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PME REQUIREMENTS FOR NEW SUPPLIES

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PME requirements for new supplies

It is Jersey Electricity's policy to install meters for new supplies provided that the installation meets the following criteria:

- The building is environmentally secure ie roof on, doors and windows installed etc.
- The installation to the customer's main switch fuse is electrically safe.

Under these circumstances, we will connect to the adjacent main switch fuse and place a suitable warning label over the switch which will be left in the 'off' position.

Should you have any questions or queries regarding the PME requirements, please contact Jersey Electricity's Customer Care Team on 505460.

Protective multiple earthing and special requirements for the bonding of metalwork of other services

All new and replacement services will have, subject to certain conditions, a solid metallic earth fault return path for the consumer's installation by means of protective multiple earthing (PME). The use of the Company's PME earthing terminals will only be permitted where PME bonding is included in the consumer's electrical installation. The requirements for PME bonding in electrical installations are detailed in Section 1 below and it should be noted that the required size of bonding leads for bonding all incoming services and structural steelwork is to be in accordance with the current edition of the IET Wiring Regulations.

In certain instances the use of PME earthing terminals is not permitted, these are described in Section 2. Section 3 of these notes deals with some special situations. General information about PME is included in Section 4.

Section 1 Requirements for the bonding of electrical installations with PME

- 1.1 An electrical bonding connection is provided between the Company's PME earthing terminal and incoming services (water, gas, oil, compressed air etc.) in accordance with the current edition of the IET Wiring Regulations, also structural metalwork in contact with ground and the special requirements in 1.2, 1.3 and 1.4.
- 1.2 This electrical bonding connection is, wherever practicable, taken directly from the PME earthing terminal which, on new services up to 400 Amps per phase capacity, will be a combined neutral and earth terminal integral in the service cut-out. Where specially approved by the Company, this connection may be taken from the consumer's earthing terminal but only provided that the size of the earthing conductor is not less than the size of the bonding connection in 1.3.
- 1.3 The size of this connection, which is a stranded copper conductor, must not be less than that shown in the attached table for the appropriate service type and capacity. It is not permissible to use the metallic sheath or armouring of a cable for this connection unless specifically approved by the Company.
- 1.4 In building complexes or in blocks of flats where a number of consumers' installations are supplied from one main supply intake position, an additional bonding connection is provided between the Company's PME earthing terminal at the main supply intake position and all incoming services as near as practicable to their point of entry to the building, and structural metalwork. The size of this additional connection is in accordance with the attached table as determined by the size of the main incoming supply cable, except that the minimum size is 16mm² stranded copper.
This connection is required in addition to the electrical bonding connection required in each consumer's installation in accordance with 1.1 – ie each flat being treated as an individual house.

New and replacement underground PME services

Service type	Capacity Amps	Supplied from	CNE service cable mm ² A1	All insulated service intake unit	Bonding of services and structural metalwork to PME earthing terminal at incoming supply position stranded copper (mm ²)
Domestic / Small Commercial Service	60 or 100	Distributor or multi-service line	35 CNE 1 ph or 3 ph	SPNE or TPNE	10
Domestic/ Small Commercial Single Phase Services in Building Complexes	2 x 60 or 2 x 100	"	35 CNE 3 ph	TPNE	16 @ main intake, 10 in each dwelling unit and in each commercial unit
	3 – 6 x 60 or 3 x 100	"	"	3/7 Multiway Board	"
	7 – 12 x 60A or 4 – 6 x 100A	Distributor, Pillar, Link Box or substation	95 CNE 3 ph	Combinations of 3/7 and/or 7/10 Multiway Board	25 @ main intake, 10 in each dwelling unit and in each commercial unit
	13 - 20 x 60A or 7 – 12 x 100A	Substation	185 CNE 3 ph	"	50 @ main intake, 10 in each dwelling unit and in each commercial unit
Industrial and Commercial	160 or 200	Distributor, Pillar, Link Box or Substation	95 CNE 3 ph	Phase segregated TPNE	25
	300	Substation	185 CNE 3 ph	"	50
	400, 500, 600	Substation	2 x 185 CNE 3 3 ph	(Consumers Main-Switch)	50
	800, 1000, 1300	"	2 or 3 per ph 185 Cu XLPE single core	"	50

NB.

1. Only 60 Amp service rating available on some distributors and multiservice lines and all overhead networks.
2. An additional earth terminal block will be provided where necessary with 60/100A TPNE service intake units.
3. Multiway Boards are housed in sheet steel boxes.
4. Three single phase fuse-ways may be used in Multiway Boards to provide a three phase service.
5. One single phase fuse-way may be used in Multiway Boards or in a TPNE intake unit in addition to the services, specified to provide a 20 Amp capacity for landlord's lighting purposes, using 6mm² meter tails.
6. 60/100 Amp. SPNE and TPNE service intake units are fitted with terminal entry plugs which are withdrawn or replaced using a special tool. The arrangement of the consumer's installation must not impede the withdrawal or replacement by the Company of service fuses and/of these plugs.

Section 2 Where PME earthing terminals must not be used

- 2.1 The use of PME earthing terminals will not be permitted on services which are used to supply petrol filling stations, camping sites, yacht marinas, caravans, cattle sheds, milking parlours, swimming pools and similar premises, fetes or outdoor exhibitions, remote buildings, where special conditions exist, and construction sites. Supplies to these premises must be connected through residual current devices, which must be provided as part of the permanent wiring installations.

All circuit protective conductors in such installations should be connected to an independent earth electrode (service pipes must not be used in any circumstances as the independent protective earth electrode) which should be a minimum of one metre away from any PME earth electrode or cable sheath. The independent earth electrode should be of such value that in the event of an earth fault the maximum sustained voltage between any circuit protective conductor and the general mass of earth should not exceed 25 Volts without the residual current device operating. A notice with the following inscription will be fixed next to the intake unit.

“PME EARTH TERMINAL NOT TO BE USED: INSTALLATION MUST BE CONNECTED THROUGH RESIDUAL CURRENT DEVICE”

- NB Except where the use of a PME earth terminal is prohibited in accordance with 2.1 or 3.1 it may be used as the earth electrode for residual current devices.

Section 3 Special situation with PME

- 3.1 Where installations provided with a PME earthing terminal are used to supply outdoor swimming pools or remote buildings, or for any of the purposes in 2.1, supplies to those parts of the installation shall be connected through residual current devices which must be provided as part of the permanent wiring installation. The independent protective earth electrode required for each residual current device shall be in accordance with 2.1.

Any gas, water or other services and structural steelwork associated with those parts of the installation supplied through a residual current device shall be bonded to the associated circuit protective conductors. The size of these bonding connections shall be in accordance with the current edition of the IET Wiring Regulations.

- 3.2 Where water meters, which have non-metallic bodies, are installed inside buildings and both incoming and outgoing pipes to the meter are metallic, a bonding connection to provide an electrically conducting path between the pipes is required. The size of the bonding lead is to be in accordance with the table in section 1.3 (eg 10mm² stranded copper for domestic and small commercial installations).
- 3.3 Where gas meters are connected by means of non-metallic pipes the bonding lead in 1.1 is to be connected to the metallic pipework on the consumer's side of the meter, within 600mm of the output union.

Section 4 General information about PME Services

- 4.1 A label is affixed at each PME service position drawing attention to the fact that the installation is connected to a PME system.
- 4.2 All new installations must comply with the current edition of the IET Wiring Regulations and the PME bonding requirements in Section 1. All existing installations must be made to comply with Chapter 54 of the current edition IET Wiring Regulations and the PME bonding requirements in Section 1 when major alterations or extensions are carried out. This also applies to installations supplied from SNE services.
- 4.3 When a replacement service or transfer of an existing service to a new position is required by a consumer, any modifications necessary to make the whole of the existing consumer's installation comply with Chapter 54 of the current edition of the IET Wiring Regulations and the PME bonding requirements in Section 1 shall be carried out by the consumer at his/her own cost.
- 4.4 Where consumer's installations are inspected for any reason, regardless of the method of earthing used, it may be found that the provisions of the IEE Wiring Regulations, or where appropriate, the bonding requirements for PME services, have not been complied with. In this event the Contractor should recommend to the consumer or landlord, either in his inspection report or otherwise in writing, that his installation is made to comply with the IET Wiring Regulations and the PME bonding requirements in Section 1.
- 4.5 Where an existing underground service provides a solid metallic earth fault return path for the consumer's installation by means of an electrically continuous cable sheath or separate protective conductors in a separate neutral and earth (SNE) cable (non-PME earthing terminal) and the Company decides to convert to or replace this with a PME earthing terminal, the Company will bear the cost of any work on the consumer's installation necessary to ensure compliance with the bonding requirements in Section 1. Where such work is to be carried out, the Company will write to the consumer and/or landlord informing him/her of the need to carry out the work and recommending that his installation be inspected, brought up to modern standards and, in particular, made to comply with the current edition of the IET Wiring Regulations at the consumer's cost.
- 4.6 Where an existing overhead or underground service with an earthing terminal is supplied from an overhead distribution main and the Company decides to convert to or replace this with an underground or overhead service line by means of CNE cables and provides a PME earthing terminal, the Company will bear the cost of any work on the consumer's installation necessary to ensure compliance with the bonding requirements in Section 1. Where such work is to be carried out, the Company will write to the consumer and/or landlord informing him/her of the need to carry out the work and recommending that his installation be inspected, brought up to modern standards and, in particular, made to comply with the current edition of the IET Wiring Regulations at the consumer's cost.
- 4.7 No person other than an authorised employee of the Company is permitted to disconnect, connect or reconnect any part of a consumer's installation, including earthing and bonding conductors, to the Company supply. The seals on service intake units must not be removed except by an authorised employee of the Company. Failure to observe this instruction may result in prosecution.
- 4.8 These notes are issued for the general guidance of Electrical Contractors and the Company reserves the right to amend or otherwise modify these requirements. Neither the agreement of the Company to permit the use of its apparatus as an earth connection by the consumer nor the issue of these notes implies any obligation to the Company for any loss or damage to any person or property directly or indirectly caused by such use.