

Course Title: Electrical Installations in Caravans and Motor Caravans

Category of candidate: Open entry

Course aim: To provide a course of training for selected persons in the skills and knowledge to achieve the standards of competence to carry out work safely when working on or with electrical equipment in a caravan or motor caravan, with special emphasis on how BS 7671 and EN 1648 are to be implemented.

Course content:

- Low voltage (LV) circuits in caravans and motor caravans
- Extra-low voltage (ELV) circuits in caravans and motor caravans
- BS 7671:2018– an overview
- EN 1648 :2018 – an overview
- BS 7671:
 - Parts, chapters, sections, regulations, appendices
 - Scope, Object and Fundamental Principles
 - Definitions
 - Protection for Safety:
 - Earthing and bonding
 - Circuit breakers
 - RCDs
 - Isolation and switching
 - Selection and Erection of Equipment:
 - Cables
 - Cable management
- Special Installations and Locations:
 - Shower rooms
- Inspection and Testing:
 - The inspection process
 - Relevant tests
 - Test instruments and parameters
 - Practical testing
 - Processing results
- Documentation:
 - The Electrical Installation Certificate
 - Schedule of Inspections
 - Schedule of Test Results
- EN 1648:
 - Power supplies –
 - The auxiliary battery
 - Battery charging
 - Battery housing, mechanical protection
 - Over current protection
 - ELV wiring and accessories
 - Voltage drop

Course duration: 32 hours: (4 x 1-day sessions)

Synopsis of training

Delegates:	Open to persons involved with the design, construction, testing and documentation of electrical equipment in caravans and motor caravans.
Objective:	The objective is the proper design and verification of electrical equipment for: maintainability, sustainability, and durability.
Training:	The course is divided into three discreet but not mutually exclusive sections; viz: <ul style="list-style-type: none">- Low voltage (AC) circuits and protection- Initial verification and documentation- Extra-low voltage (DC) circuits and protection
LV systems:	In the LV systems (BS 7671) study is directed towards the protection of persons against the risks of electric shock and burns, and the protection of property against the risk of fire.
Protection (persons):	Protection of persons concentrates on basic and fault protection. In basic protection emphasis is made on proper design for the insulation of hazardous live parts, barriers and enclosures. Design consideration for fault protection relates to proper co-ordination between overcurrent protective devices, RCDs, earthing and protective bonding.
Protection (property):	Protection of property concentrates on the thermal effects of electricity. Design consideration here centres on equipment 'location' and 'construction'.
Cables and accessories:	Design consideration for cable sizing and co-ordination between overload protection, cable selection and thermal insulation. Cable management, accessories and mutual detrimental influence form part of this element.
Labelling:	Information relating to safety and warning labels; including location, size and durability.
Electrical testing:	Use of instruments for the verification of the LV electrical installation- <ul style="list-style-type: none">▪ Continuity of protective conductors, including protective bonding▪ Insulation resistance▪ Polarity▪ RCD tests
Documentation:	Compilation of the Electrical Installation Certificate.
ELV systems:	In the ELV systems (BS EN 1648) study is directed towards the design and installation of the 12-volt (DC) systems for the habitation part of caravans and motor caravans; including: <ul style="list-style-type: none">- Batteries- Battery compartments- Wiring- Voltage drop- Overcurrent protection