

A report will quantify risks associated with using a PME earth on outdoor connecting points for EV charging stations.
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DEVELOPMENTS IN THE CODE OF PRACTICE FOR EV CHARGING EQUIPMENT INSTALLATION

THE 'IET CODE of Practice on Electric Vehicle Charging Equipment Installation', published in January 2012, provides guidance on what earthing arrangement should be used when installing charging equipment at a domestic premise with a Protective Multiple Earth (PME) supply.

For connecting points installed such that the vehicle can only be charged within the building, the PME earth may be used. However, the development committee responsible for the Code of Practice agreed that for outdoor connecting points the situation was different. There is in this case a risk of electric shock associated with the potential failure of the Protective Earth Neutral (PEN) conductor of the PME supply cable.

The development committee agreed that the charging circuit would need to be part of a TT system, subject to certain assessment criteria being met, otherwise the whole installation would need to adopt a TT system. The committee adopted this approach to outdoor connecting points because of the absence of risk data associated with the failure of PEN conductors for a PME supply.

Without data, the committee was unable to conclude that the risk of using a PME earth was low enough to consider a PME earthing arrangement suitable to supply charging equipment for outdoor connecting points.

Subsequent to this decision, and recognising that there are limited options available to the installer, as well as other risks associated with using a TT

system, IET Standards Ltd agreed to commission a risk analysis to determine the risk associated with using PME supplies. The objective is to carry out a quantitative evaluation of the increased level of risk associated with using a PME supply for outdoor connecting points.

IET Standards Ltd has commissioned the Health and Safety Laboratory (HSL) to carry out this work. The programme started in July and is due to finish in September. The findings of the HSL will be published in a report, which will be made publicly available.

Subsequent to the report being published, IET Standards Ltd will liaise with the development committee stakeholder organisations to determine the implications for the Code of Practice. ❏

IET Standards Ltd would like to thank the Energy Networks Association, Energy UK and the Society of Motor Manufacturers & Traders who have jointly funded the risk analysis activity. Web address for the Code of Practice: www.theiet.org/resources/standards/ev-charging-cop.cfm