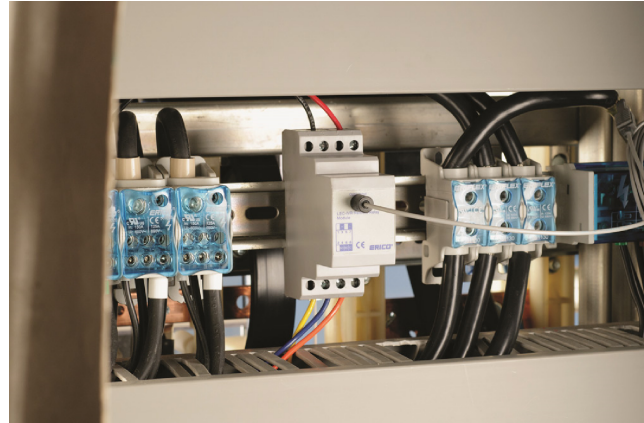


LEC-IVR

Lightning Event Counter



Product Description:

The nVent ERICO LEC-IVR is a version of the standard LEC-IV Lightning Event Counter that features an output that allows for remote monitoring of the lightning count activity.

The unit consists of:

- A standard LEC-IV counter modified to have an optic fiber output
- A length of interconnecting optic fiber
- A remote monitoring device that mounts on a Din Rail

These three are shown in the above photo.

The features of this arrangement are:

- Product based around standard, proven LEC-IV technology.
- The interconnecting cable is simple 1000µm fiber, requiring no special termination tools. It uses simple push and screw in terminals.
- The optic fiber provides galvanic isolation between the lightning downconductor and the remote monitoring device.
- The Remote Monitoring Device is easily powered from a 9 to 12 VDC supply, and provides an easily interfaced simple relay closure output.
- The Remote Monitoring Device relay output is normally open, but closes for a 2.5 second time period to indicate a lightning strike. The clean, pre-determined duration, contact closure eliminates relay chatter that might otherwise occur.

Installation Instructions

(1) Install the LEC-IV device

The Lightning Event Counter may be mounted at any location on the downconductor route between the terminal and grounding system and is fitted after the downconductor has been fixed into place. When choosing a location for the LEC, take into consideration access to the counter, whether it is to be concealed or not, the security of the unit, and ease of installation.

The LEC must be mounted in line with the downconductor as illustrated in Fig. 1.

WARNING:

1. nVent products shall be installed and used only as indicated in nVent product instruction sheets and training materials. Instruction sheets are available at www.nVent.com and from your nVent customer service representative.
2. nVent products must never be used for a purpose other than the purpose for which they were designed or in a manner that exceeds specified load ratings.
3. All instructions must be **completely** followed to ensure proper and safe installation and performance.
4. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and/or death, and void your warranty.

SAFETY INSTRUCTIONS:

All governing codes and regulations and those required by the job site must be observed. Always use appropriate safety equipment such as eye protection, hard hat, and gloves as appropriate to the application.

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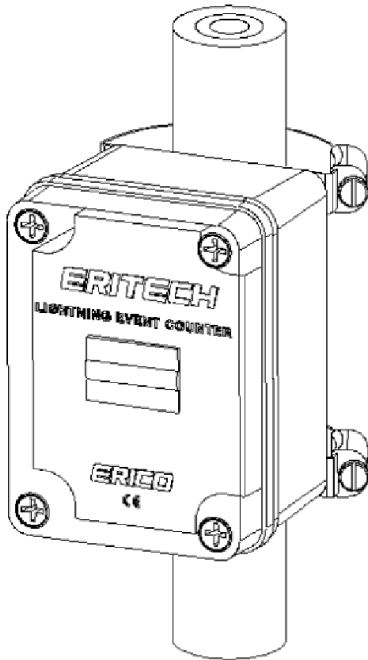
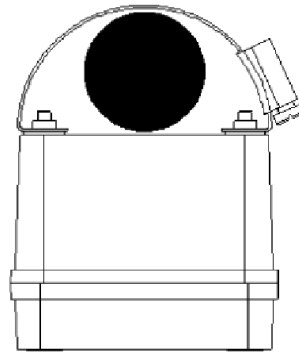


Figure 1.



Mounting for cable

Figure 2.

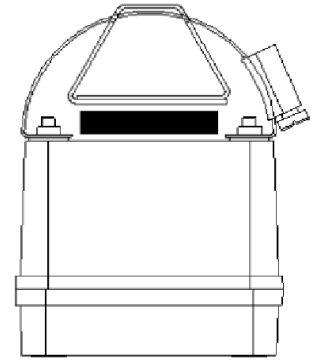
Mounting for flat
downconductor

Figure 3.

For downconductors of a diameter greater than 12 mm (0.47 in), the LEC may be mounted as per Fig. 2. Using a flat bladed screwdriver, fully release both clamps until a click sound is heard then bend back the now loose end of the clamp. Pass the loose ends of the clamps behind the downconductor and back into the clamp mechanisms. Tighten the clamp just so the LEC sits firmly. **Do not over-tighten.**

For flat down-conductors and down-conductors of a diameter less than 12 mm (0.47 in), the LEC may be mounted as per Fig. 3. Using a flat bladed screwdriver, fully release both clamps until a click sound is heard then bend back the now loose ends of the clamps. Thread the spacers provided onto the clamps, then slip the down-conductor between the spacers and the body of the LEC. Put the loose ends of the clamps back into the clamp mechanism and tighten the clamp just so the LEC sits firmly. **Do not over-tighten.**

(1) Route the optic fiber cable

Run the optic fiber cable from the LEC to the location of the Remote Monitoring Device. Avoid sharp bends in the cable, and provide appropriate physical protection for the fiber, such as a suitable non-conductive conduit.

(2) Install the Remote Monitoring Device (RMD)

- (a) Install the RMD onto a din rail at the required location.
- (b) Connect a DC power supply of the terminals as follows:
 - "-" terminal: 0 Volts.
 - "+" terminal: +9 to +12 Volts DC (rated to supply 100mA).
- (c) Connect the output relay (C, NO, NC) to the customer supplied equipment. The contacts are normally open, and close for a period of approximately 2.5 seconds to indicate a lightning strike in the downconductor.

Note: A typical lightning strike consists of multiple "strokes" within the one lightning strike or flash. These strokes give the lightning strike the flickering appearance, and are typically around 0.1 to 0.2 seconds apart. The count shown on the mechanical counter in the LEC-IV may respond to these "strokes" and record several counts for the one lightning strike. The output from the RMD, however, has been deliberately debounced, and indicates that a single lightning strike has occurred.

The relay terminals are rated at 3A @ 250V AC, 240V DC.

CAUTION:

Please be aware that significant ground potential rise (high voltages) can occur around lightning downconductors during a lightning strike. DO NOT stand near lightning downconductor, or its grounding system, during a thunderstorm.

The LEC-IVR system uses a non-conductive optic fiber system to avoid transferring this large voltage to measuring equipment. Use the full length of optic fiber cable supplied to achieve this isolation. DO NOT keep it coiled up as shown in the photograph.