

Installation Methods and Operating Conditions

– Power cables and insulated wires for fixed installation –

Installation method type A1

- Single core cables in insulation tube in a thermally insulated wall.

Installation method A2

- Multicore cables or multicore plastic sheathed cables in the insulation tube in a thermally insulated wall, whereby the walls for the methods of installation employed comprise an outer weatherproof board, thermal insulation and an inner board of wood or materials similar to wood, having a temperature lag of $0,1 \text{ m}^2 \cdot \text{K/W}$. The plastic or metal insulation tube is mounted such that this is very close to the inner wall without actually being in contact with the wall.

Installation method B1

- Single core cables in insulation tube on a wooden wall.

Installation method B2

- Multicore cables or multicore plastic-sheathed cables in insulation tube on a wooden wall.

For both installation methods, the insulation tube must be secured such that the space between conduit and the wall surface is less than 0,3 times the diameter of the insulation tube. The plastic or metal insulation tube can be installed directly on the masonry construction or plastered surface, whereby the current carrying capacity of the cables or wires can then be higher.

This problem is still being investigated by CENELEC.

Installation method C

- Single core or multicore cables, or single core or multicore plastic-sheathed cables, on a wooden wall.

The cables or insulated wires shall be mounted such that the space from the wall surface is less than 0,3 times the outer diameter of the cable or insulated wire. The current carrying capacity can be increased when installed directly on or in the masonry construction as well as underneath the plaster.

This problem is still being investigated by CENELEC.

Installation methods E, F and G

- Single core or multicore cables, or single core or multicore plastic-sheathed cables, installed in the open air.

The cable or insulated wire shall be installed such that the dissipation of heat is not impeded, whereby allowance shall be made for heating by other sources and for irradiation by sunshine. Natural convection shall not be obstructed. The space from the cable or insulated wire by each bordering surface shall be 0,3 times that of the outside diameter. A space equal to that of the outside diameter is sufficient for single core cables and plastic-sheathed wires in order to meet the current carrying requirements for an installation in the open-air.