

722.411.4 TN system

722.411.4.1 Except where (i), (ii) or (iii) applies, a PME earthing facility shall not be used as the means of earthing for the protective conductor contact of a charging point located outdoors or that might reasonably be expected to be used to charge a vehicle located outdoors.

The requirements of this regulation need not be applied for the charging point at a dwelling, if none of (i), (ii) or (iii) is reasonably practicable.

In this regulation, dwelling means a self-contained unit designed to accommodate a single household. Buildings exclusively containing rooms for residential purposes such as nursing homes, student accommodation and similar are not dwellings.

- (i) The charging point forms part of a three-phase installation that also supplies loads other than for electric vehicle charging and because of the characteristics of the load of the installation, the maximum voltage between the main earthing terminal of the installation and Earth in the event of an open-circuit fault in the PEN conductor of the low voltage network supplying the installation is not likely to exceed 70 V.

NOTE 1: Annex 722, item A722.2 gives some information relating to (i).

- (ii) The main earthing terminal of the installation is connected to an installation earth electrode by a protective conductor complying with Regulation 544.1.1, such that in the event of an open-circuit fault in the PEN conductor of the low voltage network supplying the installation, the rms voltage between the main earthing terminal of the installation and Earth does not exceed 70 V.

NOTE 2: Annex 722, item A722.3 gives guidance on determining the maximum resistance required for the earth electrode in (ii).

- (iii) Protection is provided by a device which disconnects the charging point from the live conductors of the supply and from protective earth within 5 s in the event of the voltage between the circuit protective conductor and Earth exceeding 70 V. The device need not operate if the voltage exceeds 70 V for less than 5 s. Closing of the device is by manual means only. The device shall comply with an appropriate product standard for this purpose.

NOTE 3: A product standard for a protective device for the purposes of (iii) is being developed by BSI Committee PEL/23/1.