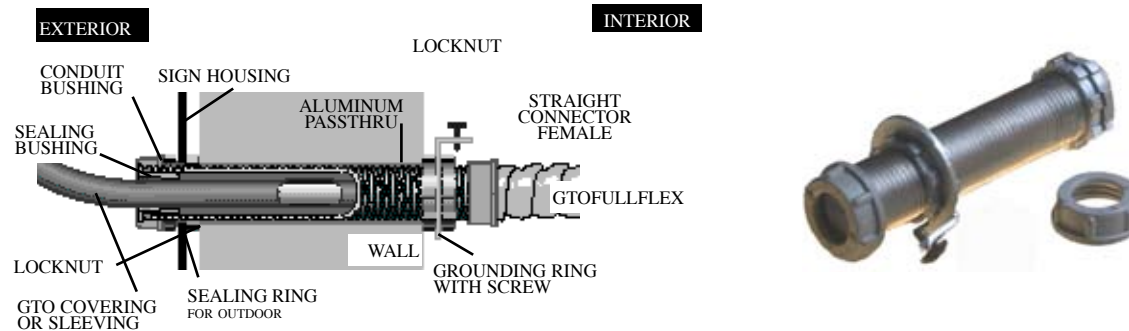
- 1- Escoger el Short Sleeve Wide (SSW) correspondiendo a la dimensión del electrodo.
- 2- Cortar un trozo de forro aislante GTOsleeving 3760 2 1/4 pulgada más corto que el cable GTO necesario para conectar los dos electrodos.
- 3- Insertar el cable en el forro GTOsleeving 3760. Pelar de 1 pulgada la funda del cable en cada extremidad.
- 4- En cada extremidad, deslizar una manga Short Sleeve por encima del forro GTOsleeving y conectar el cable con los electrodos.
- 5- En cada extremidad, deslizar el Short Sleeve sobre el electrodo hasta alcanzar el anillo interior.

### INSTALLATION RELAIS D'ÉLECTRODES DROITES - ENVIRONNEMENTS SECS ET HUMIDES

- 1- Choisir le manchon Short Sleeve Wide (SSW) approprié à la taille de l'électrode.
- 2- Couper une section de gaine isolante GTOsleeving 3760 2 1/4 pouces plus courte que la longueur de câble GTO nécessaire pour relier les deux électrodes.
- 3- Insérer le câble GTO dans la gaine GTOsleeving 3760.  
Dénuder le câble GTO sur 1 pouce de chaque côté.
- 4- De chaque côté, faire glisser un manchon Short Sleeve sur la gaine GTOsleeving et faire la connexion avec les électrodes.
- 5- De chaque côté, faire glisser le manchon SS jusqu'à l'anneau intérieur sur l'électrode et la gaine GTOsleeving 3760.

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### TYPICAL PASSTHRU INSTALLATION - DRY AND DAMP LOCATIONS



- 1- Use the appropriate length of PASSTHRU to clear the wall completely and Make 7/8 inch mounting holes to install the PASSTHRU.
- 2- Attach the end of the PASSTHRU that has the Sealing Bushing to the sign. Screw it in place with the provided locknuts. Secure sign housing to wall.
- 3- For outdoor applications, install a listed Sealing Ring where the conduit enters the sign housing to prevent water from entering between the wall and the back of the sign.
- 4- Resume installation to the transformer box with 3/8 or 1/2 inch rigid or flexible metal conduit, using the proper fitting such as the SCF 38 or SCF12.
- 5- When using non-metallic GtoSleeving 3760, you must use the Grounding Ring to provide a ground bond. Connect the ground bonding wire to the green screw provided on the Grounding Ring.
- 6- If using an electronic power supply, you must always cover GTO cable with GtoSleeving 3760 all the way. We recommend doing the same with core and coil transformer. Insert GtoSleeving in the metallic conduit to prevent corona. (Run only one GTO cable per conduit).
- 7- For use with GtoSleeving 3760, no modification to the sealing Bushing is required.

### INSTALACION TIPICA DEL PASSTHRU - AMBIENTES SECOS O HUMEDOS

- 1-Escoger un Passthru de dimensión suficiente para atravesar completamente la pared y hacer los huecos de  $\frac{7}{8}$  de pulgada para la instalación del Passthru.
- 2-Amarrar sobre el anuncio la extremidad del Passthru con el anillo de cierre (SBPT). Atornillarlo en su sitio con las tuercas surtidas. Instalar el anuncio sobre la pared.
- 3-Para un uso exterior, instalar un anillo hermetico (SRPT) allí donde el conducto entre en el anuncio para evitar la infiltración de agua entre la pared y el anuncio.
- 4-Terminar la instalación hacia la caja del transformador con un conducto metálico flexible o rígido de  $\frac{3}{8}$  o  $\frac{1}{2}$  pulgada, utilizando un conector (SCF38 o SCF12.)
- 5-Si no se utiliza un conducto metálico sino el forro GtoSleeving 3760 se debe instalar un anillo de toma de tierra (RNGR) para poder amarrarle el cable de polo a tierra sobre el tornillo verde surtido con el anillo.
- 6-Si se utiliza un transformador electrónico, siempre debe cubrir la totalidad del cable GTO con el forro GtoSleeving 3760. Se le recomienda lo mismo aún utilizando un transformador tradicional. Introducir el GtoSleeving dentro del conducto metálico flexible o rígido para evitar la formación de corona. Introducir un solo cable y forro por conducto metálico
- 7-Con GtoSleeving 3730, no se necesita modificar el anillo de cierre (SBPT).

### INSTALLATION TYPE DU PASSTHRU - ENVIRONNEMENTS SECS ET HUMIDES

- 1- Choisir un Passthru d'une longueur suffisante pour traverser complètement le mur et faire les trous de  $\frac{7}{8}$  de pouce pour installer le Passthru.
- 2- Fixer sur l'enseigne l'extrémité du Passthru qui contient la bague de scellement (SBPT). Le visser en place à l'aide des écrous fournis. Installer l'enseigne sur le mur.
- 3-Pour une utilisation en extérieur, installer une bague de scellement hermétique accréditée (SRPT) à l'endroit où le conduit pénètre dans l'enseigne pour éviter l'infiltration d'eau entre le mur et l'enseigne.
- 4- À l'aide du connecteur approprié (SCF 38 ou SCF12), terminer l'installation au niveau du transformateur avec un conduit métallique flexible ou rigide de  $\frac{3}{8}$  ou  $\frac{1}{2}$  pouce.
- 5- Lors de l'utilisation de la gaine isolante non-métallique GtoSleeving 3760, installer une rondelle de mise à la terre (RNGR) avec une vis verte pour y fixer le câble de mise à la terre.
- 6- Avec un transformateur électronique, toujours recouvrir les câbles GTO avec l'une ou l'autre des gaines isolantes GtoSleeving 3760. Nous recommandons de faire de même avec un transformateur traditionnel. Recouvrir la gaine d'un conduit métallique flexible ou rigide pour éviter la formation de corona. Ne faire courir qu'un seul câble GTO par conduit.
- 7- Avec le GtoSleeving 3730, aucune modification sur la bague de scellement.



## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

### HIGH VOLTAGE CONNECTOR TYPICAL INSTALLATION - DRY AND DAMP LOCATIONS

- 1- Unscrew yellow plastic cap which has a yellow plastic GTO wire spacer and brass crimp inside.
- 2- Orient the connector so that the duplex entry is pointing downward.  
Fasten the connector using the two n° 8 self tapping screws provided in the two upper holes.
- 3- Bring your GTO wires with sleeving and/or flexible metallic conduit  $\frac{3}{8}$ " or  $\frac{1}{2}$ " through the duplex entry leaving 3 and  $\frac{1}{2}$  inches of wire standing.
- 4- Fasten sleeving and/or flexible metal conduit by screwing the locking plate in place.
- 5- Strip 1 inch of insulation from the GTO wires. Insert the yellow plastic spacer between the GTO wires and into the connector. Twist the bare ends of the GTO wires together at the top of the plastic spacer and fasten with the brass crimp. Always maintain GTO insulation to the very top of the spacer.  
Trim excess wire. Canadian users: cover the crimp and the GTO wires with the enclosed sleeving.
- 6- Screw yellow plastic cap in place over GTO wires.
- 7- Connect ground bonding wire if required to green ground screw.



### INSTALACION TIPICA DEL CONECTOR - AMBIENTES SECOS O HUMEDOS

- 1-Desatornillar el capuchón de plástico amarillo con el separador de cable GTO y la garra de cobre por dentro.
- 2-Posicionar el conector de tal forma que la doble entrada este orientada hacia abajo. Fijar el conector con los dos tornillos #8 surtidos en los huecos de arriba.
- 3-Insertar los cables GTO ya cubiertos de forro GTOsleeving™ y/o conducto metálico flexible ( $\frac{3}{8}$ " o  $\frac{1}{2}$ " ) dentro de la entrada doble, dejando  $3\frac{1}{2}$  pulgadas de cable extra.
- 4-Fijar el forro o el conducto metálico flexible atornillando la placa de fijación en su sitio.
- 5-Pelar 1 pulgada del aislante de los cables GTO. Insertar el separador de plástico amarillo entre los cables GTO y luego dentro del conector. Enlazar las partes peladas de los dos cable por encima del separador y amarra los cables con la garra de cobre. Siempre asegurarse que el cable este cubierto de su aislante hasta el borde del separador. Cortar el exceso de cable (Utilisadores Canadienses: cubrir la garra de cobre con el forro surtido).
- 6-Atornillar el capuchón de plástico amarillo en su sitio, por encima de los cables GTO.
- 7-Si se necessita, conectar el cable de polo a tierra sobre el tornillo verde.

### INSTALLATION RELAIS D'ÉLECTRODES DROITES - ENVIRONNEMENTS SECS ET HUMIDES

- 1-Dévisser le capuchon de plastique jaune contenant un séparateur de cable GTO jaune et une agraffe en cuivre.
- 2-Orienter le connecteur de telle sorte que la double ouverture soit tournée vers le bas. Fixer le connecteur à l'aide des deux vis auto-bloquantes #8 dans les trous du haut.
- 3-Insérer les cables GTO recouverts de GTOsleeving™ et/ou de conduit métallique flexible ( $\frac{3}{8}$ " ou  $\frac{1}{2}$ " ) dans la double ouverture, laissant  $3\frac{1}{2}$  pouces de cable GTO extras.
- 4-Fixer la gaine GTOsleeving™ et/ou le conduit métallique flexible en vissant la plaque de fixation en place.
- 5-Dénuder les cables GTO de leur isolant sur une longueur d'1 pouce. Insérer le séparateur en plastique jaune entre les deux cables et dans le connecteur. Enlacer les bouts dénudés des deux cables ensemble au sommet du séparateur en plastique et les agraffer avec l'agraffe en cuivre. Toujours s'assurer que l'isolant des cables GTO arrive jusqu'au bord du séparateur. Couper les excès de cable (Utilisateurs Canadiens : couvrir l'agraffe et les cables GTO avec la gaine fournie).
- 6-Visser le capuchon de plastique jaune en place sur les cables GTO.
- 7-Si nécessaire, connecter le cable de mise à la terre sur la vis verte prévue à cet effet.

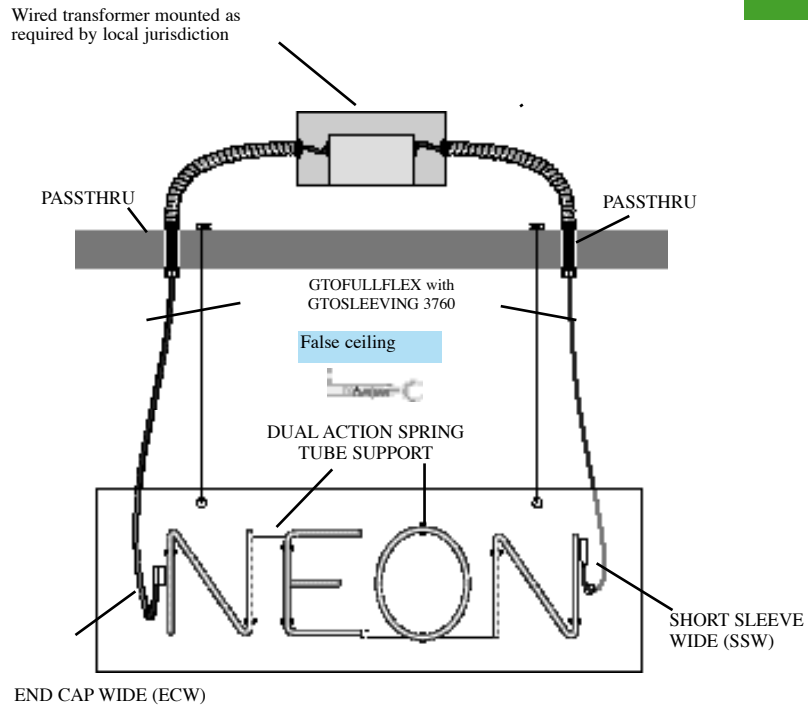
## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

TYPICAL WINDOW DISPLAY APPLICATION - SUSPENDED FROM CEILING - PLASTIC FRAME - DRY AND DAMP LOCATIONS

APLICACION TIPICA DE VITRINA DE NEON - COLGADA DEL TECHO - SOPORTE DE PLASTICO - AMBIENTES SECOS O HUMEDOS

APPLICATION TYPE DE NÉON DE VITRINE - SUSPENDUE DU PLAFOND- SUPPORT PLASTIQUE - ENVIRONNEMENTS SECS ET HUMIDES

### ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES



Short Sleeve Wide



End Cap Wide



GTOFULLFLEX with GTOBLEEVING 3760



GTOFULLFLEX with GTOBLEEVING 3760 IN METALLIC CONDUIT



Passthru



Tube Support

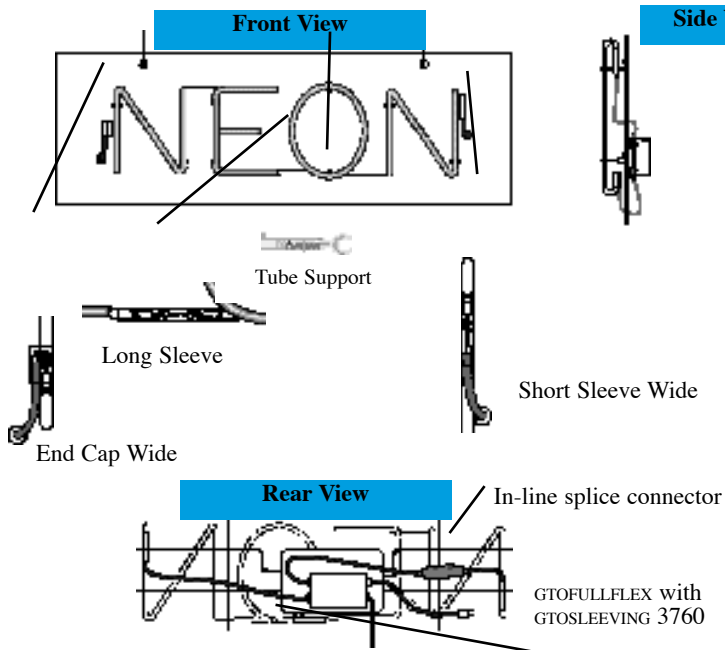
SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

TYPICAL PORTABLE NEON APPLICATION - DRY AND DAMP LOCATIONS

APLICACION TIPICA DE AVISO DE NEON PORTATIL- AMBIENTES SECOS O HUMEDOS

APPLICATION TYPE DE NÉON PORTATIF - ENVIRONNEMENTS SECS ET HUMIDES

ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES



Short Sleeve Wide



GTOFULLFLEX with GTO SLEEVING 3760



End Cap Wide



Tube Support



Long Sleeve



In-line splice connector

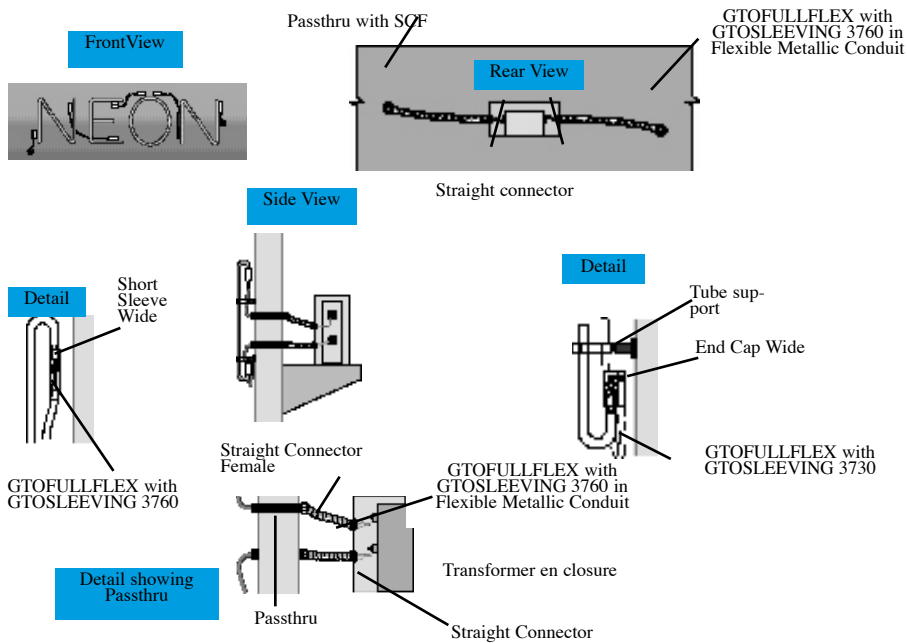
# SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

## TYPICAL INDOOR SKELETAL NEON - DRY AND DAMP LOCATIONS

### APLICACION TIPICA DE AVISO DE NEON "ESQUELÉTICO" PARA EL INTERIOR- AMBIENTES SECOS O HUMEDOS

### APPLICATION TYPE DE NÉON "SQUELETTE" À L'INTÉRIEUR - ENVIRONNEMENTS SECS ET HUMIDES

#### ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES



GTOFULLFLEX with GTO SLEEVING 3730 IN METALLIC CONDUIT



GTOFULLFLEX with GTO SLEEVING 3760



Passthru



Straight connector female



Tube Support



Straight connector



End Cap Wide



Short Sleeve Wide

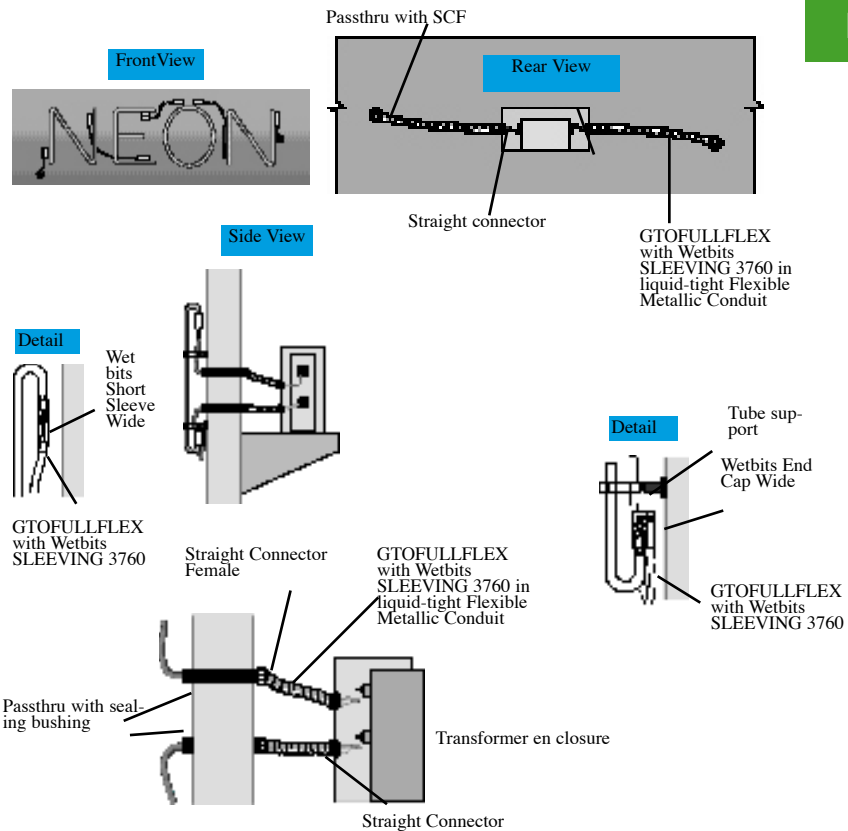
# SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

## TYPICAL OUTDOOR SKELETAL NEON - WETLOCATIONS

### APLICACION TIPICA DE AVISO DE NEON "ESQUELÉTICO" PARA EL EXTERIOR- AMBIENTES MOJADOS

### APPLICATION TYPE DE NÉON "SQUELETTE" À L'EXTÉRIEUR - ENVIRONNEMENTS MOUILLÉS

#### ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES



Passthru with outpt kit



GTOFULLFLEX with WETBITS SLEEVING 3760 IN LIQUID-TIGHT METALLIC CONDUIT



GTOFULLFLEX with WETBITS SLEEVING 3760



Straight connector



Straight connector female



Wetbits End Cap Wide



Tube Support



Wetbits Short Sleeve Wide

SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

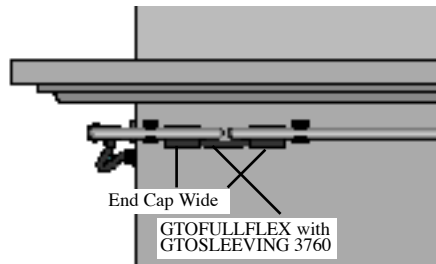
TYPICAL OUTDOOR EXPOSED BORDER ARCHITECTURAL NEON - DRY AND DAMP LOCATIONS

APLICACION TIPICA DE NEON EN ARCHITECTURA EXTERIOR- AMBIENTES SECOS O HUMEDOS

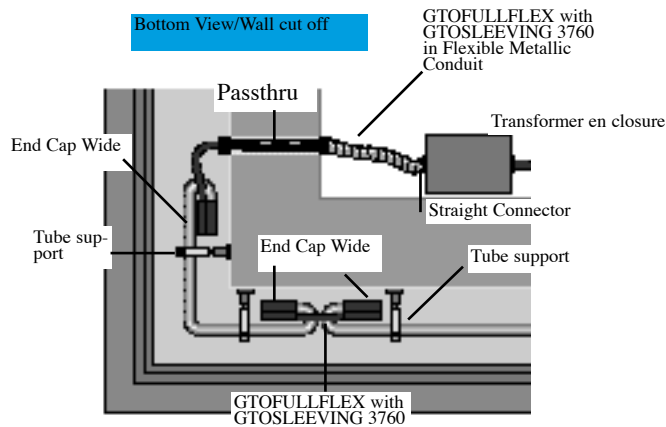
APPLICATION TYPE DE NÉON D'ARCHITECTURE À L'EXTÉRIEUR - ENVIRONNEMENTS SECS ET HUMIDES

ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES

Front View



Bottom View/Wall cut off



Passthru with outpt kit



Straight connector



Straight connector female



Tube Support



GTOFULLFLEX with GTO SLEEVING 3760 IN METALLIC CONDUIT



End Cap Wide



GTO Cable with GTO SLEEVING 3760

SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

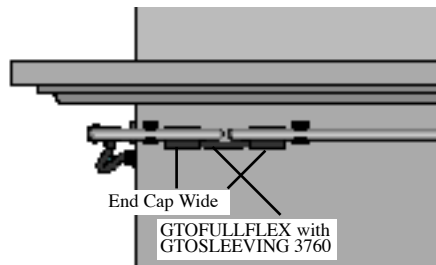
TYPICAL OUTDOOR BORDER ARCHITECTURAL NEON - WET LOCATIONS

APLICACION TIPICA DE NEON EN ARCHITECTURA EXTERIOR- AMBIENTES MOJADOS

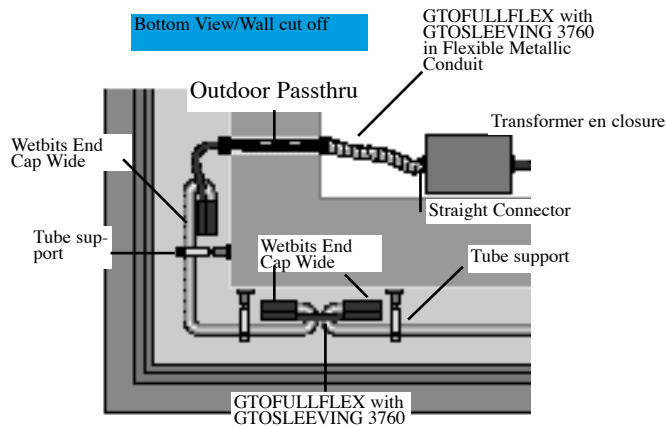
APPLICATION TYPE DE NÉON D'ARCHITECTURE À L'EXTÉRIEUR - ENVIRONNEMENTS MOUILLÉS

ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES

Front View



Bottom View/Wall cut off



GTOFULLFLEX with GTO SLEEVING 3760 IN METALLIC CONDUIT



GTO Cable with GTO Sleeveing 3760

## SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -

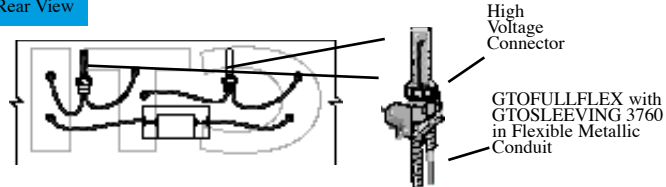
TYPICAL WALL-MOUNTED CHANNEL LETTERS APPLICATION - ANY SIGN FAC MATERIAL - DRY AND DAMP LOCATIONS

APLICACION TIPICA DE LETRAS CANALES INSTALADAS SOBRE PARED-CUALQUIER MATERIAL DE FACHADA- AMBIENTES SECOS O HUMEDOS

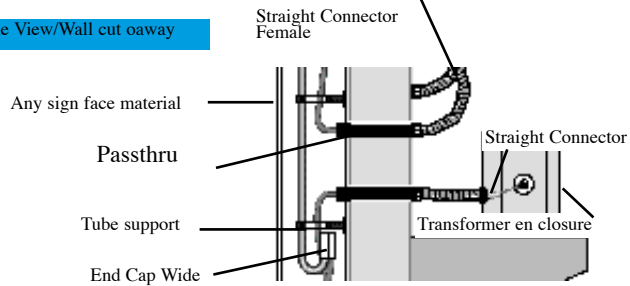
APPLICATION TYPE DE LETTRES CANAL INSTALLÉES SUR UNE PAROI - TOUT TYPE DE MATERIAUX DE FAÇADE- ENVIRONNEMENTS SECS ET HUMIDES

### ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES

Rear View



Side View/Wall cut away





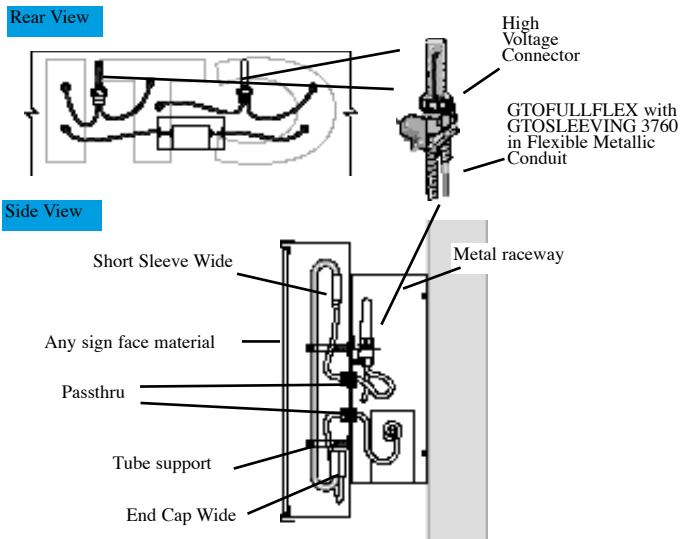
**SECTION F - NEON ASSEMBLING SYSTEMS & TYPICAL INSTALLATIONS -**

**TYPICAL RACEWAY-MOUNTED CHANNEL LETTERS APPLICATION - ANY SIGN FAC MATERIAL - DRY AND DAMP LOCATIONS**

**APLICACION TIPICA DE LETRAS CANALES INSTALADAS SOBRE CAJA-CUALQUIER MATERIAL DE FACHADA - AMBIENTES SECOS O HUMEDOS**

**APPLICATION TYPE DE LETTRES CANAL INSTALLÉES SUR UN CAISSON -FAÇADE MATERIAUX DE TOUT TYPE- ENVIRONNEMENTS SECS ET HUMIDES**

**ELECTROBITS PARTS YOU WILL NEED - PIEZAS NECESARIAS - PIÈCES NÉCESSAIRES**



High Voltage Connector



GTOFULLFLEX with GTO SLEEVING 3760 in Flexible Metallic Conduit



Tube Support



Passthru



End Cap Wide



Short Sleeve Wide



**SECTION G**

**PRODUCT INSTALLATION INSTRUCTION SHEETS**  
**INSTRUCCIONES DE INSTALACION DE LOS PRODUCTOS**  
**FEUILLETS D'INSTRUCTIONS D'INSTALLATION DES PRODUITS**



## Electrobits International Inc.

### Electrode Splice Enclosures Installation Instructions as per UL879 8th edition, October 22nd 2007.

### Model Series Short Sleeve (SS) and End Cap (EC), both models including Gto Cable Sleevng Adaptor GTOCA260

#### Gto Cable Sleevng Adaptor

GTOCA260 for cable O.D from 0.260 to 0.315 included with both models.



#### Short Sleeve

SS10mm30mA  
SS12mm60mA  
SS13mm60mA  
SS15mm60mA



#### End Cap

EC10mm30mA  
EC12mm60mA  
EC13mm60mA  
EC15mm60mA



### General instructions and warnings

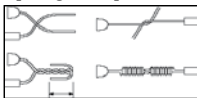
#### Follow the instructions given for each assembly

##### General

- Do not paint any section of the electrode that will be covered by the electrode splice enclosure. Do not paint any fitting, or sleeving.
- Electrobits electrode splice enclosures are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

### Minimum installation instructions for Electrobits systems

#### Splicing for all products



#### Warning : Risk of fire or electric shock!

Electrobits fittings, coverings and sleeveings to be used in dry and damp locations only.

#### Warning : Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc.

#### Warning : Risk of fire!

GtoSleeving 3760 is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation :** GTO Wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

**Note:** You need to have the following instructions and UL product file # E129837 added to your own UL procedures if you are a UL listed sign shop and would like to use our system to obtain a UL listed sign.

### Short Sleeve Installation Instructions

Model series : SS10mm30mA, SS12mm60mA, SS13mm60mA, SS15mm60mA

- For dry and damp locations only.
- Short Sleeve to be used either with Electrobits Sleevng 3760 or Gto Cable Sleevng Adaptor GTOCA260



#### Using GTO Sleevng 3760 over GTO 15 cable maximum

- Slide Sleevng 3760 over cable.
- Slide Short Sleeve over GTO cable (strip one inch) and Sleevng 3760 far enough to make splice.
- Make a splice connection between the GTO cable and the electrode.
- Slide back the Short Sleeve over the electrode connection and the neon electrode until it reaches the ceramic collar or en of metal shell. Make sure the insulated cable fits properly into the molded cavity.



Step 4 Make sure to slide the Short Sleeve back up to the ceramic collar.



#### Using Integral Sleeve GTO cable with GTO Cable Sleevng Adaptor (GTOCA)

For a complete list of Classified integral sleeve GTO systems please refer to the GTOCA260 instruction sheet.

- Choose GTOCA according to your GTO cable outside diameter :
  - For cables O.D. ranging from 0.260" to 0.275" (GTO15 and Integral sleeve GTO), use GTOCA260 as is.
  - For cables O.D. ranging from 0.300" to 0.315" (Integral sleeve GTO15), you must cut the GTOCA along the parting line, as per figures below.



Parting line



Step 1. 2 & Step 1.4

Discart right part after cutting

- Slide appropriated GTOCA at least 51/2" onto GTO cable, flanged side first, as shown on picture below.
- Slide Short Sleeve onto cable.
- Make connection between cable and electrode.
- Slide back the Short Sleeve over the electrode connection and the neon electrode until it reaches the ceramic collar.



Step 2



Step 3



Step 4



Step 5

- Insert GTOCA back into the Short Sleeve. Make sure the collar of GTOCA reaches the end of the Short Sleeve.



Step 6

### End Cap Installation Instructions

Model series : EC10mm30mA, EC12mm60mA, EC13mm60mA, EC15mm60mA

- For dry and damp locations only.
- End Cap to be used either with Electrobits Sleevng3760 or Gto Cable Adaptor GTOCA260

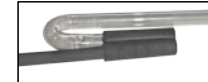


#### Using GTO Sleevng 3760 over GTO 15 cable maximum

- Slide Sleevng 3760 over cable.
- Make connection between GTO cable and electrode.
- Place Sleevng and cable along the electrode.
- Slide back on the End Cap over the electrode splice connection, while maintaining the 3760 sleeving against the glass of the electrode until it reaches the ceramic collar or end of the metal shell. Always make sure that the sleeving is inserted and covers all of the GTO cable up to the splice connection and into the interior of the End Cap when sliding it onto the electrode.
- When installed in a damp location the open end must be mounted in a horizontal position with the open end at the same height above ground or lower than the closed end of the electrode enclosure.



Step 3



Step 4



#### Using Integral Sleeve GTO cable with GTO Cable Sleevng Adaptor (GTOCA)

For a complete list of Classified integral sleeve GTO systems please refer to the GTOCA260 instruction sheet.

- Choose GTOCA according to your GTO cable outside diameter :
  - For cables O.D. ranging from 0.260" to 0.275" (GTO15 and Integral sleeve GTO), use GTOCA260 as is.
  - For cables O.D. ranging from 0.300" to 0.315" (Integral sleeve GTO15), you must cut the GTOCA along the parting line, as per figures below.



Parting line



Step 1. 2 & Step 1.4

Discart right part after cutting

- Slide appropriated GTOCA at least 21/2" onto GTO cable, flanged side first, as shown on picture below.
- Make connection between cable and electrode.



Step 2



Step 3

- Place cable and GTOCA along the electrode.
- Slide back on the End Cap over the electrode splice connection, while maintaining the 3760 sleeving against the glass of the electrode until it reaches the ceramic collar or end of the metal shell. Always make sure that the sleeving is inserted and covers all of the GTO cable up to the splice connection and into the interior of the End Cap when sliding it onto the electrode.
- Insert GTOCA back into the End Cap. Make sure the collar of GTOCA reaches the end of the End Cap. Make sure to align the flat surface of the GTOCA against the glass portion of the neon tube.



Step 4



Step 5



Step 6

- When installed in a damp location the open end must be mounted in a horizontal position with the open end at the same height above ground or lower than the closed end of the electrode enclosure.

**ELECTRObits**  
INTERNATIONAL INC.  
Improving neon bit by bit... since 1988®

Electrobits International 300 St-Sacrement Street Office 114,  
Montreal, Qc. Canada, H2Y 1X4  
USA & Canada 1 (800) 567-2487 International 1 (514) 842-4150  
www.electrobits-international.com



E129837

3PXA  
E318961

## GTO Cable Sleeving Adaptor GTOCA260 Installation Instructions With Short Sleeve



For complete set of instructions concerning Dry&Damp UL879 Electrobits Electrode enclosure please refer to Short Sleeve and End Cap instruction sheets.

### GENERAL WARNINGS AND INSTRUCTIONS

Electrobits GTO Cable Sleeving Adaptor model series number GTOCA260 rated 15kv midpoint grounded is UL Recognized and Classified to be used only with the following UL Classified Neon electrode enclosures and Gto cable with integral sleeving enclosure system as per UL 879B:

- \*1. Electrobits GTO-10 integral sleeve E137842
- 2. Paige electrical GTO-15 integral sleeve E135239
- 3. Westrim Hi-Flex GTO-15 integral sleeve E237581
- 4. Neon Power Pro GTO assembly E192648
- 5. Transco GTO-15 integral sleeve E226224
- 6. ISS GTO TECH-2 GTO-15 integral sleeve E257545
- 7. Silitherm GTO-15 integral sleeve E193971

Along with Electrobits Dry & Damp Electrode Enclosure model series number: Short Sleeve SS10mm30mA  
SS12mm60mA; SS13mm60mA; SS15mm60mA

Make sure to follow appropriate instructions.  
For Dry and Damp locations.



- 1- Choose GTOCA according to your GTO cable outside diameter :
  - 1.1 For cables O.D. ranging from 0.260" to 0.275" (GTO15 or Integral sleeve GTO), use GTOCA260 as is.
  - 1.2 For cables O.D. ranging from 0.300" to 0.315" (Integral sleeve GTO15), you must cut the GTOCA along the parting line, as per figures below.



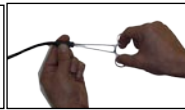
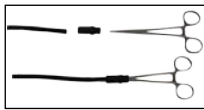
Parting line



Step 1. 2

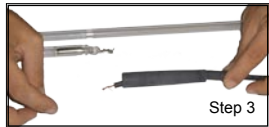
Discart  
right  
part  
after  
cutting

- 2- Using fishing forceps as per pictures below, slide appropriated GTOCA at least 5/12" onto GTO cable, flanged side first.



Step 2

- 3- Slide Short Sleeve onto cable.
- 4- Make connection between cable and electrode.
- 5- Insert GTOCA back into the Short Sleeve. Make sure the collar of GTOCA reaches the end of the Short Sleeve.



Step 3



Step 4



Step 5

- 6- Slide back the Short Sleeve over the electrode connection and the neon electrode until it reaches the ceramic collar.



Step 6

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\* When using the Electrobits GTO10 Integral, the system is UL Listed

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## GTO Cable Sleeving Adaptor GTOCA260 Installation Instructions With End Cap



For complete set of instructions concerning Dry&Damp UL879 Electrobits Electrode enclosure please refer to Short Sleeve and End Cap instruction sheets.

### GENERAL WARNINGS AND INSTRUCTIONS

Electrobits GTO Cable Sleeving Adaptor model series number GTOCA260 rated 15kv midpoint grounded is UL Recognized and Classified to be used only with the following UL Classified Neon electrode enclosures and Gto cable with integral sleeving enclosure system as per UL 879B:

- \*1. Electrobits GTO-10 integral sleeve E137842
- 2. Paige electrical GTO-15 integral sleeve E135239
- 3. Westrim Hi-Flex GTO-15 integral sleeve E237581
- 4. Neon Power Pro GTO assembly E192648
- 5. Transco GTO-15 integral sleeve E226224
- 6. ISS GTO TECH-2 GTO-15 integral sleeve E257545
- 7. Silitherm GTO-15 integral sleeve E193971

Along with Electrobits Dry & Damp Electrode Enclosure model series number: End Cap EC10mm30mA;  
EC12mm60mA; EC13mm60mA; EC15mm60mA

Make sure to follow appropriate instructions.  
For Dry and Damp locations.



- 1- Choose GTOCA according to your GTO cable outside diameter :
  - 1.1 For cables O.D. ranging from 0.260" to 0.275" (GTO15 or Integral sleeve GTO), use GTOCA260 as is.
  - 1.2 For cables O.D. ranging from 0.300" to 0.315" (Integral sleeve GTO15), you must cut the GTOCA along the parting line, as per figures below.



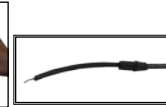
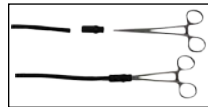
Parting line



Step 1. 2

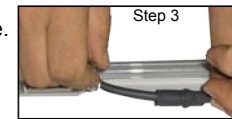
Discart  
right  
part  
after  
cutting

- 2- Using fishing forceps as per pictures below, slide appropriated GTOCA at least 2 1/2" onto GTO cable, flanged side first.



Step 2

- 3 - Make connection between cable and electrode.



Step 3

- 4- Place cable and GTOCA along the electrode.
- 5- Slide back the Short Sleeve over the electrode connection and the neon electrode until it reaches the ceramic collar.



Step 4



Step 5

- 6- Insert GTOCA back into the End Cap. Make sure the collar of GTOCA reaches the end of the End Cap. Make sure to align the flat surface of the GTOCA against the glass portion of the neon tube.



Step 6

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\* When using the Electrobits GTO10 Integral, the system is UL Listed

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## Electrobits International Inc.

### Electrode Splice Enclosures Installation Instructions as per UL879 8th edition, October 22nd 2007.

#### Model Series POP Short Sleeve (SS) and POP End Cap (EC)

Short Sleeve  
POPSS13mm60mA



End Cap  
POPEC13mm60mA



Electrobits Electrode enclosures model series number POPSS13mm60mA and POPEC13mm60mA rated 15kv midpoint grounded are UL Recognized parts and Classified systems to be used only with the following Gto cables with integral sleeving UL Classified as per UL 879:

1. Paige electrical GTO-15 integral sleeve E135239
2. Westrim Hi-Flex GTO-15 integral sleeve E237581
3. Silitherm GTO-10 & GTO-15 integral sleeve E193971
4. Transco GTO-15 integral sleeve E226224
5. ISS GTO TECH-2 GTO-15 integral sleeve E257545
6. ISS GTO TECH-1 GTO-15 integral sleeve E257545

#### General instructions and warnings

Follow the instructions given for each assembly

##### General

- Do not paint any section of the electrode that will be covered by the electrode splice enclosure.  
Do not paint any fitting, or sleeving.
- Electrobits electrode splice enclosures are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

##### Minimum installation instructions for Electrobits systems

**Warning :** Risk of fire or electric shock!

Electrobits fittings, coverings and sleeveings to be used in dry and damp locations only.

**Warning :** Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc.

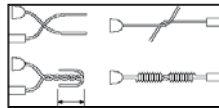
**Warning :** Risk of fire!

GtoSleeving 3760 is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation :** GTO Wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

**Note:** You need to have the following instructions and UL product file # E129837 added to your own UL procedures if you are a UL listed sign shop and would like to use our system to obtain a UL listed sign.

##### Splicing for all products



## Short Sleeve Installation Instructions

### Model series : POPSS13mm60mA

- For dry and damp locations only.



Using GTO 15 cable maximum



Step 1- Insert GTO cable into short sleeve.



Step 2a- Use a fishing forcep tool to pull GTO cable through the Short Sleeve.



Step 2b- Use a fishing forcep tool to pull GTO cable through the Short Sleeve.



Step 3- Make a splice connection between the GTO cable and the electrode.



Step 4a- Slide back the Short Sleeve over the connection and the neon electrode until it reaches the ceramic collar or end of metal shell.



Step 4b- Slide back the Short Sleeve over the connection and the neon electrode until it reaches the ceramic collar or end of metal shell.

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www.electrobits.com

## Electrobits International Inc.

### Electrode Splice Enclosures Installation Instructions as per UL879 8th edition, October 22nd 2007.

#### Model Series POP Short Sleeve (SS) and POP End Cap (EC)

Short Sleeve  
POPSS13mm60mA



End Cap  
POPEC13mm60mA



Electrobits Electrode enclosures model series number POPSS13mm60mA and POPEC13mm60mA rated 15kv midpoint grounded are UL Recognized parts and Classified systems to be used only with the following Gto cables with integral sleeving UL Classified as per UL 879:

1. Paige electrical GTO-15 integral sleeve E135239
2. Westrim Hi-Flex GTO-15 integral sleeve E237581
3. Silitherm GTO-10 & GTO-15 integral sleeve E193971
4. Transco GTO-15 integral sleeve E226224
5. ISS GTO TECH-2 GTO-15 integral sleeve E257545
6. ISS GTO TECH-1 GTO-15 integral sleeve E257545

#### General instructions and warnings

Follow the instructions given for each assembly

##### General

- Do not paint any section of the electrode that will be covered by the electrode splice enclosure.  
Do not paint any fitting, or sleeving.
- Electrobits electrode splice enclosures are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

##### Minimum installation instructions for Electrobits systems

**Warning :** Risk of fire or electric shock!

Electrobits fittings, coverings and sleeveings to be used in dry and damp locations only.

**Warning :** Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc.

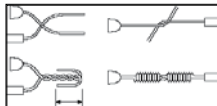
**Warning :** Risk of fire!

GtoSleeving 3760 is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation :** GTO Wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

**Note:** You need to have the following instructions and UL product file # E129837 added to your own UL procedures if you are a UL listed sign shop and would like to use our system to obtain a UL listed sign.

##### Splicing for all products



## End Cap Installation Instructions

### Model series : POPEC13mm60mA

- For dry and damp locations only.



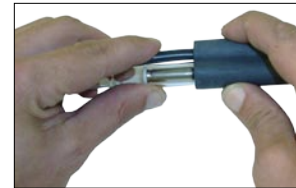
Using GTO 15 cable maximum



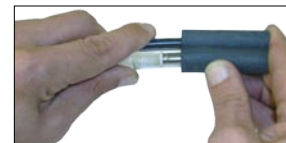
Step 1- Bring all parts together.



Step 2- Make a splice connection between the GTO cable and the electrode.



Step 3a- Slide back the End Cap over the connection and the neon electrode maintaining the integral sleeve Gto Cable into the molded cavity.



Step 3b- Slide back the End Cap over the connection and the neon electrode maintaining the integral sleeve Gto Cable into the molded cavity.



Step 4- Make sure border of End Cap reaches the ceramic collar or end of metal shell. When installed in a damp location the end cap must be mounted in an horizontal position with the open end at the same height above ground, or lower, than its closed end.

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## General instructions and warnings

### Follow the instructions given for each assembly

#### General

- Electrobits electrodes insulators are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.**
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- Do not paint any fitting, covering or sleeving.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

## Instrucciones y precauciones generales

### Seguir las instrucciones dadas por cada tipo de instalación

#### Generalidades

- Los capuchones aislantes de electrodos Electrobits están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.
- Utilización en ambientes secos o húmedos únicamente**
- Las instalaciones eléctricas nunca deben servir de soporte para la instalación de los tubos de neón.
- No perforar, ni cortar, ni modificar ninguno de los productos de una manera diferente a la indicada en las instrucciones de instalación.
- No se deben pintar los capuchones, ni los forros ni cualquier otro producto aislante.
- Para obtener un rótulo luminoso certificado e conforme a las normas de seguridad, utilizar estos productos y sistemas únicamente con componentes también certificados.
- Siempre utilizar los capuchones correspondiendo a la dimensión del electrodo.

## Instruccions et précautions générales

### Toujours suivre les instructions données pour chaque type d'installation

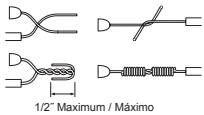
#### Généralités

- Les capuchons isolants pour électrodes Electrobits sont prévus et certifiés pour une utilisation sur un circuit de 7.5 KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par un transformateur de 15KV avec mise à la terre au milieu.
- Utilisation en environnement sec ou humide seulement**
- Les installations électriques ne doivent en aucun cas servir de support aux tubes de néon.
- Ne pas couper, ne pas percer et ne pas modifier les produits autrement que selon les instructions d'installation fournies.
- Ne pas peindre les capuchons, ni les gaines, ni aucun autre produit d'isolation.
- Pour obtenir une enseigne certifiée, utiliser ces produits et systèmes uniquement avec des composants eux-mêmes certifiés.
- Toujours prendre soin d'utiliser la taille de capuchon appropriée aux électrodes.

## Splicing for all products

### Enlace de los cables

### Raccordement des câbles



- Strip GTO cable insulation 3/4 to 1 inch maximum and bring the GTO cable to the electrode wires. All splicing must be made of at least 5 twists, bent back and flattened. If using crimps, trim the resulting stranded wires.
- Pelar de 2 a 2.5cm (3/4 a 1 pulgada) la funda del cable GTO y enlazar el cable a los cables del electrodo tal como indicado sobre la figura aquí arriba. Todos los enlaces deben contar un mínimo de 5 vueltas antes de ser doblados y achatados. Cortar las puntas sobresaliendo con pinzas.
- Dénuder le fil GTO sur une longueur de 2 à 2.5cm (3/4 à 1pouce) et le raccorder aux fils de l'électrode tel qu'illustré sur la figure ci-haut. Tous les raccordements doivent être faits d'au moins 5 tours de fils enlacés, repliés puis aplatis. Couper les extrémités superflues avec des pinces.

## Minimum installation instructions for Electrobits systems

**Warning :** Risk of fire or electric shock  
Electrobits fittings, coverings and sleeves to be used in dry and damp locations only.

**Warning :** Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.

**Warning :** Risk of fire!

GtoSleeving is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation :** GTO wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

## Instrucciones minimales para la instalación de los sistemas Electrobits

**Cuidado :** Riesgo de fuego o choque eléctrico!

Los capuchones, forros y otros productos aislantes Electrobits se deben instalar en ambientes secos o húmedos únicamente.

**Cuidado :** Riesgo de choque eléctrico!

Los productos aislantes Electrobits pueden instalarse por dentro o por fuera cuando estén en un cajetín de anuncio ("channel letters" y otros cajetines, con cualquier material de fachada), sobre instalaciones portátiles para vitrinas y orillas decorativas, etc. Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior (figura de arriba).

**Cuidado :** Riesgo de fuego!

El forro aislante GtoSleeving esta previsto para un cable GTO 15KV máximo. El forro no se debe utilizar dentro de las paredes. El forro solo no puede servir de aislante para enlaces de cable GTO (utilizar más bien el In-line Splice connector ILS).

**Recomendación :** El cable GTO debe estar alejado de cualquier pieza metálica, incluyendo las escondidas, para reducir lo más posible la posibilidad de sobrecarga eléctrica debida al acoplamiento de capacitancias.

## Instruccions minimales pour l'installation des systèmes Electrobits

**Attention :** Risque d'incendie ou de choc électrique!  
Les embouts et les gaines isolantes Electrobits doivent être installés dans un environnement sec ou humide seulement.

**Attention :** Risque de choc électrique!

Les produits isolants Electrobits peuvent être installés à l'intérieur ou à l'extérieur dans la mesure où ils sont à l'intérieur d'un caisson ("channel letter" ou autre, avec tout type de matériaux de façade), sur des enseignes portatives à l'intérieur de vitrines, sur des enseignes intérieures de type "squelette", etc. Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent être à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle (voir figure plus haut).

**Attention :** Risque d'incendie!

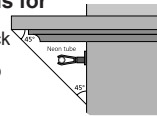
La gaine isolante GtoSleeving est conçue pour isoler au maximum un fil GTO-15. Elle n'est pas prévue pour une utilisation à l'intérieur des murs. Ne jamais effectuer de raccord de fil GTO à l'intérieur de la gaine; pour cela utiliser plutôt un connecteur en ligne ILS.

**Recommandation :** Les fils GTO devraient être tenus éloignés de tout environnement métallique, incluant les structures cachées, afin de diminuer au maximum la charge électrique provenant d'un couplage de capacités.

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www.electrobits.com or costumerservice@electrobits.com

Printed in Canada US INSTR 2000



## Installation Instructions

### Residential End Cap

#### ECR10 mm

#### ECR313 mm

#### ■ For dry and damp locations

- Strip one inch of GTO wire.
- Cover the GTO wire to within 1/4 inch of the end of the insulation with GtoSleeving.
- Insert GTO wire into the round opening of the Residential End Cap safety sleeve with the cutout side of the safety sleeve facing away from the GTO wire.
- Insert gas tube electrode into the other opening and secure the connection by making at least five twists of GTO wire with the electrode wire.
- Fold the completed wire connection into the safety sleeve cutout ensuring that the ends of the wire do not stick out.
- Insert Residential End Cap over completed assembly until safety sleeve is fully seated in the bottom of the Residential End Cap.

### Capuchones para residencias

#### ECR 10 mm

#### ECR3 13 mm

#### ■ Para ambientes secos o húmedos únicamente

- Pelar de 2.5cm (1 pulgada) la funda del cable GTO.
- Cubrir el cable GTO con GtoSleeving, dejando 0.5cm (1/4 de pulgada) del cable sin forro.
- Introducir el cable GTO dentro de la apertura redonda de la manga de seguridad del capuchón, de tal forma que la parte lisa de la manga de seguridad este opuesta al cable GTO.
- Introducir el electrodo con tubo de gas dentro de la segunda apertura de la manga de seguridad y hacer la conexión con el cable GTO dándole por lo menos 5 vueltas al enlace.
- Doblar la conexión dentro de la manga de seguridad, asegurándose que las extrmidades del enlace son se sale.
- Coloquar el capuchón para residencias por encima de la manga de seguridad hasta que la conexión este bien instalada al fondo del Capuchón.

### Capuchons pour résidences

#### ECR 10 mm

#### ECR3 13 mm

#### ■ Pour environnements secs ou humides seulement

- Dénuder le fil GTO sur 2.5cm (1 pouce).
- Couvrir le cable GTO de la gaine GtoSleeving, laissant 0.5cm (1/4 de pouce) de cable sans gaine.
- Introduire le cable GTO dans l'ouverture ronde du petit manchon de sécurité de telle sorte que la partie lisse du manchon soit à l'opposée du cable GTO.
- Introduire l'électrode avec tube de gas dans l'autre ouverture du manchon et faire la connexion entre les cables au moyen d'au moins 5 tours de fils enlacés.
- Plier la connexion dans le manchon de sécurité, s'assurer que les extrémités de la connexion n'en sortent pas.
- Faire glisser le capuchon pour résidences sur le manchon de sécurité recouvrant déjà la connexion jusqu'à ce que ce dernier atteigne le fond du Capuchon.

These devices are rated at 5 kV AC to ground.

They may be used with a 7,5 kV midpoint grounded transformer or power supply.

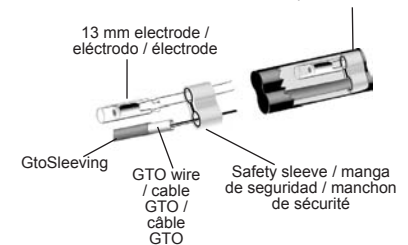
Estos productos estan acreditados para una instalación de 5 kV AC con poloa tierra. Pueden instalarse con un transformador de 7,5 kV con polo a tierra en el pormedio.

Ces produits sont accrédités pour des installations de 5 kV AC avec mise à la terre. Ils peuvent être installés avec un transformateur de 7,5 kV avec mise à la terre au milieu.



Residential End Cap (ECR0 / ECR3)  
Capuchón para residencias  
Capuchon pour résidences

Internal rib to lock safety sleeve in place / anillo interno para mantener la manga de seguridad en sitio / anneau interne pour maintenir le manchon de sécurité en place



UR FILE E 129837







**Wetbits End Cap Wide Installation Instructions**



Listed to the new UL 879 standard File # E129837



BOTTOM 4 of 4



TOP 3 of 4



BUSHING 2 of 4



WB3760 1 of 4

**COMPLETE PRODUCT CODE**

**PRODUCT DESCRIPTION**

**Includes all 3 parts**

- WBECW13mmWHT
- WBECW13mmBLK
- WBECW15mmWHT
- WBECW15mmBLK
- WBECW16mmWHT
- WBECW16mmBLK
- WBECW19mmWHT
- WBECW19mmBLK

- WETBITS END CAP WIDE 13mm WHITE
- WETBITS END CAP WIDE 13mm BLACK
- WETBITS END CAP WIDE 15mm WHITE
- WETBITS END CAP WIDE 15mm BLACK
- WETBITS END CAP WIDE 16mm WHITE
- WETBITS END CAP WIDE 16mm BLACK
- WETBITS END CAP WIDE 19mm WHITE
- WETBITS END CAP WIDE 19mm BLACK

**PRODUCT CODE  
Top part only**

**PRODUCT DESCRIPTION**

- WBECW13mmTOPWHT
- WBECW13mmTOPBLK
- WBECW15mmTOPWHT
- WBECW15mmTOPBLK
- WBECW16mmTOPWHT
- WBECW16mmTOPBLK
- WBECW19mmTOPWHT
- WBECW19mmTOPBLK

- WETBITS END CAP WIDE 13mm WHITE-TOP
- WETBITS END CAP WIDE 13mm BLACK-TOP
- WETBITS END CAP WIDE 15mm WHITE-TOP
- WETBITS END CAP WIDE 15mm BLACK-TOP
- WETBITS END CAP WIDE 16mm WHITE-TOP
- WETBITS END CAP WIDE 16mm BLACK-TOP
- WETBITS END CAP WIDE 19mm WHITE-TOP
- WETBITS END CAP WIDE 19mm BLACK-TOP

**PRODUCT CODE  
Bottom part only**

**PRODUCT DESCRIPTION**

- WBECWBOTTOMWHT
- WBECWBOTTOMBLK
- WBECWBOTTOMWHT
- WBECWBOTTOMBLK
- WBECWBOTTOMWHT
- WBECWBOTTOMBLK
- WBECWBOTTOMWHT
- WBECWBOTTOMBLK

- WETBITS END CAP WIDE 13mm WHITE-BOTTOM
- WETBITS END CAP WIDE 13mm BLACK-BOTTOM
- WETBITS END CAP WIDE 15mm WHITE-BOTTOM
- WETBITS END CAP WIDE 15mm BLACK-BOTTOM
- WETBITS END CAP WIDE 16mm WHITE-BOTTOM
- WETBITS END CAP WIDE 16mm BLACK-BOTTOM
- WETBITS END CAP WIDE 19mm WHITE-BOTTOM
- WETBITS END CAP WIDE 19mm BLACK-BOTTOM

**PRODUCT CODE  
Bushing only**

**PRODUCT DESCRIPTION**

- WBSBWHT
- WBSBBLK

- WETBITS END CAP WIDE BUSHING WHITE
- WETBITS END CAP WIDE BUSHING BLACK

**PRODUCT CODE  
Sleeving only**

**PRODUCT DESCRIPTION**

- WB3760WHT
- WB3760WHT

- WETBITS 3760 SLEEVING WHITE
- WETBITS 3760 SLEEVING WHITE

**Neon LightingLux Products inc.**

300, St-Sacrement #218 Montreal, QC, Canada H2Y 1X4  
 Tel. USA & Canada : 1-877-567-2487 Tel. International : +1-514-845-2487  
 FAX USA & Canada : 1-877-844-2487 FAX International : +1-514-842-2487  
 WEBSITE : luxandbits.com

**GENERAL WARNINGS AND INSTRUCTIONS**

1. For use on neon tubing secondary circuits rated maximum 60ma;
2. Suitable for use in wet,damp and dry locations only when GTO Sleeving, Electrobits WB3760 encloses exposed GTO cable;
3. The end of the electrode enclosure must be inserted over the GTO Sleeving;
4. Suitable for use only when electrode enclosure is properly sized for the neon tubing diameter;
5. WARNING- RISK OF FIRE,Do not modify the electrode enclosure in anyway;
6. WARNING-RISK OF FIRE,Other than cutting to length,do not modify GTO Sleeving in anyway;
7. Electrobits,E129837
8. Electrical rating of: 15kV, 7500V to ground.
9. Electrode insulators are intended for use in accordance with the 2005 National Electrical Code Art. 600 part 2 for field installed skeleton tubing and Canadian Electrical Code requirements;
10. GTO cable and Sleeving must be enclosed in conduit where it is used inside walls, though walls, above suspended ceilings or other concealed spaces.
11. Art. 600.42 (C) require that GTO Cable be supported within 6 inches of neon electrode
- 12 Art. 600.42(C) require that electrode insulator be installed at least 6 inches away from the USSB water seal. Support neon tube within 6 inches of the neon tube electrode.

Electrobits Wetbits electrode covers End Cap Wide are to be installed as part of UL approved wet system; they do not constitute a wet UL installation by themselves. The following pages present the 3 different circumstances of Electrobits Wetbits End cap Wide electrode cover installations you might encounter: 1) ELECTRODE TO TRANSFORMER CONNECTION when both transformer and neon sign are in wet locations; 2) ELECTRODE TO TRANSFORMER CONNECTION when transformer is in dry or damp location while neon sign is in wet location; 3) ELECTRODE TO ELECTRODE CONNECTION of any wet location neon sign. Always follow the appropriate installation instructions.

SECTION 1

ELECTRODE TO TRANSFORMER CONNECTION

when both transformer and neon sign are in wet locations. In that case you will need a Liquid Tight 1/2" Support Ring (LQSR12) to secure and insulate the end of LQBX or any UL Listed 1/2" Flexible Metallic Liquid Tight Conduit with WB3760 GTO Sleevling.

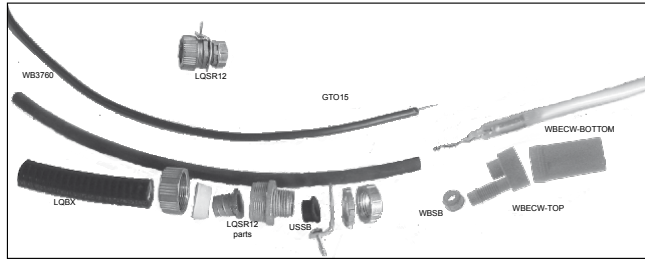


Figure 1 Exploded view of all necessary parts for Electrode to transformer connection when both transformer and sign are in wet locations.

Maximum length of LQBX is 20 feet

Cut LQBX 6" shorter than WB3760

Cut WB3760 3" shorter than GTO cable

Strip GTO cable on 1"

"GTO Cable minimum length for proper assembly is 6 in. allowing 1 inch of insulation removed for splice."

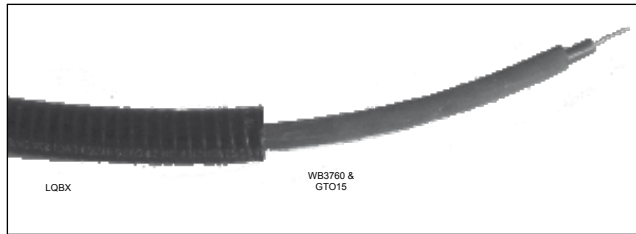


Figure 2 Sleeve your GTO cable into WB3760 and into LQBX

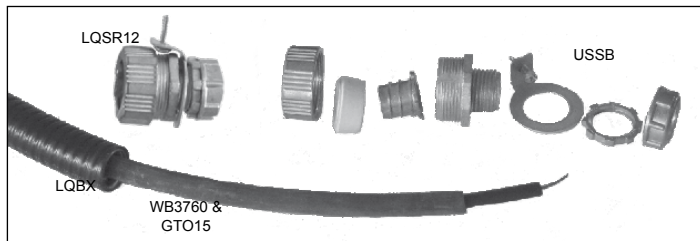


Figure 3 Disassemble LQSR12



Figure 4 Slide the large metallic head over the LQBX/WB3760/GTO cable assembly, along with yellow plastic ring. Slide the 1/2" twist-on connector over WB3760 and GTO cable and screw it into the LQBX.

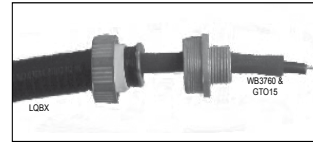


Figure 5 Slide the central part of the LQSR12 connector over the assembly and screw the large head onto it.

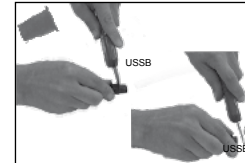


Figure 6 Cut USSB. Flanged end should be kept and the other end may be discarded.



Figure 7 Slide USSB over WB3760 and GTO cable. If necessary, slide support ring over assembly and use metallic self tapping screw to hold assembly in place on wall or ceiling.

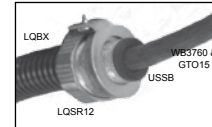


Figure 8 Make sure USSB is fully inserted into central part of LQSR12 connector

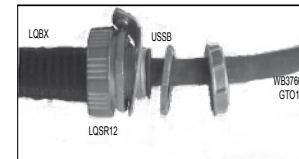


Figure 9 Slide locknut and metallic end bushing over WB3760 and GTO cable and screw all pieces together

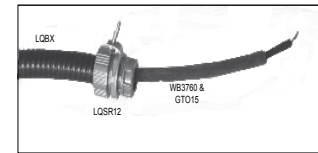


Figure 10 You are now ready to make connection between GTO cable and electrode using either Wetbits Short Sleeve or Wetbits End Cap. Make sure to leave at least 5 1/4 in. of GTO cable and WB3760 assembly standing out for connection with Wet Bits End Cap Wide.

NOTE: Please refer to the ELECTRODE TO ELECTRODE CONNECTION section for detailed installation instructions of Wetbits End Cap Wide

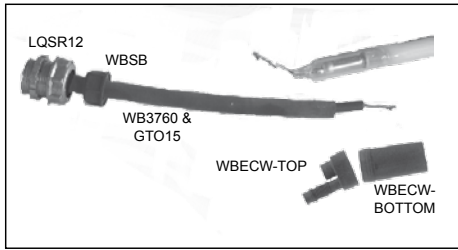


Figure 11 Slide WBSB over WB3760 and GTO cable until you reach metallic bushing of LQSR12

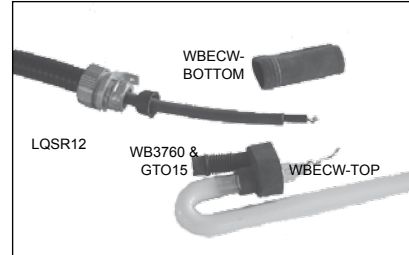


Figure 12 Slide top part of Wetbits End Cap Wide over electrode up to the ceramic collar.

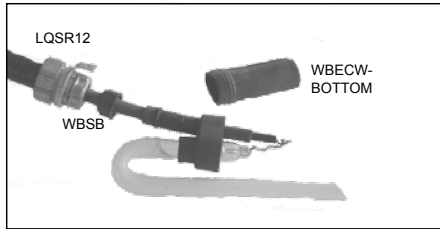


Figure 13 Slide the top part of Wetbits End Cap over WB3760 and Gto Cable. Make connection between GTO cable and electrode.

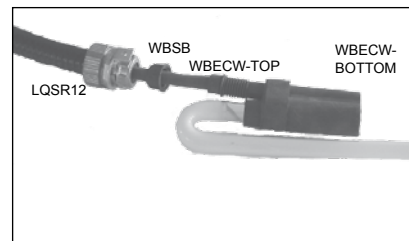


Figure 14 Cover the connection with bottom part of Wetbits End Cap Wide pushing it gently over the bottom part until it snaps over the ribs.

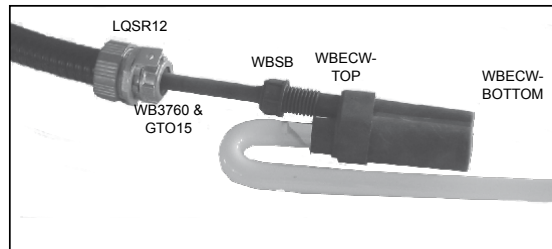


Figure 15 Slide the WBSB over the top part of the Wetbits End Cap Wide. DO NOT TWIST THE WBSB, simply push firmly.

Note:

- 1- For double backs, make sure to have at least 1/2 inch distance between the ends of the neon tubes electrodes.
- 2- For electrodes without ceramic collar, slide up to the edge of the inner electrode metal shell.

## SECTION 2

### ELECTRODE TO TRANSFORMER CONNECTION

when transformer is in dry or damp location while sign is in wet location. In that case you will need to use an OUTPT assembly to get your GTO cable thru wall or ceiling made of any material .

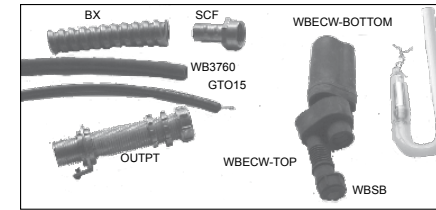


Fig 1 Exploded view of necessary parts for ELECTRODE TO TRANSFORMER CONNECTION when transformer is in dry or damp location while sign is in wet location.

Maximum length of Flexible Metallic Conduit such as BX / WB3760 sleeving / GTO cable assembly is 20 feet  
 Cut BX 6" shorter than WB3760  
 Cut WB3760 3" shorter than GTO cable  
 Strip GTO cable on 1"

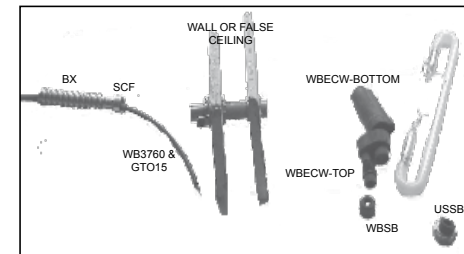
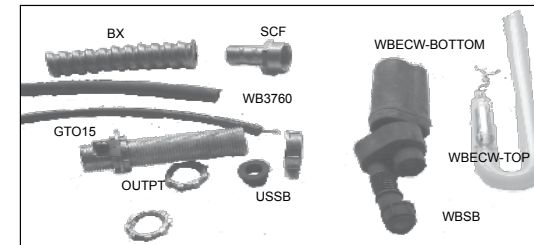


Figure 3 Sleeve your GTO cable with WB3760 sleeving and flexible metallic conduit. Use female straight connector (SCF12) to link with OUTPT. Make sure OUTPT length covers the wall completely and stands out front for 1/2". Install OUTPT thru wall making 7/8" whole. Use provided locknuts to secure in place.

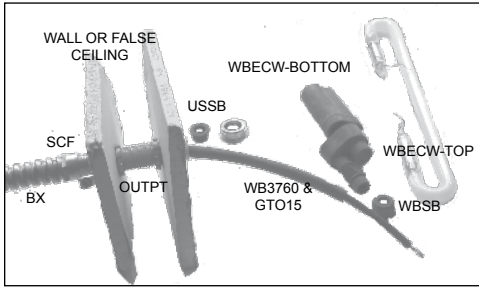


Figure 4 Slide WB3760 and GTO cable assembly into the OUTPT. Make sure you have 6" of this assembly standing out front for electrode connection.

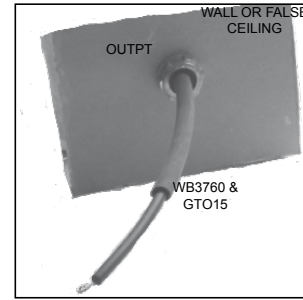


Figure 9 Screw the metallic bushing onto the end of OUTPT. You are now ready to make connection with electrode using either Wetbits short Sleeve Wide or End Cap Wide.

NOTE: Please refer to the ELECTRODE TO ELECTRODE CONNECTION section for detailed installation instructions of Wetbits End Cap Wide.

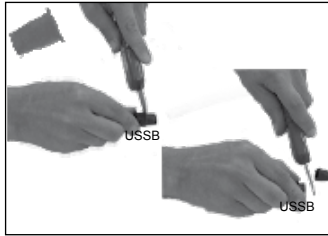


Figure 5 Cut USSB keeping only the first and largest section

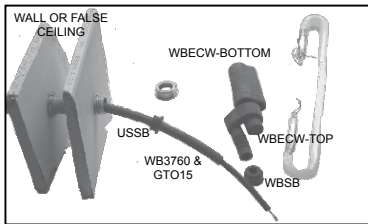


Figure 6 slide USSB over GTO cable and WB3760 assembly

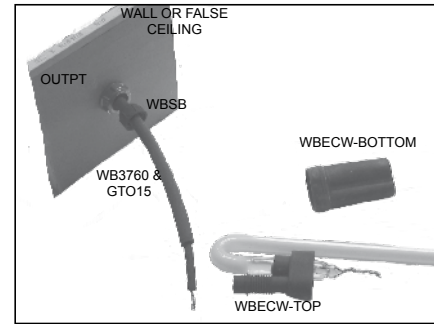
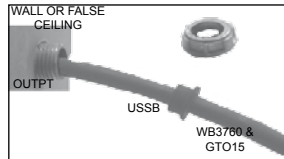


Figure 10 Slide WBSB over GTO cable and WB3760 sleeving assembly. Slide Top part of Wetbits End cap Wide onto electrode as per picture and until you reach the ceramic collar.

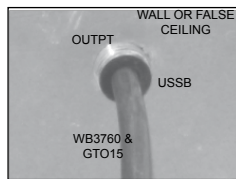


Figure 7 insert the USSB into the OUTPT

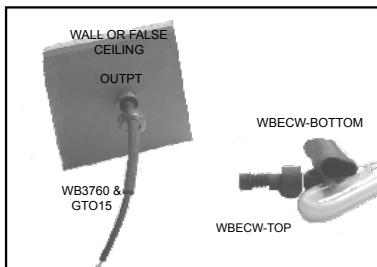


Figure 8 Slide the metallic bushing over the GTO cable and WB3760 assembly

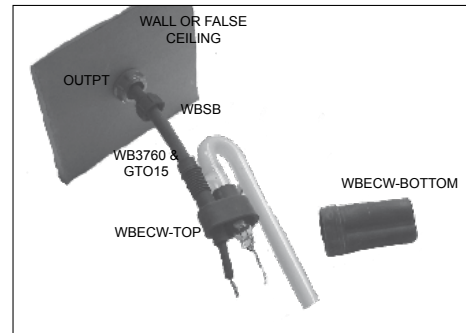


Figure 11 Slide top part of Wetbits End Cap Wide over GTO cable and WB3760 sleeving assembly.

Note:

- 1- For double backs, make sure to have at least 1/2 inch distance between the ends of the neon tubes electrodes.
- 2- For electrodes without ceramic collar, slide up to the edge of the inner electrode metal shell.

SECTION 3  
ELECTRODE TO ELECTRODE CONNECTION  
Wetbits End Cap Wide Installation instructions

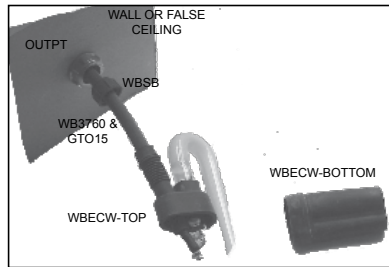


Figure 12 Make connection between GTO cable and electrode

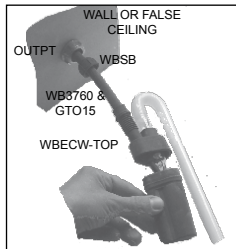


Figure 13 Cover connection with bottom part of Wetbits End Cap Wide

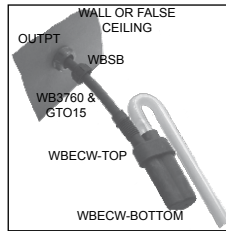


Figure 14 Push back WBSB over Wetbits End Cap to resume assembly. Use the provided grounding ring on OUTPT to ground your sign

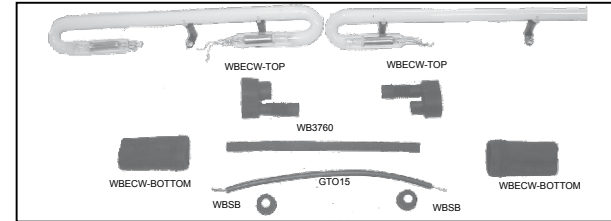
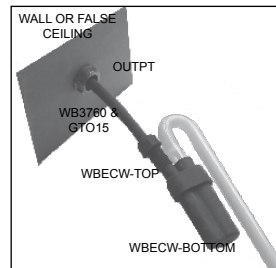
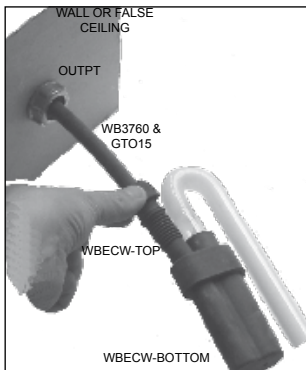


Fig.1 Exploded view of all necessary parts for a WETBITS End Cap Wide (WBECW) border tube installation with double back electrodes. A minimum of 7" from each end of the electrodes wire lead is required for proper installation of double back.

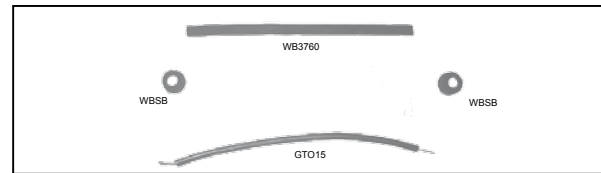


Fig.2 Cut 7" of WB3760 Sleeving and cut 8 1/2" of GTO15 cable

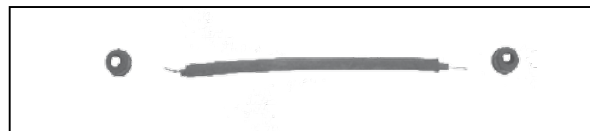


Fig.3 Insert the GTO15 cable inside the WB3760 sleeving

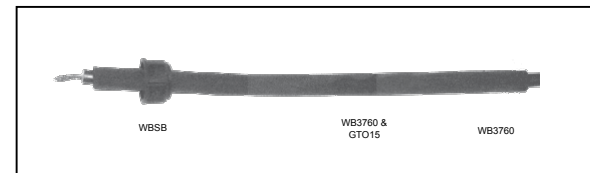


Fig.4 Slide one of the WBSB over the WB3760 sleeving

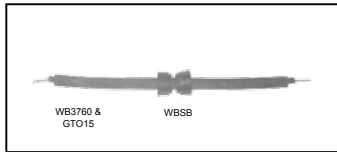


Fig.5 Slide the second WBSB in a matter to be able to have both bushing back to back as shown on the picture

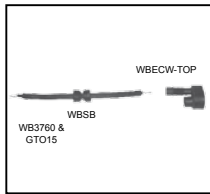


Fig.6 Slide the top part of the WBECW onto the WB3760 sleeving for a distance of 3"

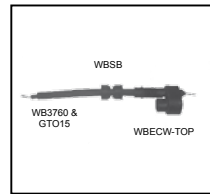


Fig.7 Slide the top part of the WBECW onto the WB3760 sleeving for a distance of 3"



Fig.8 Slide the second top part of the WBECW onto the opposite side of the WB3760 sleeving

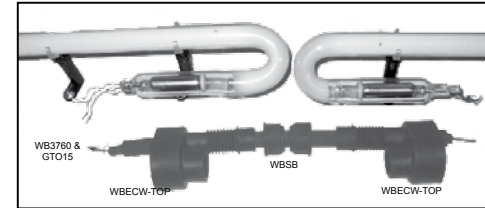


Fig.9 Align your assembly in front of the double back electrode

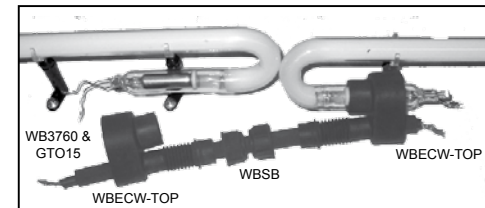


Fig.10 Slide the top part of one of the Wet-bits End Cap Wide (WBECW) on the facing electrode until it reaches the ceramic collar

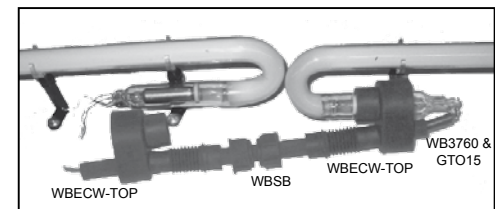


Fig.11 Make a 5 twist connection between the GTO cable and the electrode leads

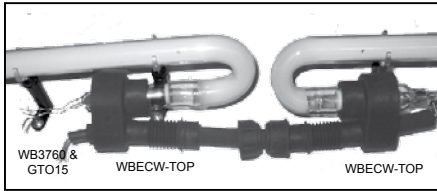


Fig.12 Slide the second top part of WBECW onto its facing electrode until it reaches the ceramic collar.

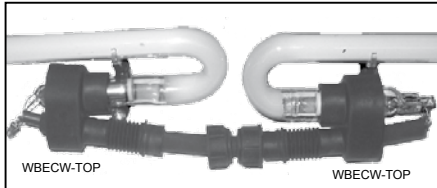
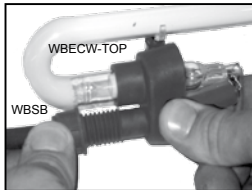


Fig.13 Make a 5 twist connection between the GTO cable and the electrode leads



**X NO TWIST  
PUSH TO SNAP ONLY**

Fig.14 Slide the WBSB Wetbits sealing bushing over the end of the top part of the WBECW in order to seal the junction between the WB3760 sleeving and the WBECW wetbits end cap wide

**X WARNING! DO NOT TWIST ON THE BUSHING  
PUSH TO SNAP ONLY**

Note:

- 1- For double backs, make sure to have at least 1/2 inch distance between the ends of the neon tubes electrodes.
- 2- For electrodes without ceramic collar, slide up to the edge of the inner electrode metal shell.

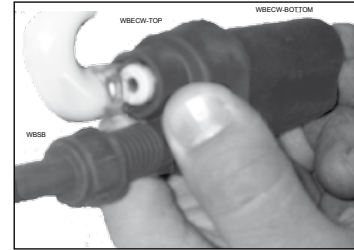


Fig.15 Slide the bottom part of the WBECW wetbits end cap wide over the connection you just made and into the top part of the end cap up the the first rib only

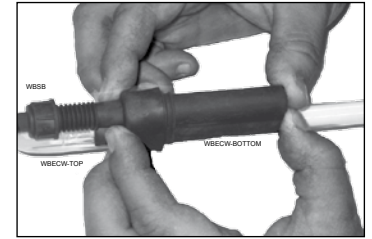


Fig.16 Position your hands and fingers as shown on the picture to insert the bottom part into the top part of the WBECW

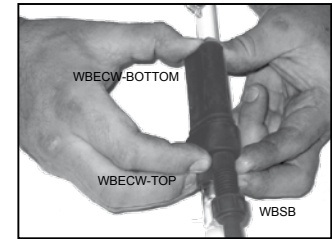


Fig.17 Placing your thumbs on the bottom part of the WBECW wetbits end cap wide, slightly push the cap forward into the top part until you hear the snap seal over the second rib of the cap

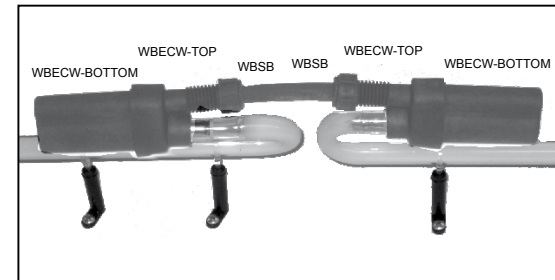


Fig.18 final assembly of the WBECW wetbits end cap wide



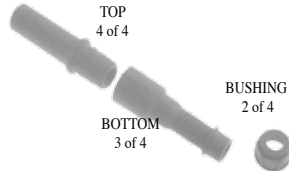
## Wetbits Short Sleeve Wide Installation Instructions



Listed to the new UL 879 standard  
File # E129837



WB3760 1 of 4



1. For use on neon tubing secondary circuits rated maximum 60ma;
2. Suitable for use in wet,damp and dry locations only when GTO Sleeving, Electrobits WB3760 encloses exposed GTO cable;
3. The end of the electrode enclosure must be inserted over the GTO Sleeving;
4. Suitable for use only when electrode enclosure is properly sized for the neon tubing diameter;
5. WARNING- RISK OF FIRE,Do not modify the electrode enclosure in anyway;
6. WARNING-RISK OF FIRE,Other than cutting to length,do not modify GTO Sleeving in anyway;
7. Electrobits,E129837
8. Electrical rating of: 15kV, 7500V to ground.
9. Electrode insulators are intended for use in accordance with the 2005 National Electrical Code Art. 600 part 2 for field installed skeleton tubing and Canadian Electrical Code requirements;
10. GTO cable and Sleeving must be enclosed in conduit where it is used inside walls, though walls, above suspended ceilings or other concealed spaces.
11. Art. 600.42 (C) require that GTO Cable be supported within 6 inches of neon electrode
- 12 Art. 600.42(C) require that electrode insulator be installed at least 6 inches away from the USSB water seal. Support neon tube within 6 inches of the neon tube electrode.

Electrobits Wetbits electrode covers Short Sleeve Wide are to be installed as part of UL approved wet system; they do not constitute a wet UL installation by themselves. The following pages present the 3 different circumstances of Electrobits Wetbits Short Sleeve Wide electrode cover installations you might encounter: 1) ELECTRODE TO TRANSFORMER CONNECTION when both transformer and neon sign are in wet locations; 2) ELECTRODE TO TRANSFORMER CONNECTION when transformer is in dry or damp location while neon sign is in wet location; 3) ELECTRODE TO ELECTRODE CONNECTION of any wet location neon sign. Always follow the appropriate installation instructions.

### COMPLETE PRODUCT CODE

### PRODUCT DESCRIPTION

Includes all 3 parts

WBSSW13mmWHT  
WBSSW13mmBLK  
WBSSW15mmWHT  
WBSSW15mmBLK  
WBSSW16mmWHT  
WBSSW16mmBLK  
WBSSW19mmWHT  
WBSSW19mmBLK

WETBITS SHORT SL. WIDE 13mm WHITE  
WETBITS SHORT SL. WIDE 13mm BLACK  
WETBITS SHORT SL. WIDE 15mm WHITE  
WETBITS SHORT SL. WIDE 15mm BLACK  
WETBITS SHORT SL. WIDE 16mm WHITE  
WETBITS SHORT SL. WIDE 16mm BLACK  
WETBITS SHORT SL. WIDE 19mm WHITE  
WETBITS SHORT SL. WIDE 19mm BLACK

### PRODUCT CODE

### PRODUCT DESCRIPTION

Top part only

WBSSW13mmTOPWHT  
WBSSW13mmTOPBLK  
WBSSW15mmTOPWHT  
WBSSW15mmTOPBLK  
WBSSW16mmTOPWHT  
WBSSW16mmTOPBLK  
WBSSW19mmTOPWHT  
WBSSW19mmTOPBLK

WETBITS SHORT SL. WIDE 13mm WHITE-TOP  
WETBITS SHORT SL. WIDE 13mm BLACK-TOP  
WETBITS SHORT SL. WIDE 15mm WHITE-TOP  
WETBITS SHORT SL. WIDE 13mm BLACK-TOP  
WETBITS SHORT SL. WIDE 16mm WHITE-TOP  
WETBITS SHORT SL. WIDE 16mm BLACK-TOP  
WETBITS SHORT SL. WIDE 19mm WHITE-TOP  
WETBITS SHORT SL. WIDE 19mm BLACK-TOP

### PRODUCT CODE

### PRODUCT DESCRIPTION

Bottom part only

WBSSWBOTTOMWHT  
WBSSWBOTTOMBLK  
WBSSWBOTTOMWHT  
WBSSWBOTTOMBLK  
WBSSWBOTTOMWHT  
WBSSWBOTTOMBLK  
WBSSWBOTTOMWHT  
WBSSWBOTTOMBLK

WETBITS SHORT SL. WIDE 13mm WHITE-BOTTOM  
WETBITS SHORT SL. WIDE 13mm BLACK-BOTTOM  
WETBITS SHORT SL. WIDE 15mm WHITE-BOTTOM  
WETBITS SHORT SL. WIDE 15mm BLACK-BOTTOM  
WETBITS SHORT SL. WIDE 16mm WHITE-BOTTOM  
WETBITS SHORT SL. WIDE 16mm BLACK-BOTTOM  
WETBITS SHORT SL. WIDE 19mm WHITE-BOTTOM  
WETBITS SHORT SL. WIDE 19mm BLACK-BOTTOM

### PRODUCT CODE

### PRODUCT DESCRIPTION

Bushing only

WBSSBWHT  
WBSSBBLK

WETBITS SHORT SL. WIDE BUSHING WHITE  
WETBITS SHORT SL. WIDE BUSHING BLACK

### PRODUCT CODE

### PRODUCT DESCRIPTION

Sleeving only

WB3760WHT  
WB3760BLK

WETBITS 3760 SLEEVING WHITE  
WETBITS 3760 SLEEVING BLACK

Neon LightingLux Products inc.

300, St-Sacrement #218 Montreal, QC, Canada H2Y 1X4

Tel. USA & Canada : 1-877-567-2487 Tel. International : +1-514-845-2487

FAX USA & Canada : 1-877-844-2487 FAX International : +1-514-842-2487

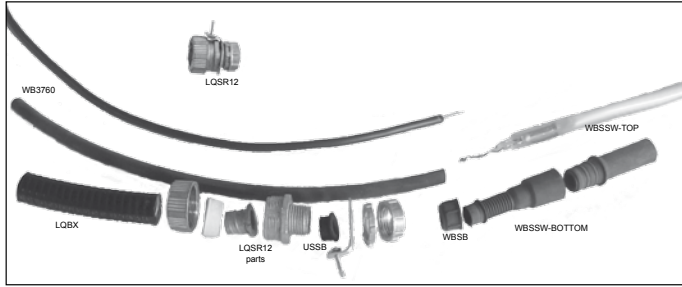
WEBSITE : luxandbits.com



## SECTION 1

### ELECTRODE TO TRANSFORMER CONNECTION

when both transformer and neon sign are in wet locations. In that case you will need a Liquid Tight 1/2" Support Ring (LQSR12) to secure and insulate the end of LQBX or any UL Listed 1/2" Flexible Metallic Liquid Tight Conduit with WB3760 GTO Sleeveing.



**Figure 1** Exploded view of all necessary parts for Electrode to transformer connection when both transformer and sign are in wet locations.

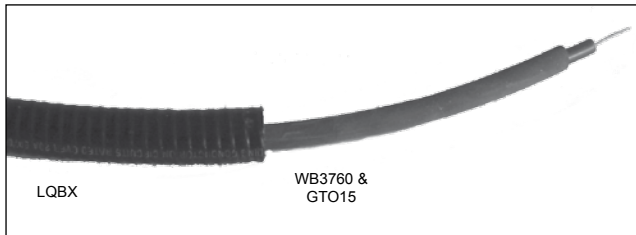
Maximum length of LQBX is 20 feet

Cut LQBX 6" shorter than WB3760

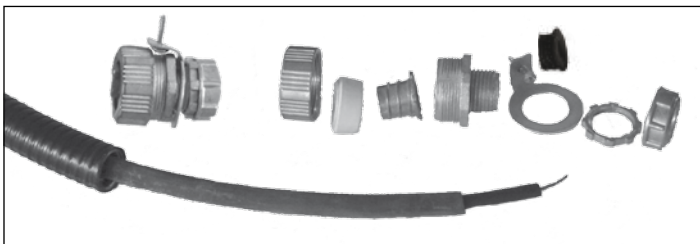
Cut WB3760 3" shorter than GTO cable

Strip GTO cable on 1"

"GTO Cable minimum length for proper assembly is 6 in. allowing 1 inch of insulation removed for splice."



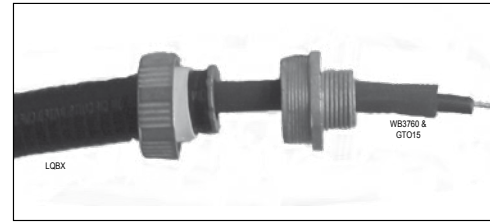
**Figure 2** Sleeve your GTO cable into WB3760 and into LQBX



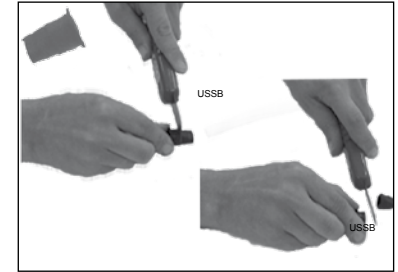
**Figure 3** Disassemble LQSR12



**Figure 4** Slide the large metallic head over the LQBX/WB3760/GTO cable assembly, along with yellow plastic ring. Slide the 1/2" twist-on connector over WB3760 and GTO cable and screw it into the LQBX.



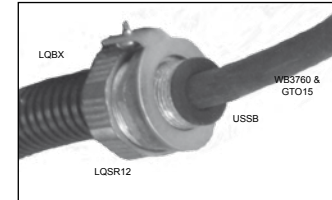
**Figure 5** Slide the central part of the LQSR12 connector over the assembly and screw the large head onto it.



**Figure 6** Cut USSB. Flanged end should be kept and the other end may be discarded.



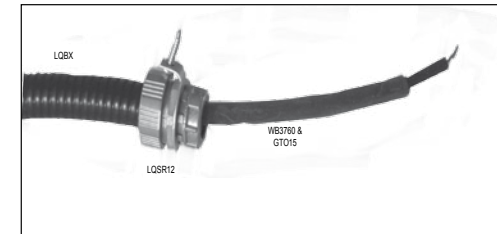
**Figure 7** Slide USSB over WB3760 and GTO cable.. If necessary, Slide support ring over assembly and use metallic self tapping screw to hold assembly in place on wall or ceiling.



**Figure 8** Make sure USSB is fully inserted into central part of LQSR12 connector



**Figure 9** Slide locknut and metallic end bushing over WB3760 and GTO cable and screw all pieces together



**Figure 10** You are now ready to make connection between GTO cable and electrode using either Wetbits Short Sleeve or Wetbits End Cap. Make sure to leave at least 5 1/4 in. of GTO cable and WB3760 assembly standing out for connection with Wet Bits Short Sleeve Wide.

NOTE: Please refer to the ELECTRODE TO ELECTRODE CONNECTION section for detailed installation instructions of Wetbits Short Sleeve Wide

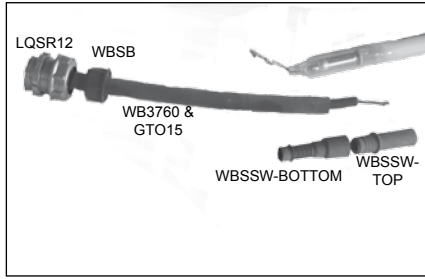


Figure 11 After taking wetbits short sleeve apart slide WBSB over WB3760 and GTO cable until you reach metallic bushing of LQSR12

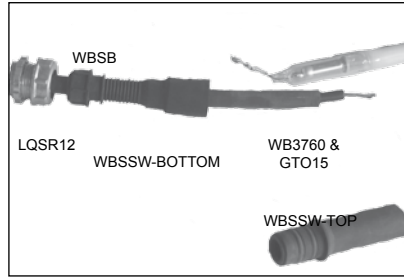


Figure 12 Slide bottom part of Wetbits Short Sleeve over WB3760 and GTO Cable

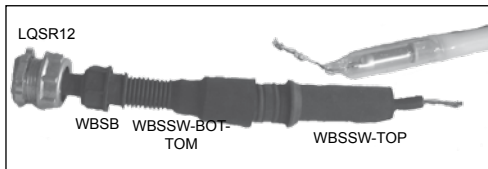


Figure 13 Slide the top part of Wetbits Short Sleeve over WB3760 and Gto Cable

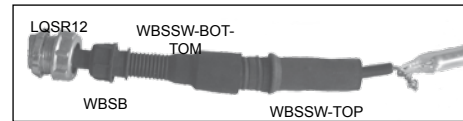


Figure 14 Make connection between GTO cable and electrode

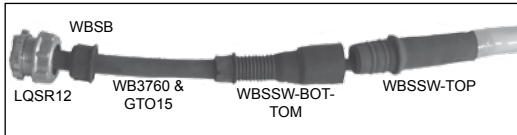


Figure 15 Gently push top part of Wetbits Short Sleeve over the connection and the electrode until it reaches the ceramic collar.

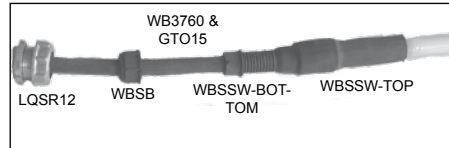


Figure 16 Slide bottom part of Wetbits Short Sleeve over the top part up to the second rib

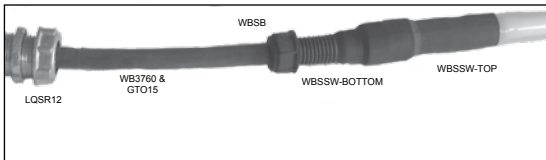


Figure 17 Slide the WBSBW over the bottom part of the Wetbits short sleeve. DO NOT TWIST WBSBW, simply push firmly.

Note:

- 1- For double backs, make sure to have at least 1/2 inch distance between the ends of the neon tubes electrodes.
- 2- For electrodes without ceramic collar, slide up to the edge of the inner electrode metal shell.

## SECTION 2

### ELECTRODE TO TRANSFORMER CONNECTION

when transformer is in dry or damp location while sign is in wet location. In that case you will need to use an OUTPT assembly to get your GTO cable thru the wall or ceiling made of any material

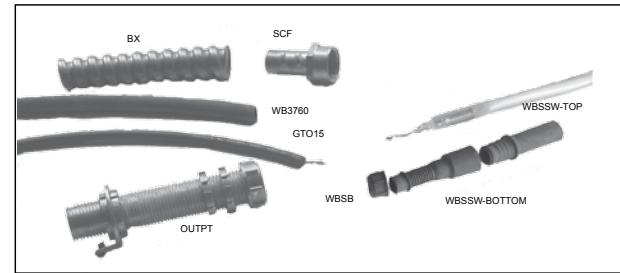


Figure 1 Exploded view of necessary parts for ELECTRODE TO TRANSFORMER CONNECTION when transformer is in dry or damp location while sign is in wet location.

Maximum length of WB3760 / Gto cable / Flexible metallic conduit such as BX assembly is of 20 feet.

Cut BX 6" shorter than WB3760

Cut WB3760 3" shorter than GTO cable

Strip GTO cable on 1"

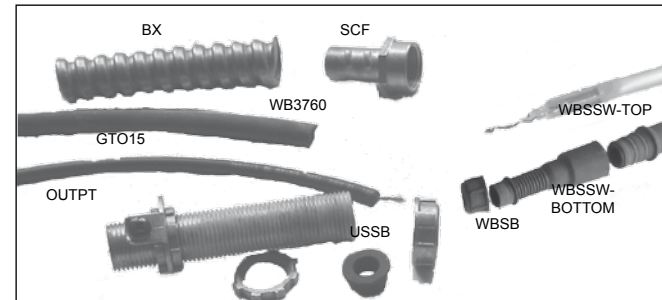


Figure 2 Disassemble the metallic bushing, the USSB and two locknuts from OUTPT

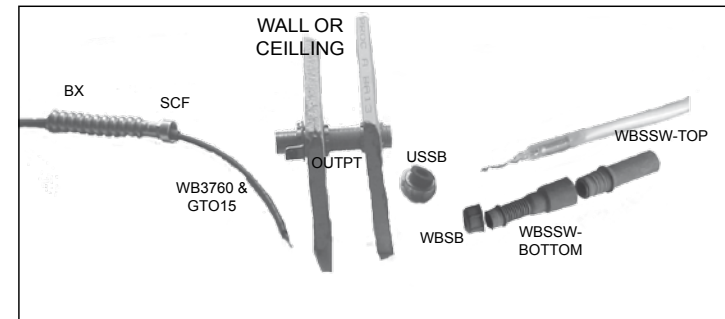


Figure 3 Sleeve your GTO cable with WB3760 sleeving and flexible metallic conduit. Use female straight connector (SCF12) to link with OUTPT. Make sure OUTPT length covers the wall completely and stands out front for 1/2". Install OUTPT thru wall making 7/8" whole. Use provided locknuts to secure in place.

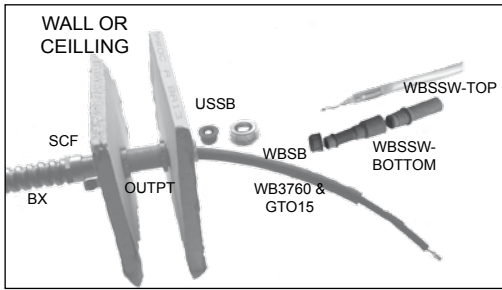


Figure 4 Slide WB3760 and GTO cable assembly into the OUTPT. Make sure you have 6" of this assembly standing out front for electrode connection.

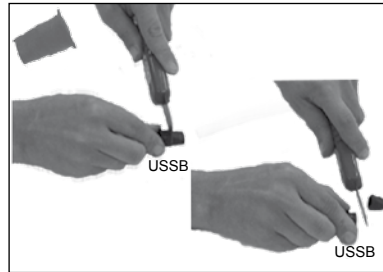


Figure 5 Cut USSB keeping only the first and largest section

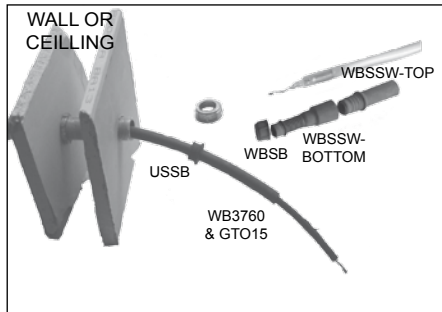


Figure 6 slide USSB over GTO cable and WB3760 assembly

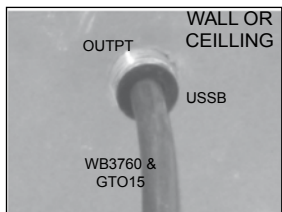
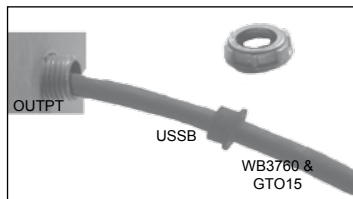


Figure 7 insert the USSB into the OUTPT

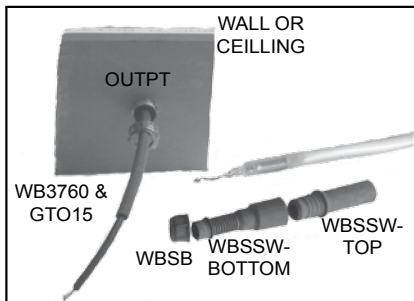


Figure 8 Slide the metallic bushing over the GTO cable and WB3760 assembly

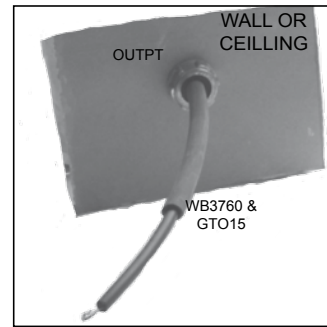


Figure 9 Screw the metallic bushing onto the end of OUTPT. You are now ready to make connection with electrode using either Wetbits short Sleeve Wide or End Cap Wide.

NOTE: Please refer to the ELECTRODE TO ELECTRODE CONNECTION section for detailed installation instructions of Wetbits Short Sleeve Wide

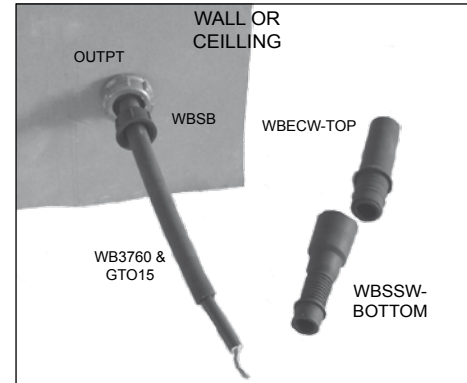


Figure 10 Slide WBSB over GTO cable and WB3760 sleeving assembly.

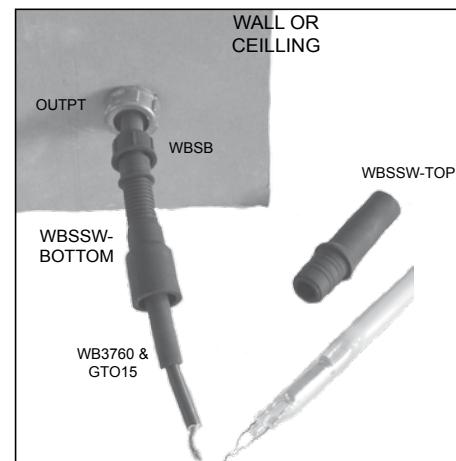


Figure 11 Slide bottom part of Wetbits Short Sleeve Wide over GTO cable and WB3760 sleeving assembly.

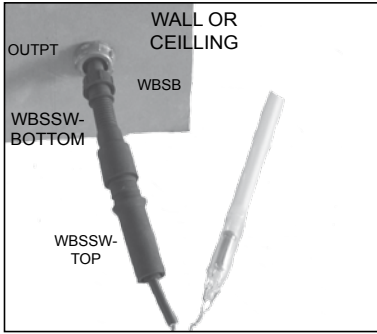


Figure 12 Slide top part of Wetbits Short Sleeve Wide over WB3760 sleeving and GTO cable assembly.

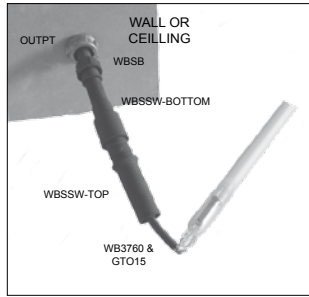


Figure 13 Make connection between electrode and GTO cable.

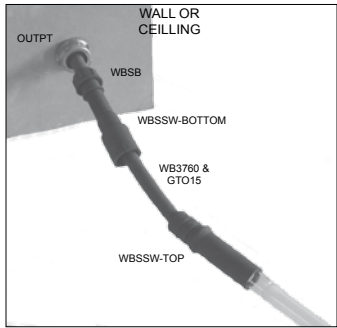


Figure 14 Slide top part of Wetbits Short Sleeve Wide back over electrode and GTO cable connection until it reaches the ceramic collar of electrode

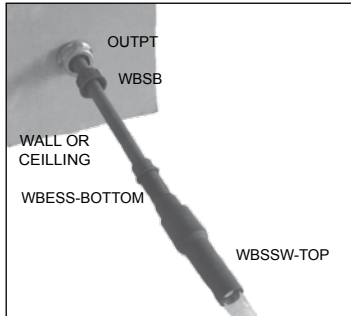


Figure 15 Slide bottom part of Wetbits Short Sleeve Wide back over top part until it snaps over the second rib.

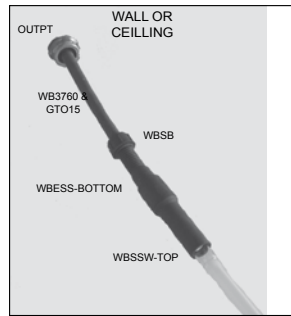


Figure 16 Push back WBSB over Wetbits Short Sleeve Wide to resume assembly. Use the provided grounding ring on OUTPT to ground your sign.

**Note:**

- 1- For double backs, make sure to have at least 1/2 inch distance between the ends of the neon tubes electrodes.
- 2- For electrodes without ceramic collar, slide up to the edge of the inner electrode metal shell.

**SECTION 3**  
ELECTRODE TO ELECTRODE CONNECTION  
Wetbits Short Sleeve Wide Installation Instructions

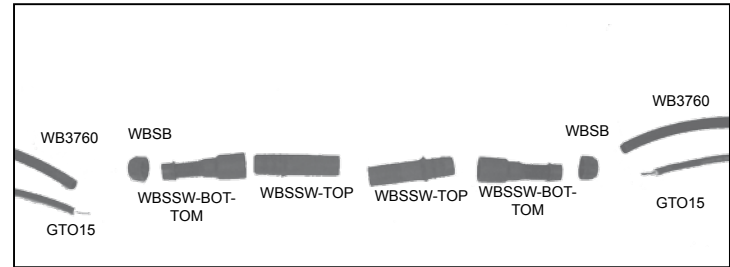


Fig.1& 2 Exploded view of all necessary parts for a WETBITS Short Sleeve Wide (WBSSW) neon tube installation with straight connection electrodes

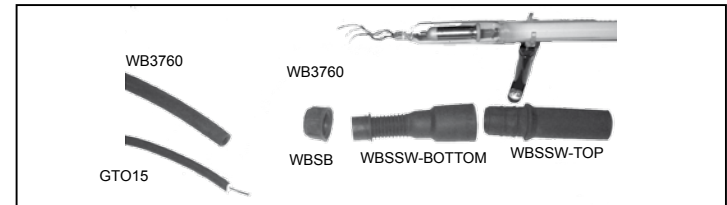


Fig.2



Fig.3 Cut the appropriate length of WB3760 Sleeving and GTO15 cable

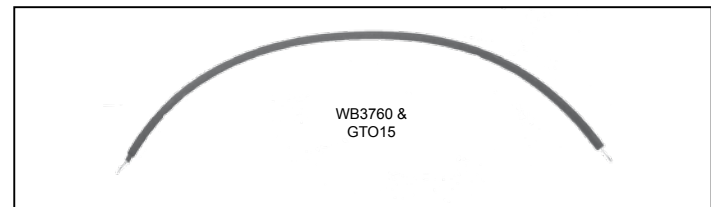


Fig.4 Insert the GTO15 cable inside the WB3760 sleeving

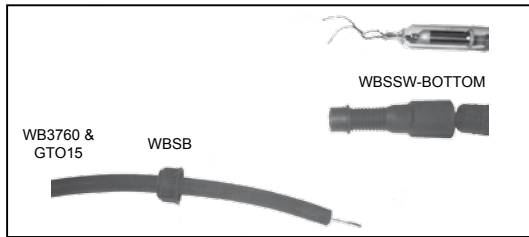


Fig.5 Slide the wetbits sealing bushing WBSB over the sleeving and cable

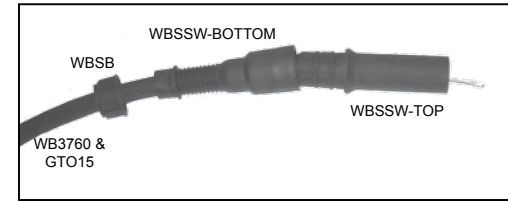


Fig.9 Slide the top part of the WBSSW onto the standing WB3760 sleeving and GTO15 cable, leaving the strands ready for connection

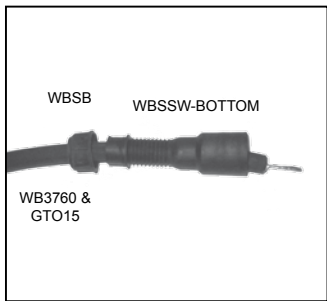


Fig.6

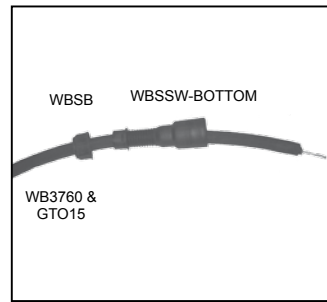


Fig.7

Slide the bottom part of the WBSSW onto the WB3760 sleeving until the GTO15 cable end stands out

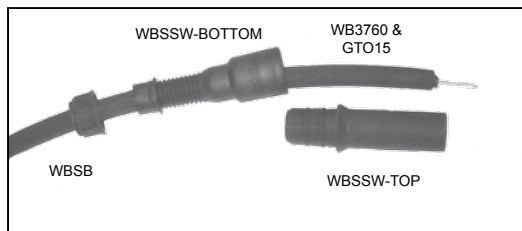


Fig.8

Make sure the GTO leads stand out long enough to receive the top part of the WBSSW

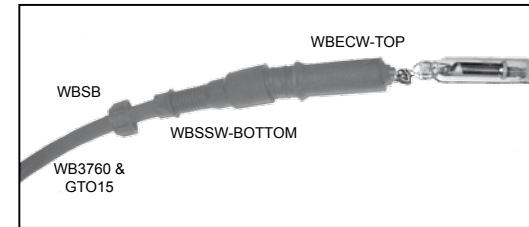


Fig.10 Make a 5 twist connection between the GTO15 cable and the electrode leads

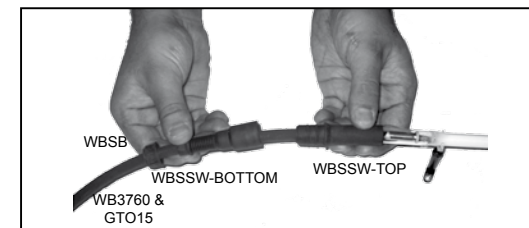


Fig.11 Gently slide the top part of the WBSSW back over the electrode to cover the connection

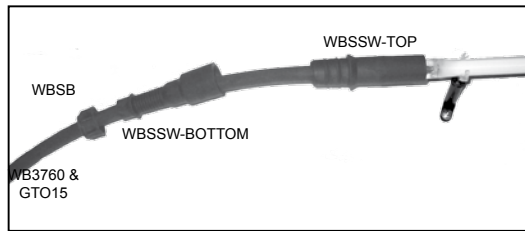


Fig.12 Slide the top part of WBSSW on the electrode until it reaches the ceramic collar.

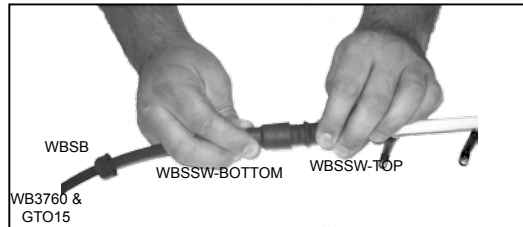


Fig.13 Gently push the bottom part of the WBSSW back over the top part until it snaps over the second rib. Place your hands and fingers as on the picture to avoid tube breakage.

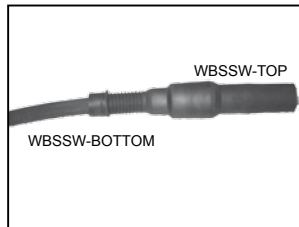


Fig.14 Push back the bottom part of the WBSSW. Slightly push the bottom of sleeve forward onto the top part until you hear and feel the snap seal over the second rib of the bottom part

**Note:**

- 1- For double backs, make sure to have at least 1/2 inch distance between the ends of the neon tubes electrodes.
- 2- For electrodes without ceramic collar, slide up to the edge of the inner electrode metal shell.

**X NO TWIST  
PUSH TO SNAP ONLY**

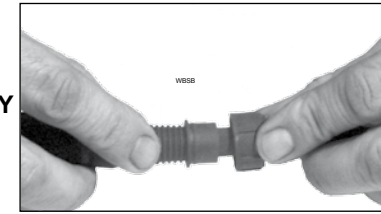


Fig.15 Slide the WBSB Wetbits sealing bushing over the end of the bottom part of the WBSSW in order to seal the junction between the WB3760 sleeving and the WBSSW wetbits short sleeve wide

**X WARNING! DO NOT TWIST ON THE BUSHING  
PUSH TO SNAP ONLY**

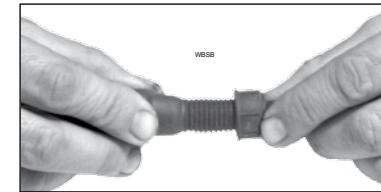


Fig.16 Position your hands and fingers as shown on the picture to slide the WBSB Wetbits sealing bushing over the end of the bottom part of the WBSSW

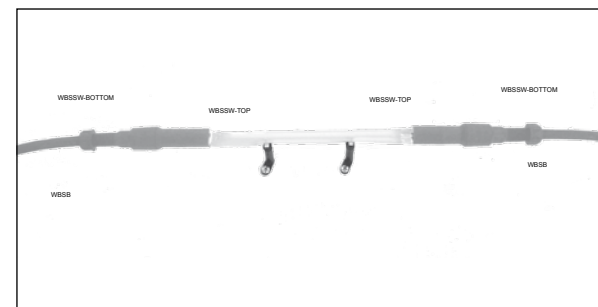


Fig.17 Final assembly of the WBSSW wetbits short sleeve wide

# Passthru and Outdoor Passthru Installation instructions using USSB

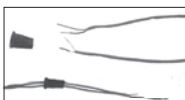
## GENERAL WARNINGS AND INSTRUCTIONS



USSB stands for UNIVERSAL SIGN SEALING BUSHING. It is designed to fit all Electrobits® connectors: Passthru (any length); Straight Connectors Male; General Bushing (all models) and Liquid Tight connectors. It is also designed to receive safely any type of secondary sign wire: GTO wire for neon signs; GE Tetra or Standard wires for LED signs as well as ballast wire for fluorescent signs.  
**RATING:** 15 000v midpoint grounded.  
 Do not cut or modify otherwise than as per proper instructions.  
 Always use a diagonal cutter or similar tool to insure a clean cut of USSB.

Electrobits® USSB is to be installed as part of UL listed, recognized or clasified system; it does not constitute a UL installation by itself. The following pages present the 6 different types of wiring you may use with Electrobits® USSB and the 6 different connectors. Always follow the appropriate installation instructions.

### 1. TYPICAL LED SIGN RV-AVMII WIRING / Dry and Damp Locations



**Fig. 1** When using USSB with standard LED wire, there is no need of cutting the bushing. Simply use a drill of 5/32" maximum to perforate the second hole at bottom.

#### Using Passthru

- A. Unscrew bushing from passthru.
- B. Slide passthurbushing onto wires.
- C. Insert each wire into the holes of the USSB, flanged collar facing bushing.
- D. Insert the wires into passthru.
- E. Insert USSB into passthru until collar reaches metallic tubing.
- F. Screw bushing on passthru.

### 2. TYPICAL LED GE TETRA WIRING INSTALLATION / Dry and Damp Locations

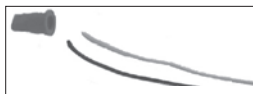


**Fig. 2** When using USSB with GE TETRA LED wire, you must cut the USSB along the 1rst molded line delimitation to remove the first section with the two holes. Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood that the piece you need to keep would fall to the ground.

#### Using Passthru

- A. Unscrew bushing from passthru.
- B. Slide passthru, bushing and USSB onto wire, flanged collar facing bushing.
- C. Slide the passthru conduit over the wire.
- D. Insert USSB into passthru until collar reaches metallic tubing. Screw bushing on passthru.

### 3. TYPICAL SIGN BALLAST AWM 1015 VW-1 WIRING INSTALLATION / Dry and Damp Locations



**Fig. 3** When using USSB with standard sign ballast AWM 1015VW wire, there is no need of cutting the USSB. Simply use a drill of 5/32" maximum to perforate the second hole at bottom.

#### Using Passthru

- A. Unscrew bushing from passthru.
- B. Slide passthurbushing onto wires.
- C. Insert each wire into the holes of the USSB, large collar facing bushing.
- D. Insert the assembly into passthru.
- E. Insert USSB into passthru until collar reaches metallic tubing. Screw bushing on passthru.

### 4. TYPICAL NEON GTO WIRE & 3730 GOTOSLEEVEING INSTALLATION / Dry, damp and wet locations

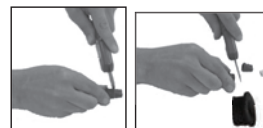


**Fig. 4 & 5** When using USSB with GTO wire and 3730 GOTOSLEEVEING, you must cut the USSB along the 2nd rib to remove the two first sections of the bushing (the ones with the two small holes). Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood that the piece you need to keep would fall to the ground.

#### Using Passthru

- A. Unscrew bushing from passthru.
- B. Slide passthurbushing onto wires.
- C. Slide pre-cut USSB onto wire and sleeving, large collar facing bushing.
- D. Insert the assembly into passthru.
- E. Insert USSB into passthru until collar reaches metallic tubing. Screw bushing on passthru.

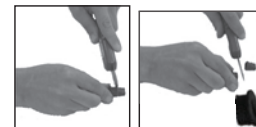
### 5. TYPICAL NEON GTO WIRE & WB3760 GOTOSLEEVEING INSTALLATION / Dry, damp and wet locations



**Fig. 6 & 7** When using USSB with GTO wire and 3760 GOTOSLEEVEING, you must cut the USSB between the 2nd molded line delimitation to remove the three first sections of the bushing, keeping only the bottom part with the flanged collar. Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood that the piece you need to keep would fall to the ground.

- A. Disassemble the metallic bushing, the USSB and two locknuts from OUTPT. Maximum length of Flexible Metallic Conduit such as BX / WB3760 sleeving / GTO cable assembly is 20 feet. Cut BX 6" shorter than WB3760. Cut WB3760 3" shorter than GTO cable.
- B. Sleeve your GTO cable with WB3760 sleeving and flexible metallic conduit. Use female straight connector (SCF12) to link with OUTPT. Make sure OUTPT length covers the wall completely and stands out front for 1/2". Install OUTPT thru wall making 7/8" whole. Use provided locknuts to secure in place.
- C. Slide WB3760 and GTO cable assembly into the OUTPT. Make sure you have 6" of this assembly standing out front for electrode connection.
- D. Slide pre-cut USSB over GTO cable and WB3760 assembly.
- E. Insert USSB into the OUTPT.
- F. To resume installation, slide the metallic bushing over the GTO cable and WB3760 assembly.

### 5. TYPICAL NEON INTEGRAL SLEEVE & GTO CABLE ADAPTOR INSTALLATION / Dry, damp and wet locations



**Fig. 6 & 7** When using USSB with integral sleeve and GTO Cable Adaptor you must cut the USSB between the 2nd molded line delimitation to remove the three first sections of the bushing, keeping only the bottom part with the flanged collar. Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood that the piece you need to keep would fall to the ground.

A. Choose GTO Cable Adaptor according to cable size



**Gto Cable Adaptor**  
**GTOCA260** for cable O.D from 0.260 to 0.315  
**GTOCA130** for cable O.D. from 0.130 to 0.230

Electrobits GTO Cable Adaptor model series number GTOCA260 rated 15kv midpoint grounded is designed and Classified to be used with the following UL Classified integral sleeve systems:

1. Electrobits GTO-10 integral sleeve E137842
2. Page electrical GTO-15 integral sleeve E135239
3. Transco GTO-15 integral sleeve E226224
4. ISS GTO TECH-2 GTO-15 integral sleeve E257545
5. Westrim Hi-Flex GTO-15 integral sleeve E237581
6. Silitherm GTO-15 integral sleeve E193971
7. Neon Power Pro GTO assembly E192648

1- Choose GTOCA according to your GTO cable outside diameter :

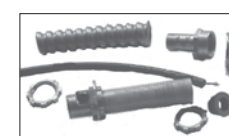
- 1.1 For cables O.D. ranging from 0.260" to 0.275" (GTO15 and Integral sleeve GTO), use GTOCA260 as is.
- 1.2 For cables O.D. ranging from 0.300" to 0.315" (Integral sleeve GTO15), you must cut the GTOCA along the parting line, as per figures below.
- 1.3 For GTO cables O.D. ranging from 0.130" to 0.150" (GTO5) use GTOCA130 as is.
- 1.4 For GTO cables O.D. ranging from 0.210" to 0.230" (GTO10), you must cut the GTOCA along the parting line, as per figures below.



A. Disassemble the metallic bushing, the USSB and two locknuts from OUTPT. Maximum length of Flexible Metallic Conduit such as BX / integral sleeve GTO cable assembly is 20 feet. Cut BX 6" shorter than integral sleeve GTO cable.

B. Insert the integral sleeve GTO cable into the flexible metallic conduit. Use female straight connector (SCF12) to link with OUTPT. Make sure OUTPT length covers the wall completely and stands out front for 1/2". Install OUTPT thru wall making 7/8" whole. Use provided locknuts to secure in place.

C. Slide integral sleeve GTO cable into the OUTPT. Make sure you have 6" of this assembly standing out front for electrode connection.



D. Slide the pre-cut USSB and the appropriated GTOCA onto the standing out integral sleeve. Insert The GTOCA into the USSB, as shown on pictures below.



F. To resume installation, slide the metallic bushing over the integral sleeve and screw it firmly on standing out OUTPT threads.



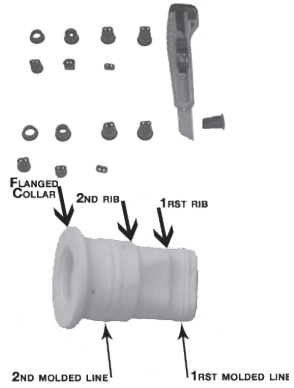
**ELECTRObits**

INTERNATIONAL INC.  
 Improving neon bit by bit... since 1988®  
 Electrobits International 300 St-Sacrement Street Office 209,  
 Montreal, Qc, Canada, H2Y 1X4  
 USA & Canada 1 (800) 567-2487 International 1 (514) 842-4150  
 www.electrobits-international.com

**USSB  
Universal Sign  
Sealing Bushing  
Installation Instructions  
According to UL879**



File #E129837



**GENERAL WARNINGS AND INSTRUCTIONS**

USSB stands for UNIVERSAL SIGN SEALING BUSHING. It is designed to fit all Electrobits® and LightingLux connectors: FeedthruLux (any length); Straight Connectors Male; General Bushing (all models) and Liquid Tight connectors. It is also designed to receive safely any type of secondary sign wire: GTO wire for neon signs; GE Tetra or Standard wires for LED signs as well as ballast wire for fluorescent signs.

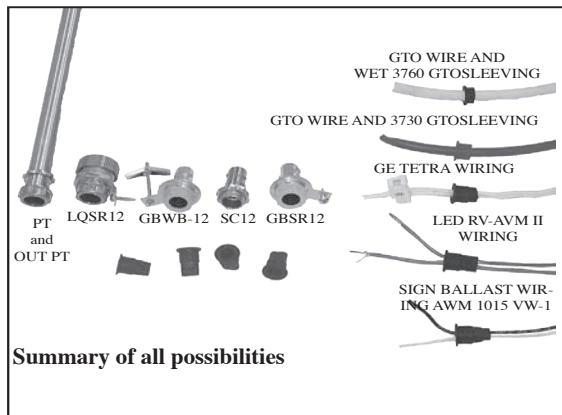
RATING: 15 000v midpoint grounded.

Do not cut or modify otherwise than as per proper instructions.

Always use a diagonal cutter or similar tool to insure a clean cut of USSB.

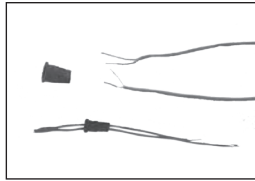
USSB is to be installed as part of UL approved system; it does not constitute a wet UL installation by itself.

The following pages present the 5 different types of wiring you may use with USSB and the 6 different connectors for a total of 14 different possibilities of use. Always follow the appropriate installation instructions.

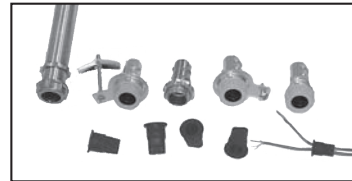


**Summary of all possibilities**

**1. TYPICAL LED SIGN RV-AVMII WIRING**

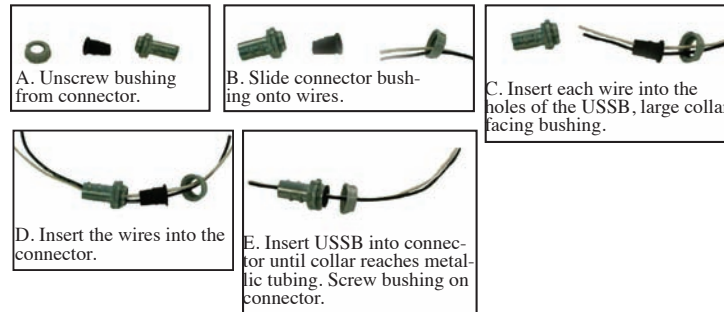


**Fig. 1** When using USSB with standard LED wire, there is no need of cutting the bushing. Simply use a drill of 5/32" maximum to perforate the second hole at bottom.

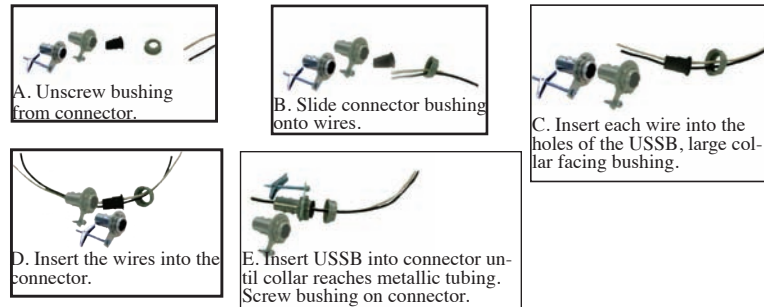


**Fig. 2** You may use **FeedthruLux**, **General bushings** or **Straight connectors** with USSB and RV-AVMII led wiring.

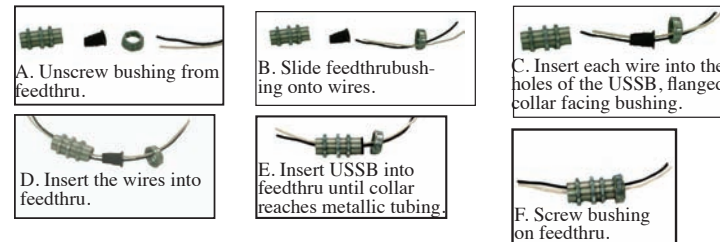
**Using Strait Connector**



**Using General Bushings**



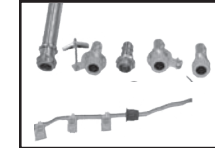
**Using FeedthruLux**



**2. TYPICAL LED GE TETRA WIRING INSTALLATION**

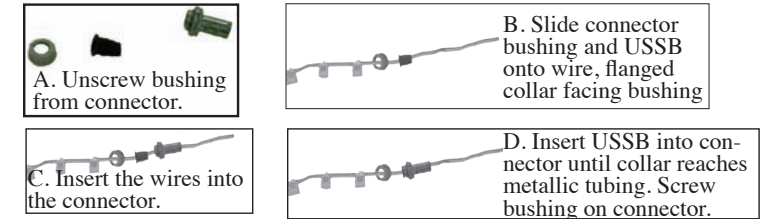


**Fig. 3 & 4** When using USSB with GE TETRA LED wire, you must cut the USSB along the 1st molded line delimitation to remove the first section with the two holes. Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood the piece the you need to keep would fall to the ground.

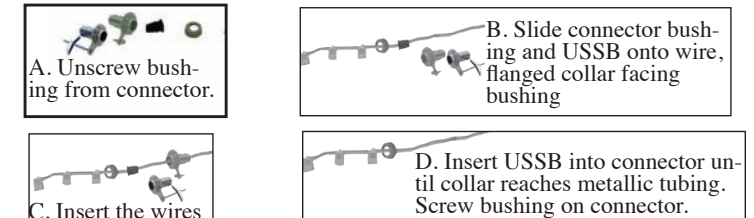


**Fig. 5** You may use Electrobits **Passthru**, **General bushings** or **Straight connectors** with USSB and GE TETRA led wiring.

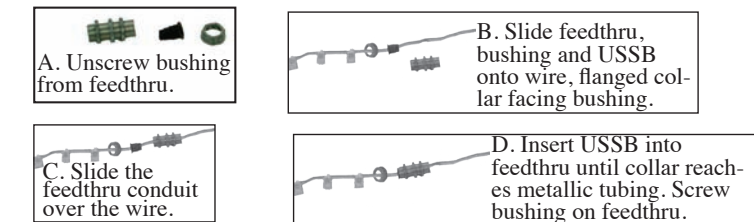
**Using Strait Connector**



**Using General Bushings**



**Using FeedthruLux**

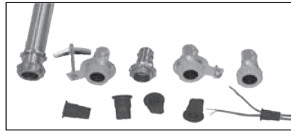




### 3. TYPICAL SIGN BALLAST AWM 1015 VW-1 WIRING INSTALLATION

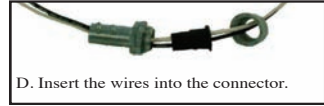
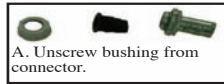


**Fig. 6** When using USSB with standard sign ballast AWM 1015VW wire, there is no need of cutting the USSB. Simply use a drill of 5/32" maximum to perforate the second hole at bottom.

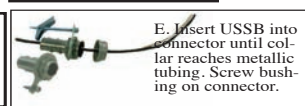


**Fig.7** You may use Electrobits Passthru, General bushings or Strait connectors with USSB and GE TETRA led wiring.

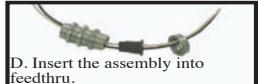
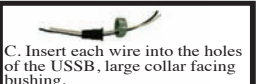
#### Using Strait Connector



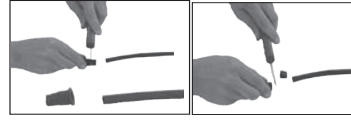
#### Using General Bushings



#### Using FeedthruLux



### 4. TYPICAL NEON GTO WIRE & 3730 GTOSLEEVEING INSTALLATION

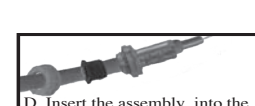


**Fig.8 & 9** When using USSB with GTO wire and 3730 GTOSLEEVEING, you must cut the USSB along the 2nd rib to remove the two first sections of the bushing (the ones with the two small holes). Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood the piece the you need to keep would fall to the ground.

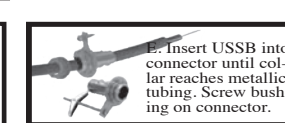
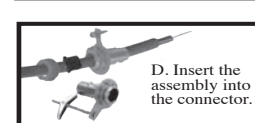


**Fig.10** You may use Electrobits Passthru, General bushings or Strait connectors with USSB and GTO wire and 3730 GTOSLEEVEING assembly.

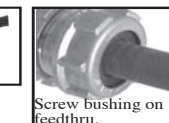
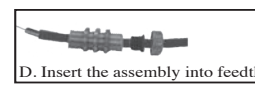
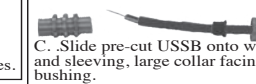
#### Using Strait Connector



#### Using General Bushings



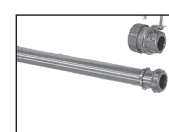
#### Using FeedthruLux



### 5. TYPICAL NEON GTO WIRE & WB3760 WET GTOSLEEVEING INSTALLATION

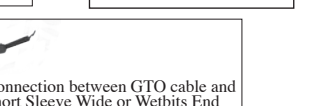
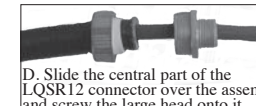


**Fig.11 & 12** When using USSB with GTO wire and 3760 WET GTOSLEEVEING, you must cut the USSB between the 2nd molded line delimitation to remove the three first sections of the bushing, keeping only the bottom part with the flanged collar. Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood the piece the you need to keep would fall to the ground.

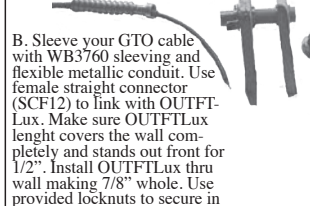
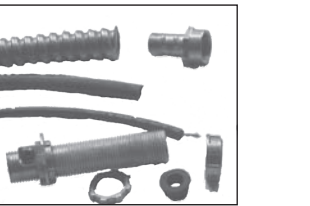
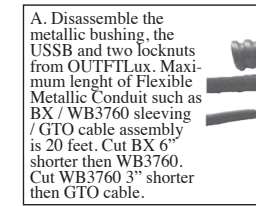


**Fig.13** You may use LightingLux OUTFTLux and Liquid Tight connector with USSB and GTO wire and 3760 WET GTOSLEEVEING assembly.

#### Using LQSR12 Liquid Tight connector



#### Using OUTFTLux



Neon LightingLux Products inc. 300 St-Sacremont Street Office 301, Montreal, Qc, Canada, H2Y 1X4  
USA & Canada 1 (877) 567-2487 International 1 (514) 845-2487  
www.Lightinglux.com

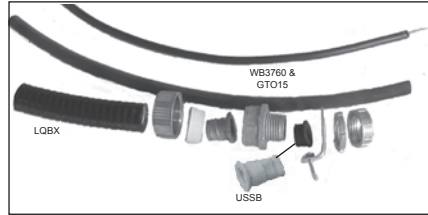
# Liquid Tight Connector LQSR12 Installation Instructions

## General Warning and Instructions

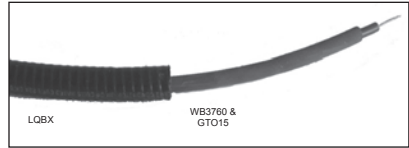
When both transformer and neon sign are in wet locations you will need a Liquid Tight 1/2" Support Ring (LQSR12) to secure and insulate the end of LQBX or any UL Listed 1/2" Flexible Metallic Liquid Tight Conduit with WB3760 GTO Sleeving or Integral sleeve GTO wire.  
LQSR12 includes USSB and GTOCA260  
Do not cut or modify otherwise then as per proper instructions.  
Always use a diagonal cutter or similar tool to insure a clean cut of USSB and GTOCA260.



## Using LQSR12 with neon GTO wire and WB3760 GTO Sleeving



**Figure 1** Exploded view of all necessary parts for Electrode to transformer connection when both transformer and sign are in wet locations.  
Maximum length of LQBX is 20 feet  
Cut LQBX 6" shorter than WB3760  
Cut WB3760 3" shorter than GTO cable  
Strip GTO cable on 1"  
"GTO Cable minimum length for proper assembly is 6 in. allowing 1 inch of insulation removed for splice."



**Figure 2** Sleeve your GTO cable into WB3760 and into LQBX



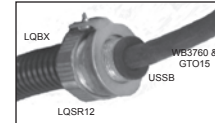
**Figure 3** Disassemble LQSR12



**Figure 5** Slide the large metallic head over the LQBX/WB3760 Sleeving/ GTO wire assembly, along with yellow plastic ring. Slide the 1/2" twist-on connector over the sleeving and cable assembly and screw it into the LQBX.



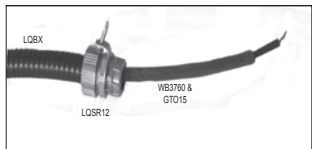
**Figure 7** Slide USSB over WB3760 and GTO cable.. If necessary, Slide support ring over assembly and use metallic self tapping screw to hold assembly in place on wall or ceiling.



**Figure 8** Make sure USSB is fully inserted into central part of LQSR12 connector



**Figure 9** Slide locknut and metallic end bushing over WB3760 and GTO cable and screw all pieces together

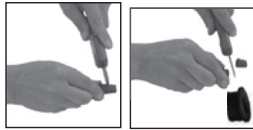


**Figure 10** You are now ready to make connection between GTO cable and electrode using either Wetbits Short Sleeve or Wetbits End Cap. Make sure to leave at least 1/4 in. of GTO cable and WB3760 assembly standing out for connection with Wet Bits End Cap Wide.

## Using LQSR12 with neon integral sleeve GTO wire



**Figure 1** Exploded view of all necessary parts for Electrode to transformer connection when both transformer and sign are in wet locations. Using Integral Sleeve GTO wire.  
Maximum length of LQBX is 20 feet  
Cut LQBX 9" shorter than Integral sleeve GTO wire  
Strip GTO cable on 1"  
"GTO Cable minimum length for proper assembly is 6 inch. allowing 1 inch of insulation removed for splice."



**Fig.2 & 3** When using USSB with integral sleeve and GTO Cable Adaptor you must cut the USSB between the 2nd molded line delimitation to remove the three first sections of the bushing, keeping only the bottom part with the flanged collar. Make sure to grasp the flanged end of the USSB prior to cutting to reduce the likely hood that the piece you need to keep would fall to the ground.

**Fig. 4** Choose GTO Cable Adaptor according to cable size



### Gto Cable Adaptor

**GTOCA260** for cable O.D from 0.260 to 0.315

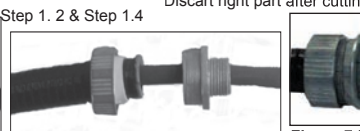
**GTOCA130** for cable O.D. from 0.130 to 230

Electrobits GTO Cable Adaptor model series number GTOCA260 rated 15kv midpoint grounded is designed and Classified to be used with the following UL Classified integral sleeve systems:

1. Electrobits GTO-10 integral sleeve E137842
2. Page electrical GTO-15 integral sleeve E135239
3. Transco GTO-15 integral sleeve E226224
4. ISS GTO TECH-2 GTO-15 integral sleeve E257545
5. Westrim Hi-Flex GTO-15 integral sleeve E237581
6. Silitherm GTO-15 integral sleeve E193971
7. Neon Power Pro GTO assembly E192648



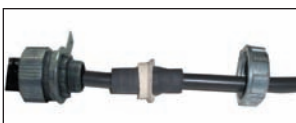
**Figure 5** Slide the large metallic head over the LQBX/Integral Sleeve GTO wire assembly, along with yellow plastic ring. Slide the 1/2" twist-on connector over the integral sleeve and screw it into the LQBX.



**Figure 6** Slide the central part of the LQSR12 connector over the assembly and screw the large head onto it.



**Figure 7** If necessary, Slide support ring over assembly and use metallic self tapping screw to hold assembly in place on wall or ceiling. Slide pre-cut USSB and appropriate GTOCA over integral sleeve GTO cable.



**Figure 8** Slide GTOCA into pre-cut USSB.



**Figure 9** Push pre-cut USSB/GTOCA assembly into the central part of the LQSR12 connector.



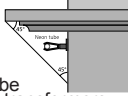
**Figure 10** Resume assembly by screwing the metallic bushing over the central part of the LQSR12 connector.



## ELECTROBITS INTERNATIONAL INC.

### Installation Instructions

Model series: HVC1001



- Dry / damp locations
- Rated 7.5kV AC to Ground. May be used with 15kV mid-point grounded transformers

**Warning** : Risk of fire or electric shock! Electrobits High Voltage Connector HVC1001 is to be used in dry and damp locations only.

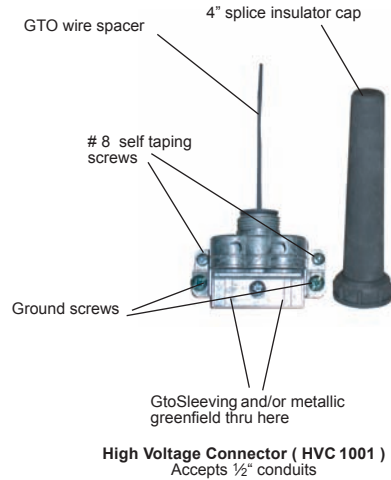
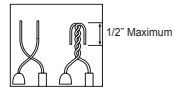
**Warning** : Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.

- 1 Unscrew yellow plastic cap which has a yellow plastic GTO wire spacer and brass crimp inside.
- 2 Orient the connector so that the duplex entry is pointing downward. Fasten the connector using the two #8 self tapping screws provided in the two upper holes.
- 3 Bring your GTO wires with sleeving or GTO integral Sleeve Cable and/or 1/2" flexible metallic conduit through the duplex entry leaving 5 inches of wire standing.
- 4 Fasten sleeving and/or flexible metal conduit by screwing the locking plate in place.
- 5 Strip 1 inch of insulation from the GTO wires. Insert the yellow plastic spacer between the GTO wires and into the connector. Twist the bare ends of the GTO wires together at the top of the plastic spacer and fasten with the brass crimp. Always maintain GTO insulation to the very top of the spacer. Trim excess wire. See splicing figure on left.
- 6 Screw yellow plastic cap in place over GTO wires.
- 7 Connect ground bonding wire if required to green ground screws. You must use the 2 provided grounding screws when using 6 feet or more of metallic conduit. If using non metallic conduit, you must always use the provided separate ground attachment path.

This device is suitable for insulating high voltage GTO splice connection up to 7.5 kV AC to ground or 15 kV mid-point referenced transformer. This GTO splice insulator may be used in indoor dry locations without any additional enclosure.

#### Splicing



**High Voltage Connector ( HVC 1001 )**  
Accepts 1/2" conduits

## General instructions and warnings

Follow the instructions given for each assembly

### General

- Electrobits electrodes insulators are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- **Dry and damp locations use only.**
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- Do not paint any fitting, covering or sleeving.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

## Instrucciones y precauciones generales

Seguir las instrucciones dadas por cada tipo de instalación

### Generalidades

- Los capuchones aislantes de electrodos Electrobits están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.
- **Utilización en ambientes secos o húmedos únicamente**
- Las instalaciones eléctricas nunca deben servir de soporte para la instalación de los tubos de neón.
- No perforar, ni cortar, ni modificar ninguno de los productos de una manera diferente a la indicada en las instrucciones de instalación.
- No se deben pintar los capuchones, ni los forros ni cualquier otro producto aislante.
- Para obtener un rótulo luminoso certificado e conforme a las normas de seguridad, utilizar estos productos y sistemas únicamente con componentes también certificados.
- Siempre utilizar los capuchones correspondiendo a la dimensión del electrodo.

## Instruccions et précautions générales

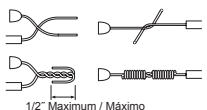
Toujours suivre les instructions données pour chaque type d'installation

### Généralités

- Les capuchons isolants pour électrodes Electrobits sont prévus et certifiés pour une utilisation sur un circuit de 7.5 KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par un transformateur de 15KV avec mise à la terre au milieu.
- **Utilisation en environnement sec ou humide seulement**
- Les installations électriques ne doivent en aucun cas servir de support aux tubes de néon.
- Ne pas couper, ne pas percer et ne pas modifier les produits autrement que selon les instructions d'installation fournies.
- Ne pas peindre les capuchons, ni les gaines, ni aucun autre produit d'isolation.
- Pour obtenir une enseigne certifiée, utiliser ces produits et systèmes uniquement avec des composants eux-mêmes certifiés.
- Toujours prendre soin d'utiliser la taille de capuchon appropriée aux électrodes.

## Splicing for all products

Enlace de los cables  
Raccordement des câbles



1/2" Maximum / Máximo

- Strip GTO cable insulation  $\frac{3}{4}$  to 1 inch maximum and bring the GTO cable to the electrode wires. All splicing must be made of at least 5 twists, bent back and flattened. If using crimps, trim the resulting stranded wires.
- Pelar de 2 a 2.5cm (3/4 a 1 pulgada) la funda del cable GTO y enlazar el cable a los cables del electrodo tal como indicado sobre la figura aquí arriba. Todos los enlaces deben contar un mínimo de 5 vueltas antes de ser doblados y achatados. Cortar las puntas sobresaliendo con pinzas.
- Dénuder le fil GTO sur une longueur de 2 à 2.5cm (3/4 à 1 pouce) et le raccorder aux fils de l'électrode tel qu'illustré sur la figure ci-haut. Tous les raccordements doivent être faits d'au moins 5 tours de fils enlacés, repliés puis aplatis. Couper les extrémités superflues avec des pinces.

## Minimum installation instructions for Electrobits systems

**Warning** : Risk of fire or electric shock! fittings, coverings and sleeves to be used in dry and damp locations only.

**Warning** : Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.

**Warning** : Risk of fire!

GtoSleeving is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation** : GTO wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

## Instrucciones mínimas para la instalación de los sistemas Electrobits

**Cuidado** : Riesgo de fuego o choque eléctrico!

Los capuchones, forros y otros productos aislante Electrobits se deben instalar en ambientes secos o húmedos únicamente.

**Cuidado** : Riesgo de choque eléctrico!

Los productos aislantes Electrobits pueden instalarse por dentro o por fuera cuando estén en un cajetín de anuncio ("channel letters" y otros cajetines, con cualquier material de fachada), sobre instalaciones portátiles para vitrinas y orillas decorativas, etc. Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior (figura de arriba).

**Cuidado** : Riesgo de fuego!

El forro aislante GtoSleeving esta previsto para un cable GTO-15KV máximo. El forro no se debe utilizar dentro de las paredes. El forro solo no puede servir de aislante para enlaces de cable GTO (utilizar más bien el In-line Splice connector ILS).

**Recomendación** : El cable GTO debe estar alejado de cualquier pieza metálica, incluyendo las escondidas, para reducir lo más posible la posibilidad de sobrecarga eléctrica debida al acoplamiento de capacitancias.

## Instruccions mínimes per l'instal·lació dels sistemes Electrobits

**Atenció** : Risque d'incendiu o de choc elèctric!

Les embouts i les gaines isolants Electrobits doivent être installés dans un environnement sec ou humide seulement.

**Atenció** : Risque de choc électrique!

Les produits isolants Electrobits doivent être installés à l'intérieur ou à l'extérieur dans la mesure où ils sont à l'intérieur d'un caisson ("channel letter" ou autre, avec tout type de matériaux de façade), sur des enseignes portatives à l'intérieur de vitrines, sur des enseignes intérieures de type "squelette", etc. Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent être à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle (voir figure plus haut).

**Atenció** : Risque d'incendiu!

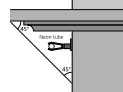
La gaine isolante GtoSleeving est conçue pour isoler au maximum un fil GTO-15. Elle n'est pas prévue pour une utilisation à l'intérieur des murs. Ne jamais effectuer de raccord de fil GTO à l'intérieur de la gaine; pour cela utiliser plutôt un connecteur en ligne ILS.

**Recomendation** : Les fils GTO devraient être tenus éloignés de tout environnement métallique, incluant les structures cachées, afin de diminuer au maximum la charge électrique provenant d'un couplage de capacités.

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Electrobits International 286 St-Paul West, Montreal, Qc, Canada H2Y2A4  
USA & Canada 1 (800) 567-2487 International 1 (514) 842-4150  
www.electrobits.com or costumerservice@electrobits.com

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## Installation Instructions

### In-line Splice Connector ILS 2000

- For dry & damp locations only
- Rated 15 KV & 7,500 VAC to ground

- 1 Cover the two GTO wires that are to be spliced with Electrobits 3730 GTOsleeving and strip three-quarters of an inch from the ends of the wires. Slide the ILS2000 connector covers over each of the sleeving covered wire ends with the larger openings facing each other (Fig. 1). Slide the spacer provided over the wire coming from the ILS-F. Fasten the spacer-covered wire from the ILS-F to the screw opposite the flanged part on the metal connector. Orient the wire around the screw so that the wire exits from the groove on the metal connector and tighten the screw securely with the appropriate screwdriver. Fasten the other wire to the flanged part of the metal connector in the same manner.
- 2 Slide the spacer onto the metal connector until it butts up against the flange (Fig. 2).
- 3 Insert the spacer covered metal connector into the ILS-F connector (Fig. 3).
- 4 Push both connector covers together until the two ribs lock in place (Fig. 4).

### Conector de enlaces aliados ILS 2000

- Para ambientes secos o húmedos únicamente
- Acreditado 15 KV y 7,500 VAC polo a tierra

- 1 Aislar con el forro GTOsleeving 3730 los dos cables GTO que se necesitan conectar y pelarlos sobre 2 cm (3/4 de pulgada). Deslizar las tapas del conector ILS™2000 por encima de las extremidades cubiertas de GTOsleeving 3730, las partes mas anchas de las tapas frente a frente (Fig.1). Deslizar el cilindro de separación sobre el cable saliendo de la parte hembra (ILS-F) del ILS™2000 y amarrar este cable al tornillo opuesto a la parte bordeada del conector metálico. Posicionar el cable alrededor del tornillo de tal forma que se salga por la ranura del conector metálico y atornillar bien. De la misma manera, amarrar el otro cable sobre el borde del conector metálico.
- 2 Deslizar el cilindro de separación sobre el conector metálico hasta que se choque contra el borde (Fig. 2).
- 3 Introducir la conexión ya cubierta con el cilindro de separación dentro de la parte hembra del ILS 2000 (Fig.3).
- 4 Empujar ambas tapas una hacia la otra, cubriendo la conexión, hasta sentir que las costillas se encajen (Fig.4).

### Connecteur de câbles alignés ILS 2000

- Pour environnements secs ou humides seulement
- Accrédités 15 KV et 7,500 VAC avec mise à la terre

- 1 Isoler avec du GTOsleeving 3730 les deux câbles devant être raccordés et en dénuder les bouts sur une longueur de 2 cm (3/4 de pouce). Faire glisser les couvercles du connecteur ILS2000 sur chacun des câbles de telle sorte que les ouvertures les plus larges soient face à face (Fig.1). Faire glisser le cylindre séparateur sur le câble sortant de la partie femelle (ILS-F) du ILS 2000 et attacher ce câble à la vis opposée au collet du connecteur métallique. Positionner le câble autour de la vis de telle façon qu'il sorte dans le sillon du connecteur métallique. Visser solidement. De la même manière, attacher l'autre câble sur le collet du connecteur.
- 2 Faire glisser le cylindre de séparation sur le connecteur métallique jusqu'à ce qu'il butte contre le collet (Fig. 2).
- 3 Introduire le connecteur métallique recouvert du cylindre de séparation à l'intérieur de la partie femelle du ILS 2000 (Fig. 3).
- 4 Pousser les deux couvercles l'un vers l'autre jusqu'à ce que les côtes et les anneaux s'emboîtent (Fig. 4).

### Note:

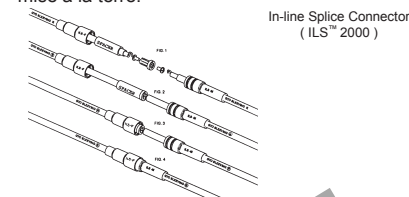
- 1 The splice insulator and GTO cable leading to each end of the splice insulator shall be enclosed within an electrical enclosure if the GTO cable leads to the splice insulator are not enclosed in Electrobits Cat. No. 3730 GTOsleeving.
- 2 The splice insulator may be used in a sign body when used with Electrobits Listed GTOsleeving cable Cat. No. 3730 over the GTO cable leading to each end of the splice connector.
- 3 The assembly of the splice insulator shall be in accordance with the assembly instructions provided with each splice insulator.
- 4 A minimum free length of 5 in. is required on each side of the point at which the splice is to be made.
- 5 The splice insulator is for use with either indoor or outdoor signs.
- 6 The splice insulator is rated 105° C.
- 7 The splice insulator may be at zero clearance to grounded metal.

### Nota:

- 1 El conector de enlaces y el cable GTO llevando a cada una de sus extremidades deben instalarse dentro de una caja eléctrica, a no ser que los cables GTO que se necesitan enlazar estén aislados con el forro Electrobits Cat. No. 3730 GTOsleeving.
- 2 El conector de enlaces puede instalarse dentro del cuerpo de un anuncio a condición de que los cables GTO llevando a cada extremidad del conector estén aislados con el forro Electrobits Listed GTOsleeving Cat. No. 3730.
- 3 La instalación del conector de enlaces debe respetar las instrucciones dadas con cada conector.
- 4 Se necesita por lo menos dejar 5 pulgadas (12.5cm) de cable libre desde cada extremidad del enlace.
- 5 El conector de enlace se puede instalar sobre anuncios por dentro y por fuera.
- 6 El conector de enlace esta acreditado hasta 105° C.
- 7 El conector de enlace puede instalarse a cualquier distancia de partes metálicas con polo a tierra.

### Note:

- 1 Le connecteur de câbles alignés et le câble GTO menant à chacune de ses extrémités doivent être installés dans un boîtier électrique, à moins que les câbles GTO à raccorder soient isolés à l'aide de la gaine isolante Electrobits Cat. No. 3730 GTOsleeving.
- 2 Le connecteur de câbles peut être installé à l'intérieur du bâti d'une enseigne à condition que les câbles GTO menant à chaque extrémité du connecteur soient isolés avec la gaine isolante Electrobits GTOsleeving Cat. No. 3730
- 3 L'installation du connecteur de câbles doit respecter les instructions fournies avec chaque connecteur.
- 4 Une longueur minimale de 5 pouces (12.5cm) de câble GTO libre est indispensable de chaque côté de la connexion.
- 5 Le connecteur de câble peut être installé sur des enseignes extérieures ou intérieures.
- 6 Le connecteur de câble est accrédité jusqu'à une température de 105° C.
- 7 Le connecteur de câble peut être installé à n'importe quelle distance de toute surface métallique avec mise à la terre.



In-line Splice Connector (ILS™ 2000)



UR FILE E129837

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## General instructions and warnings

Follow the instructions given for each assembly

### General

- Electrobits electrodes insulators are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- **Dry and damp locations use only.**
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- Do not paint any fitting, covering or sleeving.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

## Instrucciones y precauciones generales

Seguir las instrucciones dadas por cada tipo de instalación

### Generalidades

- Los capuchones aislantes de electrodos Electrobits están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.
- **Utilización en ambientes secos o húmedos únicamente**
- Las instalaciones eléctricas nunca deben servir de soporte para la instalación de los tubos de neón.
- No perforar, ni cortar, ni modificar ninguno de los productos de una manera diferente a la indicada en las instrucciones de instalación.
- No se deben pintar los capuchones, ni los forros ni cualquier otro producto aislante.
- Para obtener un rótulo luminoso certificado e conforme a las normas de seguridad, utilizar estos productos y sistemas únicamente con componentes también certificados.
- Siempre utilizar los capuchones correspondiendo a la dimensión del electrodo.

## Instruccions et précautions générales

Toujours suivre les instructions données pour chaque type d'installation

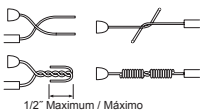
### Généralités

- Les capuchons isolants pour électrodes Electrobits sont prévus et certifiés pour une utilisation sur un circuit de 7.5 KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par un transformateur de 15KV avec mise à la terre au milieu.
- **Utilisation en environnement sec ou humide seulement**
- Les installations électriques ne doivent en aucun cas servir de support aux tubes de néon.
- Ne pas couper, ne pas percer et ne pas modifier les produits autrement que selon les instructions d'installation fournies.
- Ne pas peindre les capuchons, ni les gaines, ni aucun autre produit d'isolation.
- Pour obtenir une enseigne certifiée, utiliser ces produits et systèmes uniquement avec des composants eux-mêmes certifiés.
- Toujours prendre soin d'utiliser la taille de capuchon appropriée aux électrodes.

## Splicing for all products

### Enlace de los cables

### Raccordement des câbles



- Strip GTO cable insulation 3/4 to 1 inch maximum and bring the GTO cable to the electrode wires. All splicing must be made of at least 5 twists, bent back and flattened. If using crimps, trim the resulting stranded wires.
- Pelar de 2 a 2.5cm (3/4 a 1 pulgada) la funda del cable GTO y enlazar el cable a los cables del electrodo tal como indicado sobre la figura aquí arriba. Todos los enlaces deben contar un mínimo de 5 vueltas antes de ser doblados y achatados. Cortar las puntas sobresaliendo con pinzas.
- Dénuder le fil GTO sur une longueur de 2 à 2.5cm (3/4 à 1pouce) et le raccorder aux fils de l'électrode tel qu'illustré sur la figure ci-haut. Tous les raccordements doivent être faits d'au moins 5 tours de fils enlacés, repliés puis aplatis. Couper les extrémités superflues avec des pinces.

## Minimum installation instructions for Electrobits systems

**Warning** : Risk of fire or electric shock! fittings, coverings and sleeveings to be used in dry and damp locations only.

**Warning** : Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.

**Warning** : Risk of fire!

GtoSleeving is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation** : GTO wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

## Instrucciones mínimas para la instalación de los sistemas Electrobits

**Cuidado** : Riesgo de fuego o choque eléctrico!

Los capuchones, forros y otros productos aislante Electrobits se deben instalar en ambientes secos o húmedos únicamente.

**Cuidado** : Riesgo de choque eléctrico!

Los productos aislantes Electrobits pueden instalarse por dentro o por fuera cuando estén en un cajetín de anuncio ("channel letters" y otros cajetines, con cualquier material de fachada), sobre instalaciones portátiles para vitrinas y orillas decorativas, etc. Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior (figura de arriba).

**Cuidado** : Riesgo de fuego!

El forro aislante GtoSleeving está previsto para un cable GTO-15KV máximo. El forro no se debe utilizar dentro de las paredes. El forro solo no puede servir de aislante para enlaces de cable GTO (utilizar más bien el In-line Splice connector ILS).

**Recomendación** : El cable GTO debe estar alejado de cualquier pieza metálica, incluyendo las escondidas, para reducir lo más posible la posibilidad de sobrecarga eléctrica debida al acoplamiento de capacitancias.

## Instruccions mínimes per l'instal·lació de sistemes Electrobits

**Atenció** : Risque d'incendi o de choc elèctric!

Les embuts i les gaines isolants Electrobits deivent étre instal·lats dans un environnement sec ou humide seulement.

**Atenció** : Risque de choc elèctric!

Les produits isolants Electrobits doivent étre installés à l'intérieur ou à l'extérieur dans la mesure où ils sont à l'intérieur d'un caisson ("channel letter" ou autre, avec tout type de matériaux de façade), sur des enseignes portatives à l'intérieur de vitrines, sur des enseignes intérieures de type "squelette", etc. Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent étre à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle (voir figure plus haut).

**Atenció** : Risque d'incendi!

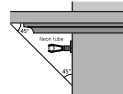
La gaine isolante GtoSleeving est conçue pour isoler au maximum un fil GTO-15. Elle n'est pas prévue pour une utilisation à l'intérieur des murs. Ne jamais effectuer de raccord de fil GTO à l'intérieur de la gaine; pour cela utiliser plutôt un connecteur en ligne ILS.

**Recomandation** : Les fils GTO devraient étre tenus éloignés de tout environnement métallique, incluant les structures cachées, afin de diminuer au maximum la charge électrique provenant d'un couplage de capacitances.

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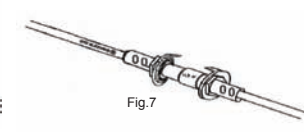
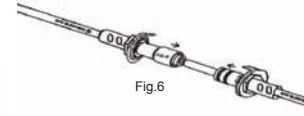
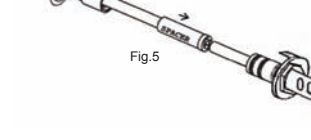
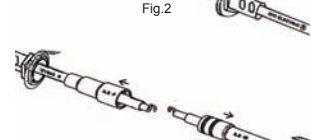


## Installation Instructions

### In-line Splice Connector ILS 2000 BX

- For dry & damp locations only
- Rated 15 KV & 7,500 VAC to ground

- 1 Cover the two GTO wires that are to be spliced with Electrobits 3730 GTOsleeving and strip three-quarters of an inch from the ends of the wires.
- 2 Assemble the grounding ring onto each of the SC12 (Fig. 1).
- 3 Slide the assembled connectors onto each GTO cable (Fig.2).
- 4 Slide the ILS2000 connector covers over each of the sleeving covered wire ends with the larger openings facing each other (Fig. 3).
- 5 Slide the spacer provided over the wire coming from the ILS-F. Fasten the spacer-covered wire from the ILS-F to the screw opposite the flanged part on the metal connector. Orient the wire around the screw so that the wire exits from the groove on the metal connector and tighten the screw securely with the appropriate screwdriver. Fasten the other wire to the flanged part of the metal connector in the same manner (Fig.4).
- 6 Slide the spacer onto the metal connector until it butts up against the flange (Fig. 5).
- 7 Insert the spacer covered metal connector into the ILS-F connector (Fig. 6).
- 8 Push both connector covers together until the two ribs lock in place (Fig. 7).
- 9 Using the provided grounding strap, attach each end of the strap to the grounding screw of the grounding ring (Fig.8).
- 10 Final assembly (Fig. 9).



## Conector de enlaces aliñados ILS 2000 BX

- Para ambientes secos o húmedos únicamente
- Acreditado 15 KV y 7,500 VAC polo a tierra

- 1 Aislar con el forro GTOsleeving 3730 los dos cables GTO que se necesitan conectar y pelarlos sobre 2 cm (3/4 de pulgada).
- 2 Ensamblar los anillos de toma de tierra sobre cada uno de los SC12 (Fig.1).
- 3 Deslizar los conectadores SC12 ya ensamblados sobre cada cable GTO (Fig.2).
- 4 Deslizar las tapas del conector ILS™2000 por encima de las extremidades cubiertas de GTOsleeving 3730, las partes mas anchas de las tapas frente a frente (Fig.3).
- 5 Deslizar el cilindro de separación sobre el cable saliendo de la parte hembra (ILS-F) del ILS2000 y amarrar esté cable al tornillo opuesto a la parte bordeada del conector metálico. Posicionar el cable alrededor del tornillo de tal forma que se salga por la ranura del conector metálico y atornillar bien. De la misma manera, amarrar el otro cable sobre el borde del conector metálico (Fig.4).
- 6 Deslizar el cilindro de separación sobre el conector metálico hasta que se choque contra el borde (Fig. 5).
- 7 Introducir la conexión ya cubierta con el cilindro de separación dentro de la parte hembra del ILS 2000 (Fig.6).
- 8 Empujar ambas tapas una hacia la otra, cubriendo la conexión, hasta sentir que las costillas se encajen (Fig.7).
- 9 Amarrar cada extremidad del palo de toma de tierra a los tornillos de los anillos de toma de tierra (Fig.8).
- 10 Ensamblaje final (Fig.10).

## Connecteur de câbles alignés ILS 2000 BX

- Pour environnements secs ou humides seulement
- Accrédités 15 KV et 7,500 VAC avec mise à la terre

- 1 Isoler avec du GTOsleeving 3730 les deux câbles devant étre raccordés et en dénuder les bouts sur une longueur de 2 cm (3/4 de pouce).
- 2 Assembler les anneaux de mise à la terre sur chacun des SC12 (Fig.1).
- 3 Faire glisser les connecteurs SC12 assemblés sur chacun des câbles GTO (Fig. 2).
- 4 Faire glisser les couvercles du connecteur ILS2000 sur chacun des câbles de telle sorte que les ouvertures les plus larges soient face à face (Fig.3).
- 5 Faire glisser le cylindre séparateur sur le câble sortant de la partie femelle (ILS-F) du ILS2000 et attacher ce câble à la vis opposée au collet du connecteur métallique. Positionner le câble autour de la vis de telle façon qu'il sorte dans le sillon du connecteur métallique. Visser solidement. De la même manière, attacher l'autre câble sur le collet du connecteur (Fig. 4).
- 6 Faire glisser le cylindre de séparation sur le connecteur métallique jusqu'à ce qu'il butte contre le collet (Fig. 5).
- 7 Introduire le connecteur métallique recouvert du cylindre de séparation à l'intérieur de la partie femelle du ILS 2000 (Fig. 6).
- 8 Pousser les deux couvercles du connecteur l'un vers l'autre jusqu'à ce que les côtes et les anneaux s'emboîtent (Fig. 7).
- 9 Attacher chaque extrémités de la barette de mise à la terre aux vis des anneaux de mise à la terre (Fig. 8).
- 10 Assemblage final (Fig.9).

## Double LB-BOX Installation Instructions

### Step 1

**1.1** Install a flexible metallic or EMT conduit electrical fitting onto one of the 2 holes of the bottom box enclosure, use the supplied knock out plug to blank out the other hole.

**1.2** Pass all three incoming primary line conductor wire ( #12 or 14 AWG) through the electrical connector into the box enclosure.

**1.3** Pass all three outgoing primary line conductor which are coming from the power light source of the sign through the Electrobits Passthru that is attached to the upper switch box enclosure.



Step 1.2



Step 1.3

### Step 2

Attach the incoming primary line green ground wire along with the outgoing primary line green ground conductor wire to the provided grounding ring that is located in the bottom LB-box enclosure. Please note that the outgoing primary line green ground conductor wire will need to be feed through the Electrobits Passthru that is located inside the LB-box enclosures.

Step 2 & 3.1



### Step 3

**3.1** Attach both incoming primary and outgoing secondary neutral conductor wire together inside of the bottom LB-box enclosure and secure them by using the appropriate size of electrical marret. Please note that the outgoing neutral conductor wire will need to be feed through the Electrobits passthru that is located inside of the LB-box enclosure.

**3.2** Feed the incoming primary line(hot) conductor wire through the Electrobits passthru in order to be able to splice it to the selected toggle switch that is located in the top box enclosure. Snap back the blank cover onto the bottom LB-box, please note that you need to align the arrow located on cover with the arrow located on the bottom LB-box

### Step 4

**4.1** Fasten the selected toggle switch onto the cover that has a hole and the ON - OFF markings.

**4.2** Splice the incoming primary line(hot) conductor wire with the one located inline with the **off** position of the toggle switch.

**4.3** Splice the outgoing secondary line (hot) conductor wire with the one located inline with the on position of the toggle switch



Step 4

### Step 5

**5.1** Snap back the cover with the toggle switch onto the top LB-box, please note that you need to align the arrow located on the cover with the arrow located on the top LB-box.

**5.2** Drill a 5/16 hole in the sign enclosure where the LB-box is to be mounted.

For securement of the LB-box system, please use the provided tab on the cover or you can also secure the LB-box by using the provided self taping screws and fasten the LB-box from the inside of the box using the provided guide holes.



Step 5.1



Step 5.2

## General instructions and warnings

### Follow the instructions given for each assembly

#### General

- Electrobits electrodes insulators are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.**
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- Do not paint any fitting, covering or sleeving.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

## Instrucciones y precauciones generales

### Seguir las instrucciones dadas por cada tipo de instalación

#### Generalidades

- Los capuchones aislantes de electrodos Electrobits están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.
- Utilización en ambientes secos o húmedos únicamente**
- Las instalaciones eléctricas nunca deben servir de soporte para la instalación de los tubos de neón.
- No perforar, ni cortar, ni modificar ninguno de los productos de una manera diferente a la indicada en las instrucciones de instalación.
- No se deben pintar los capuchones, ni los forros ni cualquier otro producto aislante.
- Para obtener un rótulo luminoso certificado e conforme a las normas de seguridad, utilizar estos productos y sistemas únicamente con componentes también certificados.
- Siempre utilizar los capuchones correspondiendo a la dimensión del electrodo.

## Instruccions et précautions générales

### Toujours suivre les instructions données pour chaque type d'installation

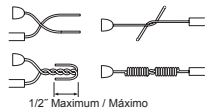
#### Généralités

- Les capuchons isolants pour électrodes Electrobits sont prévus et certifiés pour une utilisation sur un circuit de 7.5 KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par un transformateur de 15KV avec mise à la terre au milieu.
- Utilisation en environnement sec ou humide seulement**
- Les installations électriques ne doivent en aucun cas servir de support aux tubes de néon.
- Ne pas couper, ne pas percer et ne pas modifier les produits autrement que selon les instructions d'installation fournies.
- Ne pas peindre les capuchons, ni les gaines, ni aucun autre produit d'isolation.
- Pour obtenir une enseigne certifiée, utiliser ces produits et systèmes uniquement avec des composants eux-mêmes certifiés.
- Toujours prendre soin d'utiliser la taille de capuchon appropriée aux électrodes.

## Splicing for all products

### Enlace de los cables

### Raccordement des câbles



- Strip GTO cable insulation 3/4 to 1 inch maximum and bring the GTO cable to the electrode wires. All splicing must be made of at least 5 twists, bent back and flattened. If using crimps, trim the resulting stranded wires.
- Pelar de 2 a 2.5cm (3/4 a 1 pulgada) la funda del cable GTO y enlazar el cable a los cables del electrodo tal como indicado sobre la figura aquí arriba. Todos los enlaces deben contar un mínimo de 5 vueltas antes de ser doblados y achatados. Cortar las puntas sobresaliendo con pinzas.
- Dénuder le fil GTO sur une longueur de 2 à 2.5cm (3/4 à 1 pouce) et le raccorder aux fils de l'électrode tel qu'ilustré sur la figure ci-haut. Tous les raccordements doivent être faits d'au moins 5 tours de fils enlacés, repliés puis aplatis. Couper les extrémités superflues avec des pinces.

## Minimum installation instructions for Electrobits systems

**Warning :** Risk of fire or electric shock! fittings, coverings and sleeveings to be used in dry and damp locations only.

**Warning :** Risk of electric shock!

Electrobits parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.

**Warning :** Risk of fire!

GtoSleeving is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation :** GTO wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

## Instrucciones minimales para la instalación de los sistemas Electrobits

**Cuidado :** Riesgo de fuego o choque eléctrico!

Los capuchones, forros y otros productos aislante Electrobits se deben instalar en ambientes secos o húmedos únicamente.

**Cuidado :** Riesgo de choque eléctrico!

Los productos aislantes Electrobits pueden instalarse por dentro o por fuera cuando estén en un cajetín de anuncio ("channel letters" y otros cajetines, con cualquier material de fachada), sobre instalaciones portátiles para vitrinas y orillas decorativas, etc. Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior (figura de arriba).

**Cuidado :** Riesgo de fuego!

El forro aislante GtoSleeving está previsto para un cable GTO-15KV máximo. El forro no se debe utilizar dentro de las paredes. El forro solo no puede servir de aislante para enlaces de cable GTO (utilizar más bien el In-line Splice connector ILS).

**Recomendación :** El cable GTO debe estar alejado de cualquier pieza metálica, incluyendo las escondidas, para reducir lo más posible la posibilidad de sobrecarga eléctrica debida al acoplamiento de capacitancias.

## Instruccions minimales pour l'installation des systèmes Electrobits

**Attention :** Risque d'incendie ou de choc électrique!

Les embouts et les gaines isolantes Electrobits doivent être installés dans un environnement sec ou humide seulement.

**Attention :** Risque de choc électrique!

Les produits isolants Electrobits doivent être installés à l'intérieur ou à l'extérieur dans la mesure où ils sont à l'intérieur d'un caisson ("channel letter" ou autre, avec tout type de matériaux de façade), sur des enseignes portatives à l'intérieur de vitrines, sur des enseignes intérieures de type "squelette", etc. Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent être à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle (voir figure plus haut).

**Attention :** Risque d'incendie!

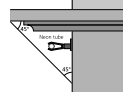
La gaine isolante GtoSleeving est conçue pour isoler au maximum un fil GTO-15. Elle n'est pas prévue pour une utilisation à l'intérieur des murs. Ne jamais effectuer de raccord de fil GTO à l'intérieur de la gaine; pour cela utiliser plutôt un connecteur en ligne ILS.

**Recommandation :** Les fils GTO devraient être tenus éloignés de tout environnement métallique, incluant les structures cachées, afin de diminuer au maximum la charge électrique provenant d'un couplage de capacitances.

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Electrobits International 286 St-Paul West, Montreal, Qc, Canada H2Y2A4  
USA & Canada 1 (800) 567-2487 International 1 (514) 842-4150  
www.electrobits-international.com or costumerservice@electrobits-international.com

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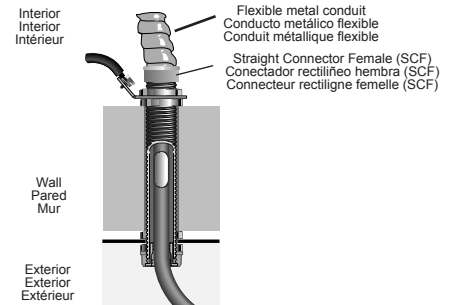


## Installation Instructions

### RNGR Grounding Ring

- For dry & damp locations only
- Rated 15 KV & 7,500 VAC to ground

- Remove the Listed Plastic Bushing on the side of the Passthu that is to be grounded.
- Screw one provided Listed Locknut onto the Passthu.
- Slide the RNGR Grounding ring over the Passthu and secure in place with a second Listed Locknut.
- Replace the plastic Bushing.
- Insert the ground bouding wire (10-14 AWG) into the cut-out on the brass retainer.
- Tighten the ground screw securely.



### RNGR Arrandela de toma de tierra

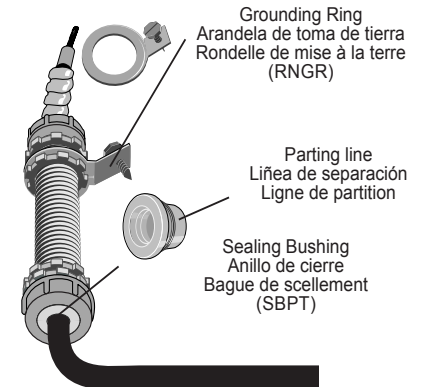
- Para ambientes secos o húmedos únicamente
- Acreditado 15 KV y 7,500 VAC polo a tierra

- Remove the Listed Plastic Bushing del lado que se necesita instalar la toma a tierra sobre el conducto Passthu.
- Atornillar una tuerca acreditada surtida sobre el conducto Passthu.
- Deslizar la RNGR Arrandela de toma de tierra por encima del conducto Passthu y asegurarla en sitio con una segunda tuerca acreditada.
- Volver a poner el tapón de plástico plastic Bushing en su sitio.
- Insertar el cable de toma de tierra (10-14 AWG) dentro de la apertura prevista sobre el anillo de latón.
- atornillar el tornillo de toma de tierra firmamente.

### RNGR Rondelle de mise à la terre

- Pour environnements secs ou humides seulement
- Accrédités 15 KV et 7,500 VAC avec mise à la terre

- Enlever la bague de scellement accréditée SBPT Plastic Bushing du côté où le conduit Passthu doit être mis à la terre.
- Visser un écrou accrédité fourni sur le conduit Passthu.
- Faire glisser la rondelle de mise à la terre RNGR sur le conduit Passthu et la fixer à l'aide d'un deuxième écrou.
- Replacer la bague de scellement SBPT Plastic Bushing.
- Insérer le câble de mise à la terre (10-14 AWG) dans l'encoche prévue sur la rondelle en laiton.
- Serrer la vis de mise à la terre fermement.



File Number  
E205017



File Number  
LR88690-16

ELECTRObits  
INTERNATIONAL

## General instructions and warnings

Follow the instructions given for each assembly

### General

- Electrobites electrodes insulators are rated 7.5KV AC to ground. May be used with 15KV mid-point grounded transformers.
- Dry and damp locations use only.
- These neon electrical systems should not act as support for neon tube installation.
- Do not puncture, cut or modify any product except as per instructions given for each assembly.
- Do not paint any fitting, covering or sleeving.
- To obtain a listed sign, use these systems and fittings only with listed or recognized components.
- Always match the size of products with size of electrodes.

## Instrucciones y precauciones generales

Seguir las instrucciones dadas por cada tipo de instalación

### Generalidades

- Los capuchones aislantes de electrodos Electrobits están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.
- Utilización en ambientes secos o húmedos únicamente
- Las instalaciones eléctricas nunca deben servir de soporte para la instalación de los tubos de neón.
- No perforar, ni cortar, ni modificar ninguno de los productos de una manera diferente a la indicada en las instrucciones de instalación.
- No se deben pintar los capuchones, ni los forros ni calquier otro producto aislante.
- Para obtener un rótulo luminoso certificado e conforme a las normas de seguridad, utilizar estos productos y sistemas únicamente con componentes también certificados.
- Siempre utilizar los capuchones correspondiendo a la instrucción del electrodo.

## Instructions et précautions générales

Toujours suivre les instructions données pour chaque type d'installation

### Generalités

- Les capuchons isolants pour électrodes Electrobits sont prévus et certifiés pour une utilisation sur un circuit de 7.5 KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par un transformateur de 15KV avec mise à la terre au milieu.
- Utilisation en environnement sec ou humide seulement
- Les installations électriques ne doivent en aucun cas servir de support aux tubes de néon.
- Ne pas couper, ne pas percer et ne pas modifier les produits autrement que selon les instructions d'installation fournies.
- Ne pas peindre les capuchons, ni les gaines, ni aucun autre produit d'isolation.
- Pour obtenir une enseigne certifiée, utiliser ces produits et systèmes uniquement avec des composants eux-mêmes certifiés.
- Toujours prendre soin d'utiliser la taille de capuchon appropriée aux électrodes.

Splicing for all products

Enlace de los cables

Raccordement des câbles



1/2" Maximum / Máximo

- Strip GTO cable insulation 3/4 to 1 inch maximum and bring the GTO cable to the electrode wires. All splicing must be made of at least 5 twists, bent back and flattened. If using crimps, trim the resulting stranded wires.
- Pelar de 2 a 2.5cm (3/4 a 1 pulgada) la funda del cable GTO y enlazar el cable a los cables del electrodo tal como indicado sobre la figura aquí arriba. Todos los enlaces deben contar un mínimo de 5 vueltas antes de ser doblados y achañados. Cortar las puntas sobresalendo con pinzas.
- Dénuder le fil GTO sur une longueur de 2 à 2.5cm (3/4 à 1 pouce) et le raccorder aux fils de l'électrode tel qu'illustré sur la figure ci-haut. Tous les raccords doivent être faits d'au moins 5 tours de fils enlacés, repliés puis aplatis. Couper les extrémités superflues avec des pinces.

## Minimum installation instructions for Electrobits systems

**Warning** : Risk of fire or electric shock!  
Electrobites fittings, coverings and sleeves to be used in dry and damp locations only.

**Warning** : Risk of electric shock!

Electrobites parts may be installed in indoors or outdoors sign bodies (channel letters and others, with any sign face material), portable show window signs, skeletal neon signs, etc. For outdoor lighting neon (border type neon), Electrobits parts must be sheltered within the perimeter of a 45° right angle triangle.

**Warning** : Risk of fire!

GtoSleeving is for maximum GTO-15 cable. The sleeving is not intended to be used inside walls. No splices of GTO cable should be made in the sleeving.

**Recommendation** : GTO wiring should be spaced from any metal (including hidden structures) to reduce loading due to capacitive coupling.

## Instrucciones mínimas para la instalación de los sistemas Electrobits

**Cuidado** : Riesgo de fuego o choque eléctrico!

Los capuchones, forros y otros productos aislantes Electrobits se deben instalar en ambientes secos o húmedos únicamente.

**Cuidado** : Riesgo de choque eléctrico!

Los productos aislantes Electrobits pueden instalarse por dentro o por fuera cuando estén en un cajetín de anuncio ("channel letters" y otros cajetines, con cualquier material de fachada), sobre instalaciones portátiles para vitrinas y orillas decorativas, etc. Para las instalaciones al exterior se necesita cubrir el anuncio con un ángulo de 45°, formando así un triángulo recto con la pared exterior (figura de arriba).

**Cuidado** : Riesgo de fuego!

El forro aislante GtoSleeving está previsto para un cable GTO-15KV máximo. El forro no se debe utilizar dentro de las paredes. El forro solo no puede servir de aislante para enlaces de cable GTO (utilizar mas bien el In-line Splice connector ILS).

**Recommendación** : El cable GTO debe estar alejado de cualquier pieza metálica, incluyendo las escondidas, para reducir lo más posible la posibilidad de sobrecarga eléctrica debida al acoplamiento de capacitancias.

## Instrucciones mínimas para la instalación de sistemas Electrobits

**Attention** : Risque d'incendie ou de choc électrique!

Les embouts et les gaines isolantes Electrobits doivent être installés dans un environnement sec ou humide seulement.

**Attention** : Risque de choc électrique!

Les produits isolants Electrobits peuvent être installés à l'intérieur ou à l'extérieur dans la mesure où ils sont à l'intérieur d'un caisson ("channel letter" ou autre, avec tout type de matériaux de façade), sur des enseignes portatives à l'intérieur de vitrines, sur des enseignes intérieures de type "squelette", etc. Pour les installations extérieures (bordures ou autres), les produits Electrobits doivent être à l'abri des intempéries sous une corniche formant un angle de 45° et un triangle rectangle (voir figure plus haut).

**Attention** : Risque d'incendie!

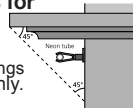
La gaine isolante GtoSleeving est conçue pour isoler au maximum un fil GTO-15. Elle n'est pas prévue pour une utilisation à l'intérieur des murs. Ne jamais effectuer de raccord de fil GTO à l'intérieur de la gaine; pour cela utiliser plutôt un connecteur en ligne ILS.

**Recommendation** : Les fils GTO devraient être tenus éloignés de tout environnement métallique, incluant les structures cachées, afin de diminuer au maximum la charge électrique provenant d'un couplage de capacitancias.

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Electrobites International, 286 St-Paul West, Montreal, Qc, Canada H2Y 2A4  
USA & Canada 1 (800) 567-2487 International 1 (514) 842-4150  
www.electrobites.com or costumerservice@electrobites.com

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## Installation Instructions

### Connectors SC, SCF and 90CF

- For dry and damp locations



### Straight Connector Female SCF12 & SCF 38 for Passtru

- Remove listed Plastic Bushing from installed Passtru where SCF is to be installed.
- Screw SCF onto the installed Passtru. Tighten securely.
- Pass 3730/3830 GtoSleeving or 3870 GtoCovering covered GTO wire through the Passtru and SCF12 combination. (Note that when using SCF38 the GtoSleeving or GtoCovering must be interrupted at the entrance to the SCF38 and continued at the other side). Pass the GtoSleeving covered GTO wire through the Flexible Metallic Conduit to reach the final destination.
- Twist-lock the Flexible Metallic Conduit onto the SCF securely so that no movement on the connection is possible.

### Connectadores rectilíneos hembras SCF12 y SCF 38 para Passtru

- Retirar el anillo de cierre acreditado del interior del Passtru, allí donde se debe instalar el SCF.
- Atornillar el SCF sobre el Passtru ya instalado. Asegurarlo bien.
- Introducir el cable GTO ya cubierto de GtoSleeving 3730/3830 o de GtoCovering 3870 dentro del ensamblaje del Passtru con el SCF12 (notar que el uso del SCF 38 necesita que se interrumpa el GtoSleeving o el GtoCovering a la entrada del SCF 38 y que se continúe del otro lado). Introducir entonces el cable GTO recubierto de su forro dentro del Conducto Metálico Flexible hasta su destinación final.
- Asegurar firmemente el Conducto Metálico Flexible sobre el SCF de tal forma que la conexión no se pueda mover.

### Connecteurs rectilignes femelles SCF12 et SCF38 pour Passtru

- Retirer la bague de plastique certifiée de l'intérieur du Passtru là où doit être installé le SCF.
- Visser le SCF sur le Passtru. Serrer solidement.
- Passer le câble GTO déjà recouvert de GtoSleeving 3730/3830 ou de GtoCovering 3870 à l'intérieur du Passtru et du SCF12 préassemblés (notez que lors de l'utilisation du SCF38, les GtoSleeving ou GtoCovering doivent être interrompus à l'entrée et continuer de l'autre côté). Passer ensuite le câble GTO recouvert de sa gaine à l'intérieur du Conduit métallique flexible jusqu'à sa destination finale.
- Ajuster solidement le Conduit Métallique Flexible sur le SCF. Veiller à ce qu'aucun mouvement ne soit possible au niveau de la connexion.

### Straight Connector male SC 12 and SC 38

- Pass 3730/3830 GtoSleeving or GtoCovering covered GTO wire from Flexible Metallic Conduit into barrel end of Straight Connector. (Note that when using SC 38 the GtoSleeving/GtoCovering must be interrupted at the entrance.
- Twist lock the SC securely onto the end of the Flexible Metallic Conduit so that no movement is possible.
- Insert the SC into the Transformer Enclosure 1/2 inch knockout and secure with listed locknut.

Note: SCF12 refers to Cat. No. SCF12; SC12 refers to Cat. No. SC12; SCF38 refers to Cat. No. SCF38; SC38 refers to Cat. No. SC38; SCF refers to either Cat. No. SCF12 or SCF38; SC refers to either Cat. No. SC12 or SC38; 90CF12 refers to Cat. No. 90CF12

Note: SCF12 refiere al número de Cat. SCF12; SC12 refiere al número de Cat. SC12; SCF38 refiere al número de Cat. SCF38; SCF refiere a los números de Cat. SCF12 o SCF38; SC12 refiere al número de Cat. SC12; SC38 refiere al número de Cat. SC38; SC refiere a los números de Cat. SC12 o SC38; 90CF12 refiere al número de Cat. 90CF12.

Note: SCF12 fait référence au numéro de Cat. SCF12; SC12 fait référence au numéro de Cat. SC12; SCF38 fait référence au numéro de Cat. SCF38; SC38 fait référence au numéro de Cat. SC38; SCF fait référence aux numéros de Cat. SCF12 ou SCF38; SC fait référence aux numéros de Cat. SC12 ou SC38; 90CF12 fait référence aux numéros de Cat. 90CF12.

These devices are rated at 7.5 KV AC to ground. The 15 kV MID-POINT GROUND marking refers to the ability to be connected to a 15 kV mid-point grounded transformer.

Estos productos están previstos y certificados para una utilización sobre una instalación de 7.5KV AC polo a tierra. Pueden utilizarse con transformadores de 15KV con polo a tierra en el pormedio.

Ces produits sont prévus et certifiés pour une utilisation sur un circuit de 7.5KV AC avec mise à la terre. Ils peuvent être installés sur des enseignes alimentées par des transformateurs de 15KV avec mise à la terre au milieu.



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## Connectadores rectilíneos machos SC12 y SC38

- Introducir el cable GTO ya cubierto de GtoSleeving 3730/3830 o GtoCovering dentro del Conducto Metálico Flexible y hasta el conector (Notar que el uso del conector SC38 necesita que se interrumpa el forro a la entrada del SC38 y que lo continúe del otro lado).
- Asegurar firmemente el Conducto Metálico Flexible sobre el SC de tal forma que la conexión no se pueda mover.
- Insertar el SC dentro de la entrada de 1/2 pulgada del cajetín del transformador. Asegurar con la tuerca acreditada.

## Connecteurs rectilignes mâle SC 12 et SC 38

- Introduire le câble GTO déjà recouvert de GtoSleeving 3730/3830 ou GtoCovering dans le Conduit Métallique Flexible et jusqu'au connecteur (noter qu'avec le connecteur SC38 la gaine isolante doit être interrompue à l'entrée et reprise à la sortie).
- Ajuster solidement le Conduit Métallique Flexible sur le SC. Veiller à ce qu'aucun mouvement ne soit possible au niveau de la connexion.
- Insérer le SC dans l'ouverture d'1/2 pouce du boîtier du transformateur et le fixer à l'aide de l'écrou certifié.

## 90 Degree Connector Female for Passtru™ (90CF™12)

- Install a Passtru according to instructions supplied.
- Remove both plastic bushings and the sealing bushing on the Passtru to allow the GTO wire to easily pass thru.
- Screw the 90CF12 onto the Passtru until it is securely attached. Continue to rotate the 90CF12 and Passtru to the orientation desired.
- Pass the required amount of GTO wire through the 90CF12 and Passtru.
- Pass the other end of the GTO wire thru the required length of 1/2 inch Flexible Metallic Conduit.
- Twist lock securely the 1/2 inch Flexible Metallic Conduit onto the barrel of the 90CF12.
- Terminate the other end of the 1/2 inch Flexible Metallic Conduit as required.
- Re-install the sealing bushing and one plastic bushing on the Passtru.

## Connectador 90° hembra para Passtru (90CF12)

- Instalar el Passtru según las direcciones surtidas.
- Quitarle los anillos de plástico y el anillo de cierre para facilitar el pasaje del cable GTO.
- Atornillar el 90CF12 sobre el Passtru hasta que esté bien amarrado. Seguir dándole vueltas al 90CF12 y al Passtru hasta obtener la orientación deseada.
- Hacer deslizar la cantidad adecuada de cable GTO dentro del ensamblaje del 90CF12 y del Passtru.
- Introducir el otro lado del cable GTO dentro de un trozo suficientemente largo de Conducto Metálico Flexible de 1/2 pulgada de ancho.
- Ensamblar y asegurar el Conducto Metálico Flexible con la parte más ancha del 90CF12.
- Terminar la otra extremidad del Conducto Metálico Flexible como se necesita.
- Volver a instalar el anillo de cierre y uno de los dos anillos de plástico sobre el Passtru.

## Connecteur Femelle à 90° pour Passtru (90CF12)

- Installer le Passtru selon les instructions fournies.
- Retirer les deux anneaux de plastique ainsi que l'anneau de scellement afin de permettre au cable GTO de passer librement.
- Visser le 90CF12 sur le Passtru jusqu'à ce qu'il soit fixé solidement. Continuer à visser le 90CF12 et le Passtru jusqu'à ce qu'ils se trouvent dans la position désirée.
- Faire glisser la longueur nécessaire de cable GTO dans l'assemblage du 90CF12 et du Passtru.
- Introduire l'autre extrémité du cable GTO dans une section de longueur adéquate de Conduit Métallique Flexible de 1/2 pouce.
- Ajuster fermement le Conduit Métallique Flexible sur l'ouverture la plus large du 90CF12.
- Terminer l'installation de l'autre extrémité du Conduit Métallique Flexible tel que nécessaire.
- Remettre en place l'anneau de scellement et l'un des anneaux plastique sur le Passtru.



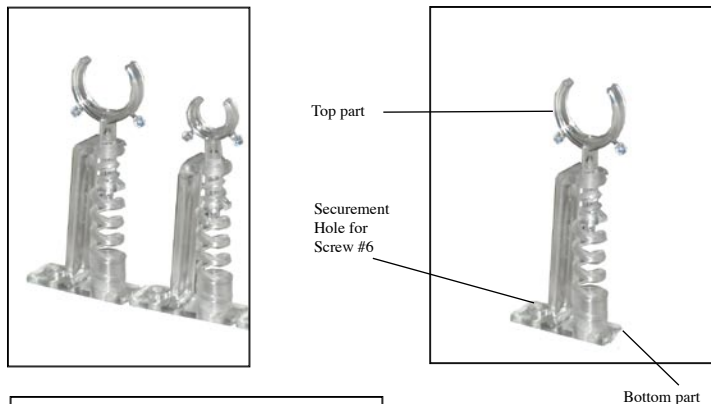


Installation Instructions

Model series: Tube Support Spring 3D  
TSS3D8mm, TSS3D10mm, TSS3D12mm, TSS3D15mm,

- Dry / damp & wet locations
- Warning: The rated minimum distance of tube support must be maintained from the mounting surface when used in wet locations to not result in corona or arching.

■ Rating: Spring 3D - TSS3D8mm, - TSS3D10mm, -TSS3D12mm, -TSS3D15mm is rated 1.875" height minimum required for 7.5 KV to ground or 15KV midpoint reference to ground. Use only with neon tube.



Installation Instructions

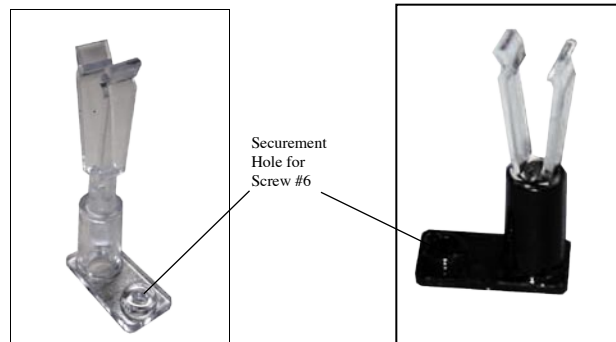
- 1- Match Tube Spring 3D tube support with your neon tube size.
- 2- Use self tapping screws number 6 Tube Spring 3D on sign support.
- 3- Installation of the neon tube support must be spread within 6 inches of the neon tube electrode and not closer than 3 inches of the neon tube electrode.
- 4- The rated minimum height specified for each of the neon tube support, is the height required to maintain a 15 kV, and 7 kV to ground rating based on it being used in a dry and damp location or a wet location. The minimum height is measured from the bottom of the neon tube (after installation of the neon tube onto the support) to the metal mounting foot.

Installation Instructions

Model series: Tube Support  
TS100, TSO1000

- Dry / damp & wet locations
- Warning: The rated minimum distance of tube support must be maintained from the mounting surface when used in wet locations to not result in corona or arching.

■ Rating: TS100 and TSO1000 is rated 1.625" height minimum required for 7.5 KV to ground or 15KV midpoint reference to ground. Use only with neon tube.



Installation Instructions

- 1- TS100 and TSO1000 Tube Supports are one size fits all neon tube from 8mm to 18mm.
- 2- Use self tapping screws number 6 Tube Spring 3D on sign support.
- 3- Installation of the neon tube support must be spread within 6 inches of the neon tube electrode and not closer than 3 inches of the neon tube electrode.
- 4- The rated minimum height specified for the neon tube support, is the height required to maintain a 15 kV, and 7 kV to ground rating based on it being used in a dry and damp location or a wet location. The minimum height is measured from the bottom of the neon tube (after installation of the neon tube onto the support) to the metal mounting foot.



## Installation Instructions

### Neon Tube Support Pad (NTSP)

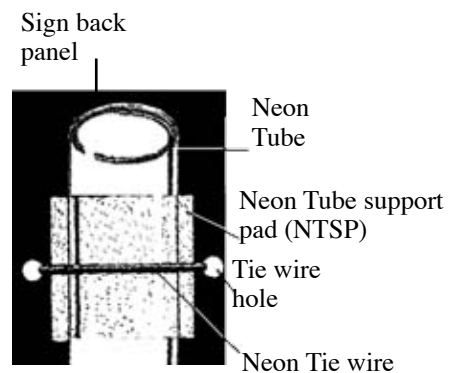
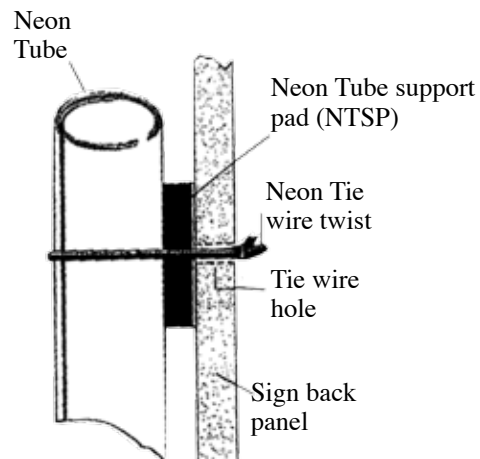


**1** Drill two tie wire holes 3/8 inch apart for NTSP to be installed at the requires locations.

**2** Clean under neon tubing to be supported.

**3** Peel off appropriate NTSP Neon Tube Support Pad from supply roll and firmly press onto mounting surface at the drilled locations.

**4** Insert an appropriate length of tie wire over the neon tubing and pass the ends through the drilled holes. Twist the wire at the rear of the mounting surface. Trim wire ends to reduce corona discharge.



### Neon LightingLux Products inc.

300, St-Sacrement #218 Montreal, QC, Canada H2Y 1X4  
 Tel. USA & Canada : 1-877-567-2487 Tel. International : +1-514-845-2487  
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**Neon LightingLux Products inc.**

300, St-Sacrement #218

Montréal, Qc, Canada H2Y 1X4

**Telephone**

International : +1-514-845-BITS(2487)

USA & Canada : 1-877-567-BITS(2487)

**Fax**

International : +1-514-842-BITS(2487)

USA & Canada : 1-877-844-BITS(2487)

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

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