



**49, RUE DE LA BIENFAISANCE - 94300 VINCENNES - FRANCE**

SA. AU CAPITAL DE 152 449 € – RCS CRETEIL B 316 719 855  
SIRET 316 719 855 00025 – CODE APE 7112B - TVA : FR54 316719855  
TEL. : 33 - (0)1.43.28.10.43 – FAX : 33 – (0)1.43.65.43.37

## Training Q2

### **In- depth training program according to Qualifoudre (2 days): to obtain level 2 or 3 Qualifoudre**

According to Qualifoudre framework: a 2-day (12-hour) in-depth training will be followed by the person for whom the organization wishes a level 2 or 3 certification. The candidate must have followed the initial training (must not to be older than 3 years)

1. Lightning: generalities (IEC 62505 - 1)
2. Lightning Risk Analysis:
  - reminders (IEC 62305 - 2)
    1. Prevention of lightning risk
3. New standards for Lightning Protection Systems
  - Different kinds of Lightning protection system (IEC 62305 - 3)
    - Isolated systems
    - System not isolated
  - Capture:
    - Mesh System, Stretched Wires, Lightning Rods
    - Natural components
  - Downconductors:
    - copper, aluminum, steel
    - natural components
    - insulated cables
  - Earthing system:
    - type A and type B
    - earth resistance and impedance
  - Components: IEC 62561 standards
  - Protection of persons
  - Distance of separation: calculation
  - Verification of LPS



**49, RUE DE LA BIENFAISANCE - 94300 VINCENNES - FRANCE**

SA. AU CAPITAL DE 152 449 € – RCS CRETEIL B 316 719 855  
SIRET 316 719 855 00025 – CODE APE 7112B - TVA : FR54 316719855  
TEL. : 33 - (0)1.43.28.10.43 – FAX : 33 – (0)1.43.65.43.37

5. New standards for SPDs:

- Type 1 Surge Protective Devices (IEC 62305 - 4, IEC TS 61643 - 12 and 22)
- Type 2 Surge Protective Device
- Distance of protection needed for multiple SPDs
- Coordination of Surge Protective Devices
- Choice of disconnecter, Installation of Surge Protective Devices
- Verification

6. Earthing and Equipotentiality

7. Regulatory context

8. Normative context (Europe, International) : Ed1. Ed.2.

9. Qualification scheme: Qualifoudre

10. Technical innovations

Synthesis Exercise

Assessment of achievements (MCQ)

Optional additional one-day Q3 training on Lightning Risk Analysis.



**49, RUE DE LA BIENFAISANCE - 94300 VINCENNES - FRANCE**

SA. AU CAPITAL DE 152 449 € – RCS CRETEIL B 316 719 855  
SIRET 316 719 855 00025 – CODE APE 7112B - TVA : FR54 316719855  
TEL. : 33 - (0)1.43.28.10.43 – FAX : 33 – (0)1.43.65.43.37

### Training Q3 “LRA”

#### LRA Advanced Training Program (1 day)

**Required to have taken extensive training Q 2: p our Level 2 and 3  
for companies carrying only LRAs or specializing in LRAs**

1. History of the Lightning Risk Analysis
2. The normative context for Lightning protection
3. The regulatory context:
4. Comparison between method IEC 62305 - 2 and the simplified methods
5. The essence of the method
6. The method in detail
7. Sample (processing by software - software not supplied)
8. Deepening :
  - Buildings with real form
  - Lines with real structures
  - Calculation of fire risk
  - Selection of protections in automatic mode
  - Protections comparison
  - Help for economic risk calculation
  - For information: choice of Surge Protective Devices
9. Round table :
  - Complex structure
  - Problems encountered in the choice of parameters
  - Problems encountered in the simplification of data of the site
10. Application to actual cases (on basis of cases brought on by the trainees)

Questions and answers

Assessment of achievements (MCQ)