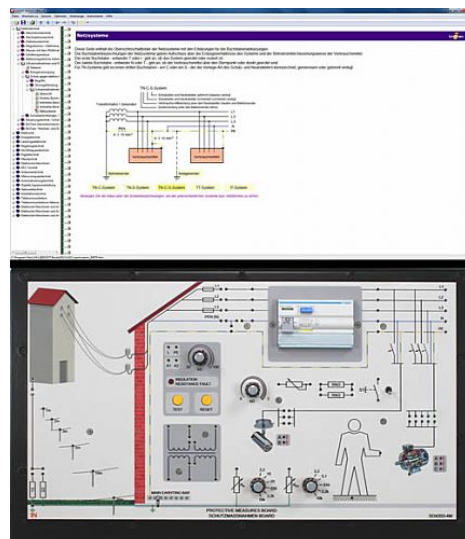


Item No.: SO4204-4M

## Course - Installation engineering 1: Protective measures and power network types

This training system lays the foundations for understanding how to handle voltage and current safely. For electrical engineers and electricians in particular, but for other professions too, handling of high voltage and current is a key skill. Trainees taking the course can learn for themselves how safe handling can be assured, what safety measures need to be taken and how installations can be tested.



### Includes:

- 1 Experiment board for assembling various 3-phase mains systems including the following components:
  - 1 RCD, 4-pole, 30mA
  - 1 Isolating transformer
  - 1 Transformer for safety extra-low voltage (SELV)
  - 1 Insulation monitor, adjustable
  - 1 Model of a person
  - 1 Simulated earthing electrode
  - 1 Single-phase load
  - 1 Three-phase load
  - 16 Different fault simulation resistors
  - Set of measuring leads and jumpers
- CD-ROM with LabSoft browser and course software

### Training contents:

- Design of various mains systems (TN, TT, IT)
- Protection against direct and indirect contact
- Protection by isolation
- Protection using safety extra-low voltage
- Excess current circuit breakers
- Residual leakage current circuit breakers (RCDs)
- Measurement and testing of protective measures
  - Protective earth resistance measurement
  - Insulation resistance measurement
  - RCD testing with and without tripping
  - Earthing electrode measurements
  - Loop resistance measurement
- Course duration: 10 h approx.