

The new lightning impacts counter FRANCE PARATONNERRES

I FLASH REPORT®

Introduction

The installation of lightning strike counters on the earthing conductors is recommended in the lightning protection standards (NFC 17-102 and EN 62305) in order to activate the control and verification of the good functioning of the Lightning Protection System after a lightning impact :

«A Lightning Protection System must be verified after every lightning impact registered on the structure».

Moreover, the modified Decree dated October 4th 2010, relative to prevention of accidental risks in classified installations imposes the installation of registration system for the lightning attacks, to enable a systematic verification of the lightning protection installations within 1 month maximum after lightning activity on the site.

In order to bring a permanent reporting on the site, our engineers team developed an innovative, performing and patented device :

The connected counter **I FLASH REPORT®**





In conformity with **NF EN 62651-6** standard
Range of detection from **1 kA to 100 kA**
Works in extreme conditions : IP 67

Presentation of the counter I FLASH REPORT®

The connected counter offers the triple function of : activity registration with a flash memory of 20 years and 100 registered data, communication with smartphone, self-test on a digital, tilted and LCD screen.

The first lightning impacts counter for External and Internal Lightning Protection Systems (ELPS and ILPS).

The application « I FLASH REPORT » enables the collect of the lightning data and is available free.

Applications :

- Measures, registers and collects the date of the discharge current passing by the air terminal down conductor (Class I)
- Measures and registers the discharge current in the earthing conductors of the internal lines (Class II)
- Ensures a preventive maintenance encouraging the verification of the status of the earthing systems.
- Allows a distance information report up to 20 meters via a bidirectional system : Bluetooth® Low Energy



External Lightning Protection System

The **I FLASH REPORT®** counter is installed in parallel to the down conductor. So there is no need to cut the down conductor to install the counter. It is suitable for all types of down conductors.

The fastening of the counter on the conductors is made with 2 screws accessible from the front face of the counter which facilitate the installation of the product on the Lightning Protection System.

If the building is protected by an external lightning protection installation (like the ESEAT IONIFLASH MACH NG) and has a metallic coat structure, the **I FLASH REPORT®** can be placed directly on the supporting masts of the ESEAT.

Indeed, the Bluetooth® communication of the counter allows the user to consult the data up to more than 20 meters.



In the case of lightning protection system by meshed cage or natural structure, it is possible to register and measure the lightning current received on the installation, by positioning the counter on the electrical earthing system of the electric board of the structure to be protected.

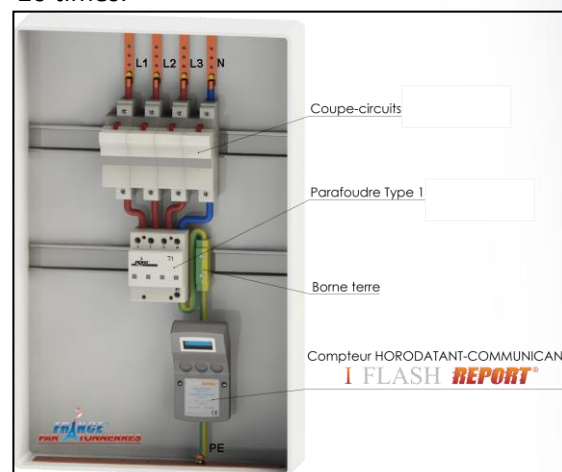
In that way, the counter **I FLASH REPORT®** will be able to measure the earth potential rises.

Internal Lightning Protection System

The counter **I FLASH REPORT®** can also be installed on the earthing cables of the SPDs in an electrical installation. It enables a preventive maintenance of the SPDs, registering the lightning and network overvoltages. Thus, the SPD's ending life can be anticipated.

As a reminder :

- A SPD Class I is characterized by a flow current in waveform 10/350 μ s (waveform the most similar to direct lightning impact waveform) I_{imp} is the pulse surge current that the SPD can withstand in one shot without any damage.
- A SPD Class II is characterized by a flow current in a waveform 8/20 μ s. I_n is the nominal discharge current that the SPD can withstand 20 times.



The above scheme gives an example of the installation of the counter on the down conductor of a SPD Class I :



Shortly after its installation on the down conductor on one of the pillars of the **EIFFEL TOWER**, a **I FLASH REPORT®** detected and registered a lightning impact of 12 kA intensity confirming in situ its high reliability and the quality of its detection and measurement systems.

