

Lightning flash counters

Indelec Patent

Advanced lightning flash counter with remote information

- Number of strikes
- Date and time of the flashes
- Intensity of the discharge current
- Remote information by optical fiber
- Testable on site

Ref P8014



Description

Main features of the advanced lightning flash counter :

- counting and recording all direct lightning strikes on the external lightning protection systems
- for each recorded strike, it shows the date, time and peak current of the lightning discharge
- integrated remote information system by optical fiber

This counter is equipped with a 16 characters digital display. This user friendly interface is controlled by 3 push-buttons. The display is powered by 2 long life batteries. The charge level can be displayed on request. A reminder for preventive replacement of batteries is automatically shown every 3 years.

Lightning discharges counting and saving requires no external power supply and is not thus dependent of the life cycle of the internal batteries.

Possibility of sending all the lightning strike datas towards a remote interface (optional).



Tests

According to the UTE C 17-106 Guide, the advanced lightning flash counter was subjected to several test procedures in high voltage laboratory (LCIE test report available on request).

Its protection against electromagnetic radiation of the flash current is certified up to 100kA - 8/20 μ s wave.

Its working principle has also been validated under real lightning discharges during in-situ testing procedures in our testing facility in Brazil.

Installation

The lightning flash counter is fixed directly on the down-conductor using 2 mounting flanges located on the back face. It is designed for a use with flat and round conductors. The counter records the lightning current by induction at the time of passage in the down conductor. No interruption of the down conductor is necessary thus allowing an excellent electrical continuity of the installation down from the rod to earthing system.

Checking and Maintenance

In the meantime, INDELEC has developed a specific testing device : this portable tool allows to test on site, after installation and without disassembling, the advanced lightning flash counter internal circuit functions. In order not to affect the real record of lightning strikes shown by the advanced lightning flash counter, it includes a specific menu making it possible to temporarily switch to a test mode. Within the framework of regular maintenance and checking procedures of installations of external lightning protection systems, all parts and accessories of the system can now be controlled (test box for Prevelectron, visual checking of the installation, earth resistance meter and the advanced lightning flash counter testing device).



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Technical datas

References	P8014	
Minimal detectable current	Id	≥ 1kA
Maximal detectable current	I _{max}	≤ 100 kA
Minimum current sensitivity (Id/3)	I _{nd}	333 A
Protection class	IP	65
Size	L x H x P	165 x 119 x 55 mm
Weight		890 g
Operating temperature range	T° min / T° max	- 20°C / + 70°C
Accuracy of peak current measurement		+/- 10%
Average batteries lifetime		3 years
Optical fiber output		Silica fiber 50/125 μm SMA

UTE C 17-106 guide compliant (certificate N° 85455-576220)
NF EN 50164-6 standard compliant

Schematic of the advanced lightning flash counter (in mm)

