

CompEx Ex12 Design Course

**AS-CMP-314
MODULES EX12**

Ex12 was developed with an industry working group to deliver a competency certificate to ensure application design engineers understand the risks of potentially explosive atmospheres and know how to select the appropriate electrical equipment.

Ex12 meets the competency requirements of IEC 60079-14 for Designers (design & selection). The course consists of theoretical training, individual exercises, group exercises, and written assignments.

Prerequisites: Employer letter or proof of electrical qualification

Successful completion of CompEx ExF plus or employer letter with reference/explanation of current duties are considered proof.

CompEx[®]
Approved Training Provider No.078

COURSE OBJECTIVES

Upon completion of the CompEx Design Ex12 course the student will demonstrate the following

- Understanding of Ex markings
- Ability to select Ex equipment based on area classification
- Perform IS Loop calculations for single barrier
- Define proper installation methodology based on method of protection

Course Content



- Gas groups
- Temperature classes
- The density of gases and vapors
- Properties of dust
- Flammable range
- Explosive range
- EPLs categories
- Ambient temperatures
- Minimum Ignition Energy
- Maximum Experimental Safe Gaps
- Standards
- Area Classification
- Protection Concepts
- Electrical concepts
- Ingress Protection
- Equipment Marking/Selection
- Design of equipment installed in gas/vapors and combustible dust environments
- Intrinsic Safety
- Cables and Glands
- Documentation
- IEC standards
- Test methods and data
- Certification
- Installation documentation



Who is this for?

Senior level design engineers, project engineers, or those aspiring to these positions

Duration

5 Business Days



Learning Technique

In order to provide the highest quality training experience, this course will consist of the following instructional elements:

Instructor Lead Presentation

The core elements of skill will be presented and demonstrated in a classroom environment.

Final Exam

The final exam will include both written and multiple-choice examinations, and it will be conducted online.

Certification

The attendee will receive an attendance certificate from ELITE. Upon successfully passing the CompEx exam, attendees will receive a CompEx Certificate of Competence valid for 5 years.