NICC802

Mk7 Padmount Transformers - General Information for Customers/Contractors

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SA Power Networks

Empowering South Australia

Revision Notice:

Date	Explanation
18 June 2013	• The vertical '**black-line**' marked in left margin are the current amendments. • All figures and various clauses updated. • Removed previous section 6: "Determination of Maximum Demand"
28 April 2020	• Updated Sections 1 and 2 • Added Section 3.1 • Added Figure 1 in Section 3.3 • Updated Sections 5.2, 5.2.1, 5.2.2, 5.3, 5.4 and 5.4.1 • In Section 6 - Updated Table 1 and Removed Table 4 • Updated Section 7
05 May 2020	• Changed 'Title Cover Page' • In Section 7. Connection of Consumer's Mains to Padmount Transformers – Updated Notes 2 and 3.

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1. Introduction

When SA Power Networks receives an application for Supply, that indicates a potential load beyond the capacity, which can be conveniently supplied from the SA Power Networks low voltage distribution system, a need for a Mk7 padmount transformer is evaluated.

This informative brochure provides 'General Information' for the Mk7 padmount transformer, which is applicable to all associated parties (eg Developer, Designers, Engineers, Internal/External Contractors, Consultants and Customers of SA Power Networks), when its need is identified.

More technical details/specifications can be found in TS100: 'Electrical Design Standards for Underground Distribution Networks (up to and including 33kV)'.

2. Scope

It is important that you contact SA Power Networks in the early planning stages of your project to enable SA Power Networks to assist you in establishing your installation requirements and the most suitable method of supply.

The installation of transformer/s in the public places, reserves and or in the parklands is not permitted, therefore at preliminary design stage, obtain an approval from the relevant SA Power Networks' Project Manager.

This brochure is not a stand-alone reference and is not intended to incorporate all technical data, design requirements, site specifications and or construction details.

There are many factors to be considered, if the project requires a Mk7 padmount transformer, therefore, Applicants/Customers are advised to ensure that they comply to TS100, applicable AS/NZS standards, regulatory requirements, project specifications, including requirements stated in the SA Power Networks' technical standards (TS series) and brochures (NICC series).

The Mk7 range supersedes the full 11kV Mk6 range. For further assistance, please refer to Section titled: 'Who you should talk to', in this document.

3. Mk7 Padmount Transformer

3.1 General

The standard Mk7 padmount transformer for residential, industrial and or commercial developments is 315kVA (Stock Item LC7309).

For new residential high-density sites, the 500kVA Mk7 padmount transformer (Stock Item LC7310) can be used with an approval from the relevant SA Power Networks' Project Manager.

For any brownfield applications prior to 1980s, proposed design will require written approval from the Manager Network Planning (MNP). Contact 'Standards and Equipment Hotline' on (08) 8404 4200 and or send an email to: networkstandards@sapowernetworks.com.au

3.2 Overview

The Mk7 padmount transformer provides neat and compact ground level installation. It also includes new features that focus on improvements to safety, reliability and productivity.

The standard range is supplied with a 2-switch oil ring main unit (RMU) in the high voltage compartment, which includes earth switches on both LS1 & LS2.

The Mk7 can supply a Customer with 3 phase 230V/400V range which includes 11kV/0.4kV & 11kV-7.6kV/0.4kV, and sizes 315kVA, 500kVA, 750kVA, 1000kVA, 1500kVA and 2000kVA. The Mk7 transformer consists of 3 footprint sizes and is backwards compatible with the Mk6 arrangement.

The colour of the new Mk7 padmount transformer is Solver Colorbond River gum green. Refer to Section 6.0, Tables 1 to 3 in this brochure for the Mk7 general data and for more details, refer to TS100.

3.3 Major Features

The major features of the Mk7 padmount transformer include:

1. Replacement of the staggered configuration of the Mk6 HV bushings with all three phases at one height. This height is equivalent to the lowest bushing height on Mk6
2. The HV side of the transformer can be isolated using a two-position transformer switch (LS3)
3. Earthing facilities built into the HV switches provide easier switching/isolation and allows for dead break connectors to be used as standard. This provides more secure connections and means earth leads are not required
4. Cable clamping supports are now included at the base of the HV compartment
5. To reduce the time to locate HV underground faults, the Mk7 has been fitted with a fault indicator on LS1. The indicator unit is located at the top left-hand corner of the HV compartment. A clear window in the HV door allows the signal to be seen from a distance and without the need to open the transformer door
6. The Mk7 transformer is fitted with two separate oil tanks. One tank is for the HV switches and the other for the transformer windings
7. Three flexible twist lock earthing leads are included in the LV compartment. Earthing can be done by connecting these earth leads to the LV main bus or to any of the individual LV circuits, therefore separate earth leads are no longer required
8. Refer to Figure 1 for typical Mk7 Padmount Transformer

Figure 1
Typical Mk7 Transformer with 'Wilson Ring Main Unit'
Transformer Rating: 315kVA to 2000kVA
Voltage Ratio: 11kV/0.4kV, 11kV and 7.6kV/0.4kV

4. Customer's Responsibilities

You, or your representative, will need to consult with SA Power Networks prior to your project commencing. The relevant SA Power Networks Project Manager will assist you in establishing the padmount transformer size that best suits your requirements, the proposed location, and the appropriate cable route.

The relevant SA Power Networks Project Manager will need from you, a site plan showing the proposed location of the padmount transformer, and the location of any other services in the vicinity of the transformer. The electrical design should be approved by the relevant SA Power Networks Project Manager prior to proceeding with any site preparation in the vicinity of the proposed cables and padmount transformer.

4.1 Transformer Location and Trenching

The Customer is normally responsible for trenching, backfilling, reinstatement, levelling and work associated with the transformer installation, refer to TS085 for more details. We can provide a quotation for this work. The location of the padmount transformer and the cable route for the SA Power Networks cables needs to be clear of other services. For more details, refer to TS085 and TS100.

The trenching contractor will need to know the location of all underground services in the vicinity of the transformer site and along the cable route, for more details, refer to TS085.

Customer's infrastructure (excluding consumer mains) shall not encroach on the SA Power Networks' easement. The padmount transformer shall be installed centrally within the transformer easement as practical as possible. For more details on easement requirements, refer to TS102.

For interpretation of the Regulations under the Building Act you will need to liaise with your local council's building inspector.

Where the padmount transformer is installed inside a building or structure, adequate ventilation is required to prevent excessive temperatures. The transformer room is required to be designed so that the temperature inside the building shall comply with the requirements of TS108.

For a URD, the Mk7 transformer size should NOT exceed 500kVA and associated cable ratings shall also be taken into consideration. In circumstances where a LV residential feeder is supplied from a larger transformer installed for a spot load Customer, ie shops, apartments, a school, the designer will need to ensure that there is adequate fault current protection at the closest residential supply point. For more details, refer to TS100.

When designing a network, the ideal configuration for supply to a transformer is to create a 'ring circuit'. This will give the network flexibility and enable maintenance and switching to easily occur. It is important that High Voltage cables do not cross over. Consideration in planning shall be given to the location of the transformer and feed direction to avoid crossing cables.

Designers and Constructors need to be aware that, if the Mk7 transformer is to be a radial supply only and installed with cables supplying from the Left-hand side, then the cables shall be terminated on the LS1 side. This is to ensure that the line fault indicator (LFI) that is supplied with a fixed length connection can be placed around the cables.

If a radial transformer is to be installed with cables supplying from the Right-hand side, then it is acceptable to terminate to LS2 where LFI is not required to be connected. If the transformer becomes a loop feed, the additional cables will be connected to LS1 (where the LFI will be installed).

4.2 Transformer Minimum Separation (Indoor)

Where 3 hours fire rating (ie FRL 180/180/180) as determined by the Building Code of Australia (BCA) of the room is achieved, then a minimum of **1.0m** clearance, measured from inside wall(s) of the room to the indoor distribution transformer and or equipment, shall be maintained.

For more details on 'Distribution Transformer Room Size' requirements, refer to TS108.

4.3 Transformer Minimum Separation (Outdoor)

The installation design of an outdoor padmount transformer shall ensure that no part of the padmount transformer enclosure is within **1.2m** of any part of a building or wall that has a fire rating less than 3 hours (ie FRL 180/180/180) as determined by the Building Code of Australia (BCA).

Refer to TS085 and TS100 for more detail on clearances and refer to TS102 for easements requirements.

5. Transformer Site Requirements

5.1 Typical Operating and Easement Area

The typical operating area of 3.5m x 3.0m, located in the front of the transformer, is required. This may be provided in car parks, passageways, footpaths or private roadways subject to the approval from the relevant SA Power Networks Project Manager.

The operating area is additional to the area requested for the padmount transformer easement. For more details, refer to TS102, Figures 2 and 3 below and TS100 - Section titled: 'Typical Easement Requirements'.

A minimum 600mm wide space is required around padmount transformer. This requirement also applies for the transformer installed below ceilings, cover or roof enclosures.

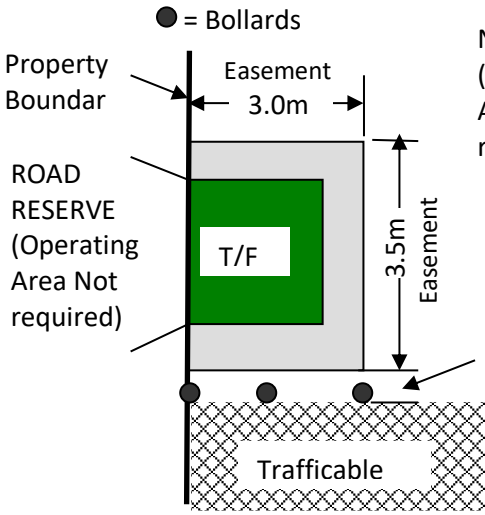

Figure 2:
Typical Layout of Site Plan
Easement Dimensions
(Up to and including 750kVA Transformer)

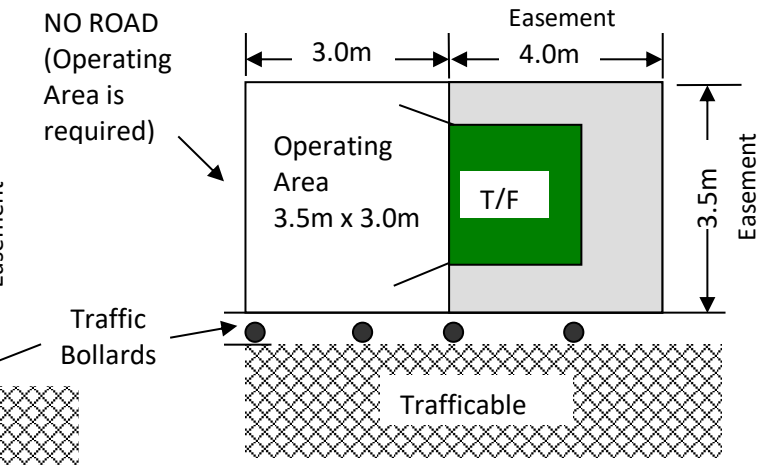

Figure 3:
Typical Layout of Site Plan
Easement Dimensions
(Greater than 750kVA Transformer)

5.2 Typical Traffic Bollards

Traffic bollards are required where padmount transformers and or switching cubicle etc are adjacent to trafficable areas and are at a risk from any vehicular impact damaging SA Power Networks' Infrastructure. Traffic bollards are to be supplied and installed by the Customer.

The following are the general requirements for traffic bollards and for more details, refer to TS100 - Section titled: 'Traffic Bollards':

1. The relevant SA Power Networks Project Manager will assess the risk and bollard's suitability (including location) prior to its installation
2. Alternative barriers (instead of bollards) and their installation on the SA Power Networks' easement boundary are not acceptable
3. Traffic barriers for DPTI roads, shall be installed as per DPTI's requirements. Also refer to AS/NZS 3845, for road safety barrier systems requirement in detail
4. Some temporary protection may be required during construction

5.2.1 Fixed Bollards

As shown in **Figure 4**, the typical fixed round bollard heavy duty, is used for fixed installation around the SA Power Networks' infrastructure exposed to the vehicular traffic. Maintain 1500mm bollard spacing (centre to centre) to act as vehicle barrier (average car width approx. 1800mm).

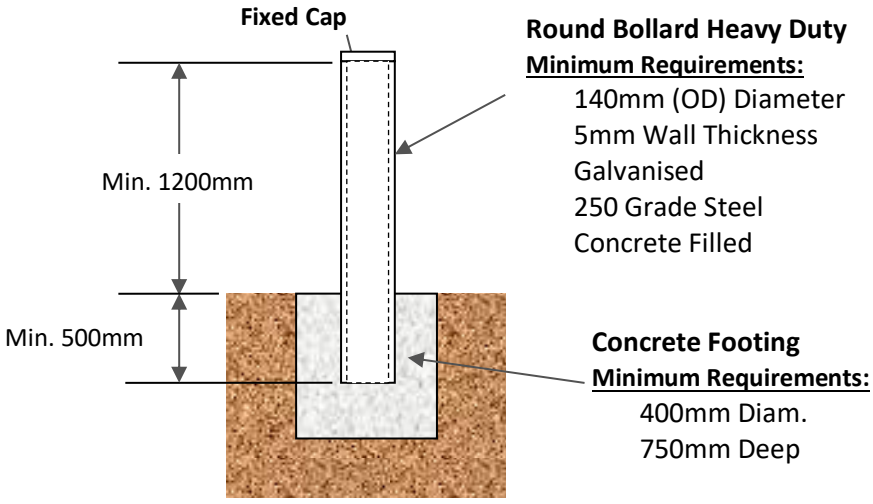

Figure 4
Typical Fixed Round Bollard Heavy Duty - (Not to Scale)

5.2.2 Removable Bollards

As shown in **Figure 5**, the typical removable traffic round bollard heavy duty, is used for occasional operational access requirements around the SA Power Networks' infrastructure exposed to the vehicular traffic. The following are the requirements for removal bollards:

1. The relevant SA Power Networks' Project Manager will assess the risk and suitability of removable bollards prior to use.
2. Removable bollards for maintenance/operation vehicular access area require a minimum of 3000mm clear width (preferred 3500mm).
3. As per Service and Installation Rules, SA Power Networks will provide suitable pad locks when installed removable bollards are for the SA Power Networks.

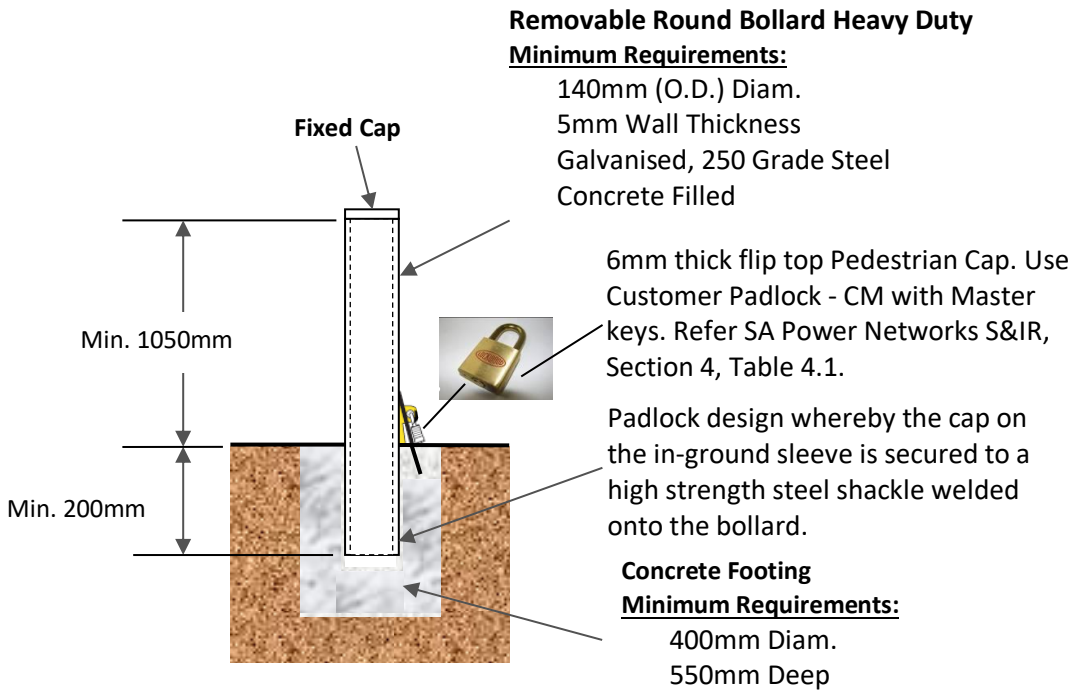

Figure 5
Typical Removable Traffic Round Bollard Heavy Duty - (Not to Scale)

5.3 Transformer Access

Clear and safe access to the padmount transformer shall always be provided (24hours/7days) for the SA Power Networks personnel and heavy transport vehicles. Typically, distribution transformer room requires suitable access to a clear equipment handling area in front of the room. This equipment handling area is to be large enough to maneuver all required equipment in to and out of the room with a minimum 4,000mm width. For more details, refer to TS108 - Section titled: 'Equipment Access'.

The padmount transformer that is installed below ceilings, cover or roof enclosures where headroom is limited, then a minimum height of 4m above floor level is acceptable, provided if FRL 180/180/180 is maintained. Refer to BCA and AS 2067 clause 5.5.4 'Service Areas' for more detail.

Shrubs, trees, creeping or climbing plants shall not be planted on the transformer's easement area or within the operating area. If the Customer's service point is nominated as being in the low voltage compartment of the transformer cubicle, the Customer is responsible for LV reticulation beyond this service point.

It is the Customer's responsibility to provide appropriate lifting equipment for installation/ removal of padmount transformer when headroom is limited.

5.4 Typical Footing Arrangement

A padmount transformer will normally be installed on a concrete pad footing which incorporates a cable vault under the high and low voltage compartments. Any floor supporting a transformer shall be capable of safely supporting the weight of the transformer. The height from the ground level to the top of the padmount transformer base shall be 75mm (E1982 sheet 3.3) and 150mm for a switching cubicle vault (E1981 sheet 3.0), this is to ensure the switchgear and fuses are positioned at the correct height for operational purposes and the vault is not compromised.

Refer to Figure 6 for the 'Typical Footing Arrangement for the Mk7 Padmount Transformer'.

For detailed requirements, refer to TS100 - Section titled: 'Standard Footing'.

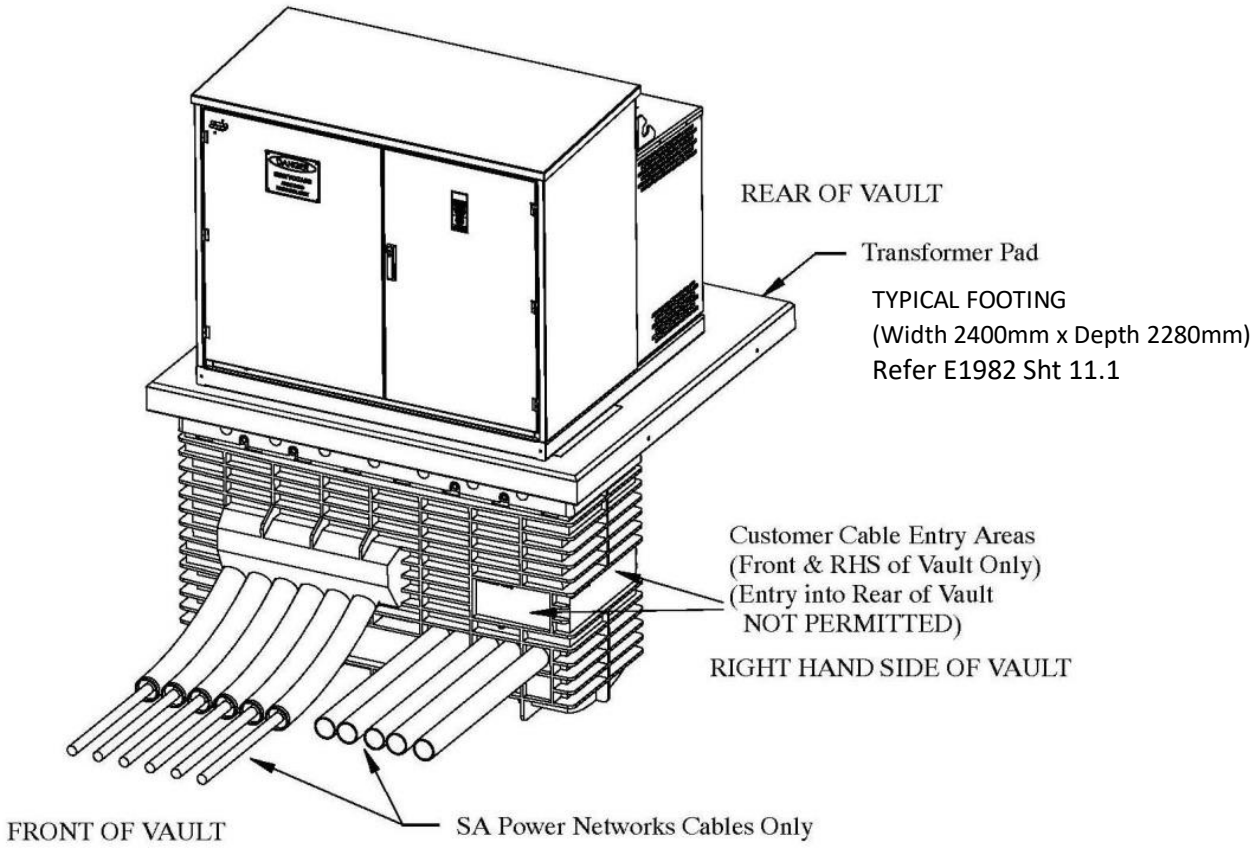

Figure 6
Typical Footing Arrangement for the Mk7 Padmount Transformer

5.4.1 Extended Vault

Where standard footing and vault are not feasible due to the transformer location (eg in basements), the relevant SA Power Networks' Manager shall be consulted for alternative arrangement.

In the CBD area, there may be an additional requirement for an extended vault in front of the padmount transformer. This extended vault will facilitate safe access to the cabling arrangements. The designer shall first seek approval from the relevant SA Power Networks' Manager before considering need for an extended vault.

6. Mk7 Padmount Transformer - General Data

Table 1
Mk7 Padmount Transformer (11kV/400V) - General Details

Pad - T/F Nominal Rating (kVA)	Nominal Dimensions (Width x Depth x Height) (mm)	Weight (Tones)	Maximum SA Power Networks' LV 'NH' Fuse Link and/or Circuit Breaker Ratings (A)	Nominal Impedance (%)	Prospective Fault Current (kA) #
315	1950 x 1662 x 1627	2.6	400A (NH3 Type)	3.6	13.5
500	1950 x 1662 x 1627	3.0	400A (NH3 Type)	4.0	19.3
750	1950 x 2042 x 1677	4.1	400A (NH3 Type) and 2000A CB*	4.4	26.3
1000	1950 x 2042 x 1677	4.5	400A (NH3 Type) and 2000A CB*	4.4	35.1
1500	2200 x 2117 x 1797	6.1	2500A CB*	6.3	36.8
2000	2200 x 2117 x 1797	6.6	N/A	6.5	47.6

Note:
Nominal dimensions and weights of padmount transformers are subject to change by the transformer manufacturer without notice. The actual weight is stenciled on the Pad T/F nameplate.

Notations:
= Based on minimum transformer impedance
***** = Terasaki XS2000NE or XS2500NE LV Circuit Breaker with the following settings:

KVA Rating	I_n	I_o	I_1	T_1	I_2	T_2	I_3
750kVA	2000	0.8	0.85	5	2	0.1	5
1000kVA	2000	1	0.9	5	2	0.1	6
1500kVA	2500	1	1	30	2	0.1	6

Table 2
Mk7 Padmount Transformers - 11kV/400V

Pad – T/F Nominal Rating (kVA)	Nominal Voltage (kV)	Pad – T/F Full Load Current (A)	Pad – T/F Losses (Watts)	HV Tapping Range (Tap Steps = 2.5%)
315	11/0.4	420	4994	-10% To +5%
500	11/0.4	667	6962	-10% To +5%
750	11/0.4	1000	10,188	-10% To +5%
1,000	11/0.4	1333	14,361	-10% To +5%
1,500	11/0.4	2000	21,834	-10% To +5%
2,000	11/0.4	2667	29,962	-10% To +5%

Table 3
Mk7 Padmount Transformers - 11kV/7.6kV/400V (ie Dual Ratio)

Pad – T/F Nominal Rating (kVA)	Nominal Voltage (kV)	Pad – T/F Actual Rating (kVA)	Pad – T/F Full Load Current (A)	Pad – T/F Losses (Watts)	HV Tapping Range (Tap Steps = 2.5%)
315	11/0.4	315	420	4994	-10% To +5%
	7.6/0.4	268	357		
500	11/0.4	500	667	6962	-10% To +5%
	7.6/0.4	425	567		
750	11/0.4	750	1000	10,188	-10% To +5%
	7.6/0.4	638	850		
1000	11/0.4	1000	1333	14,361	-10% To +5%
	7.6/0.4	850	1133		
1500	11/0.4	1500	2000	21,834	-10% To +5%
	7.6/0.4	1275	1700		
2000	11/0.4	2000	2667	29,962	-10% To +5%
	7.6/0.4	1700	2267		

7. Connection of Consumer's Mains to Padmount Transformers

All low voltage circuits emanating from padmount transformers are via fuse switch disconnectors, a circuit breaker or isolator. Refer to TS100 and E drawings E1947 series. Refer to Figures 7, 8, 9, 10 and 11 for various typical arrangements.

Note that where padmount transformer is required for LV and or HV consumers spot load supply, at the preliminary design stage, an approval from relevant SA Power Networks' Project Manager is required.

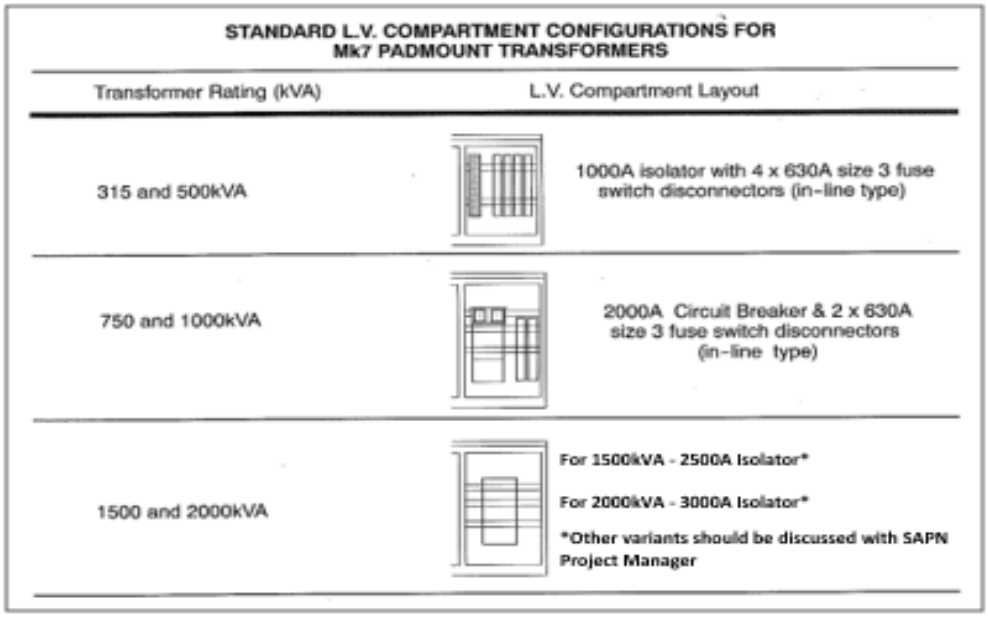

Figure 7
Standard LV Compartment Configuration for 315kVA to 2000kVA Mk7 Padmount Transformers

Notes:

1. Where spare transformer capacity is available, we may include one or more supplies to our mains, or may supply another Customer. In this case the LV compartment will contain a fuse switch disconnector for each circuit and a main isolator. In emergencies this arrangement may be used to provide a limited supply to the Customer in the event of a HV failure at the transformer.
2. Generally, the terminals of the equipment (ie. fuse switch disconnects, isolators, circuit breakers and associated SA Power Networks' parallel kits) used to connect the Customer's cables are made of tinned plated copper and therefore suitable for copper or aluminium terminal lugs, which shall be supplied by the contractor. M12 bolts are supplied with the switchgear.
3. Where copper terminals or copper parallel kits or copper extensions are used as connection point for customers' cables, only Bi-Metallic lugs should be used when connecting aluminium cables to these copper connections hardware.
4. The contractor or electrical worker shall clearly identify each phase and neutral of the Customers' mains.
5. When installing Customers' cables, allow 700mm above the top of the concrete pad footing for termination to switchgear.
6. In all cases we will supply appropriate shields for the Customer's mains.
7. Offset brackets are fitted as standard with the Mk7 padmount transformer.

7.1 Mk7 Padmount Transformers - 315kVA and 500kVA

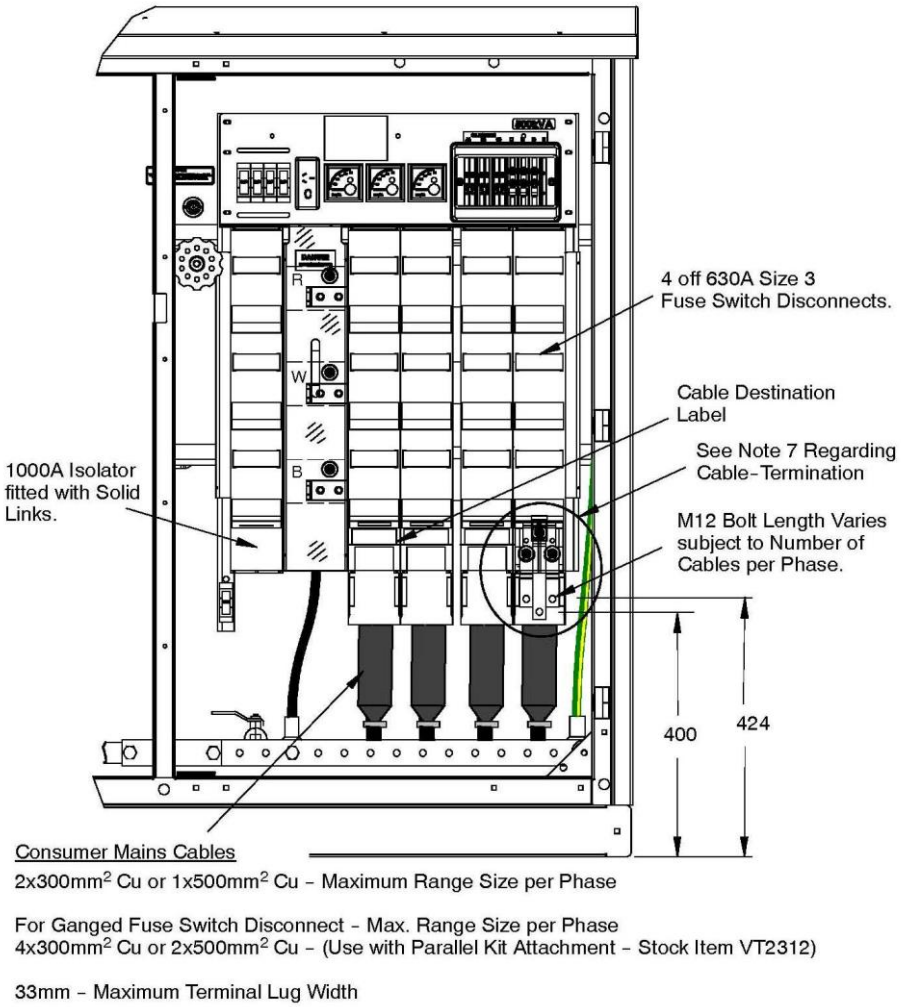

Figure 8
Standard LV Compartment for
315kVA & 500 kVA Mk7 Padmount Transformers

Notes: The following notes are applicable to the Figures 9, 10, 11 and 12:

1. Where non-compliant conductors are installed, they shall be converted to compliant conductors prior to being connected to our equipment.
2. We shall be consulted where the suitability of proposed connection facilities is in doubt.
3. Ensure adequate phase to phase clearance is maintained using suitable shrouds or approved insulating materials.
4. Cables to be clamped in vault. For more details, refer to Section 8 'Typical Securing LV Cables' in this brochure.
5. If larger cables are required for voltage drop reasons, then these larger cables shall be terminated to allow for appropriate size cable at our connection point.
6. Offset brackets are fitted as standard to the Mk7 T/F.

7.2 Mk7 Padmount Transformers - 750kVA and 1000kVA

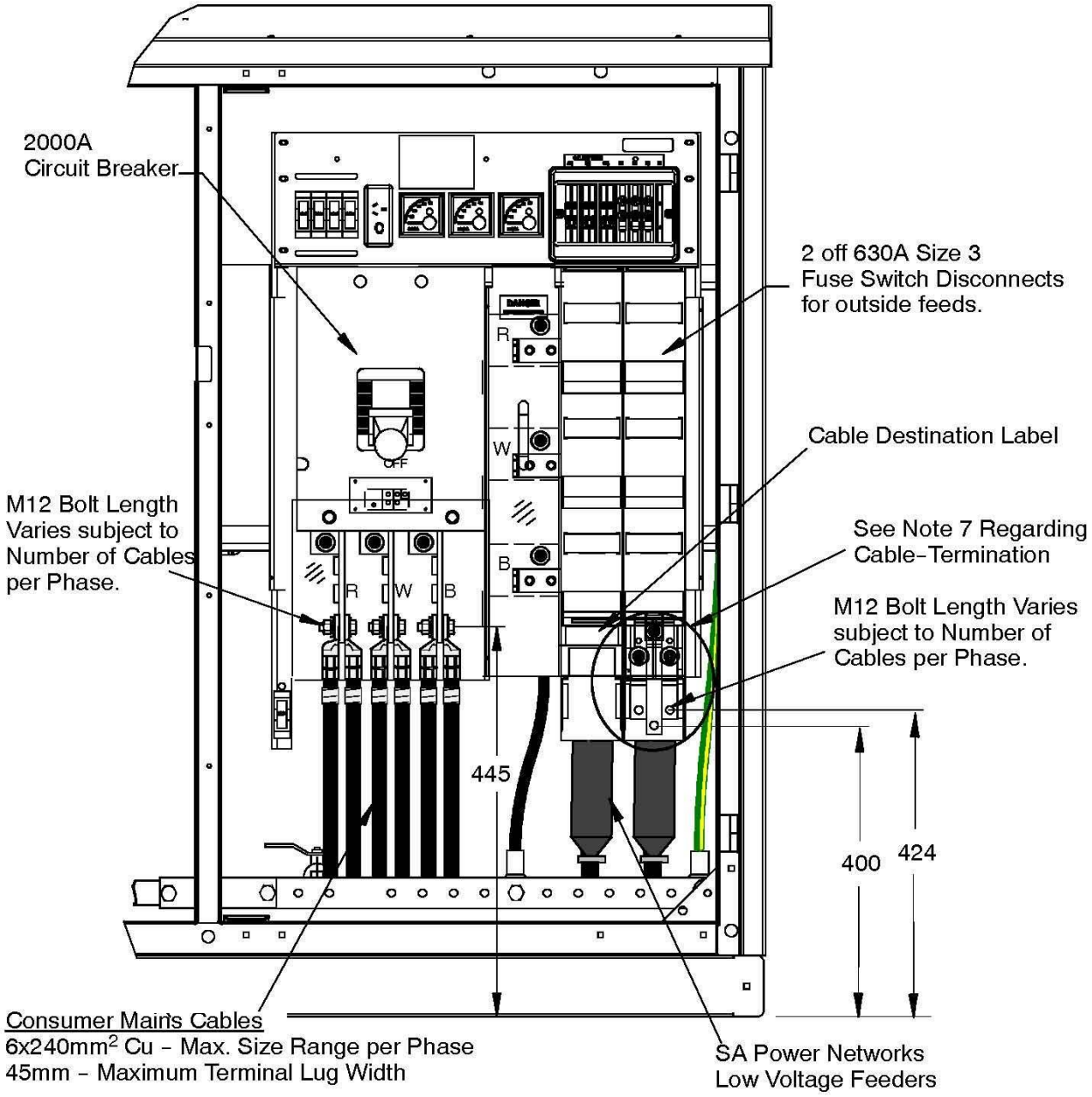

Figure 9
Standard LV Compartment For
750kVA & 1000kVA Mk7 Padmount Transformers

7.3 Mk7 Padmount Transformers - 1500kVA

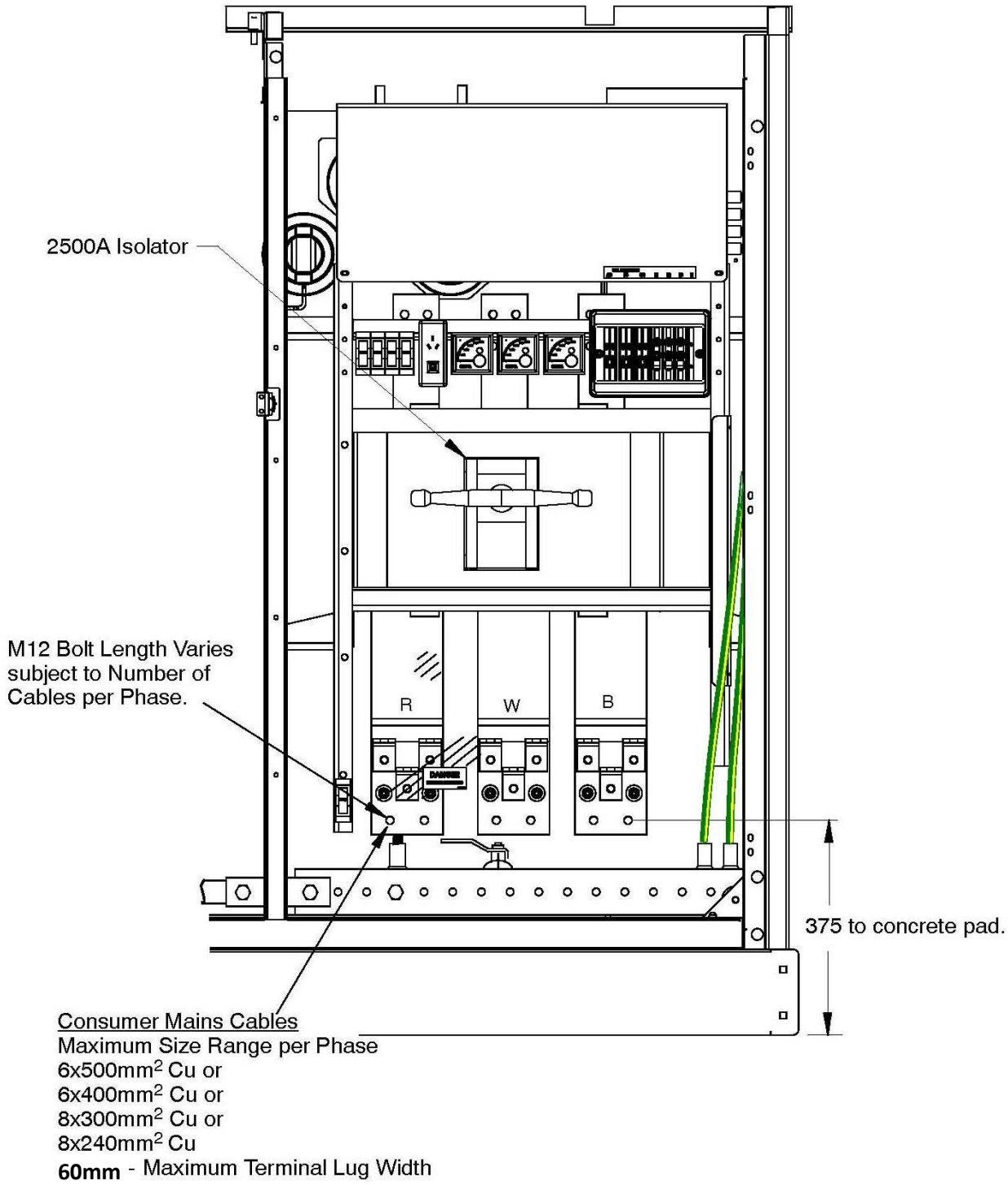

Figure 10
Standard LV Compartment for
1500kVA Mk7 Padmount Transformer

7.4 Mk7 Padmount Transformers - 2000kVA

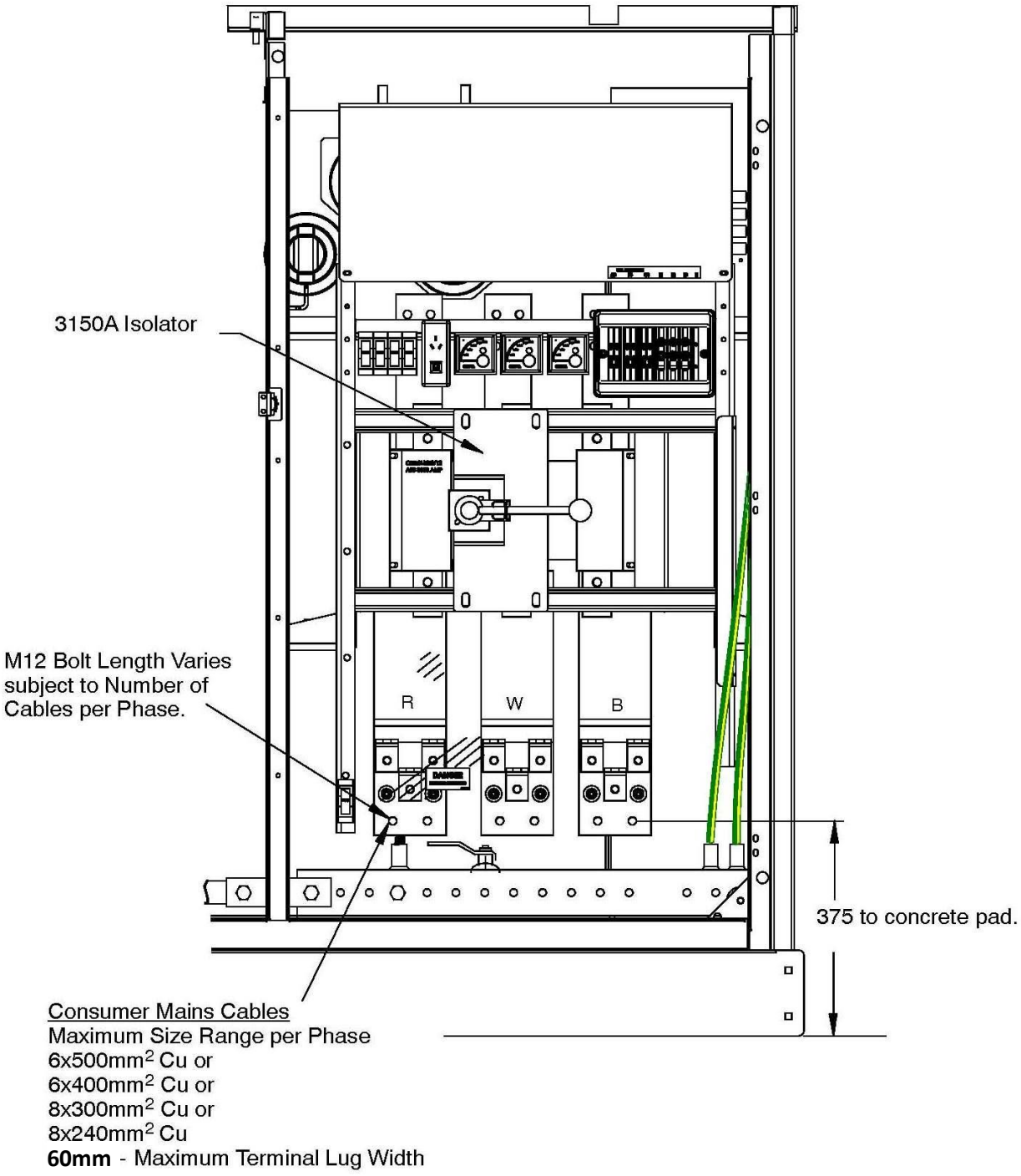

Figure 11
Standard LV Compartment for
2000kVA Mk7 Padmount Transformer

8. Typical Securing LV Cables

Customer's mains terminated in padmount transformers shall be secured. Support rails etc. will be supplied by us on request to our relevant Customer Solutions Manager/Network Project Officer. All cable vaults are pre-assembled with a centre cross member.

Customer to supply cable clamps (Unistrut P2024 series or equivalent) and shall ensure the clamps do not allow a continuous magnetic loop around the cable by using a brass screw, nut and spacer washer.

Refer to Figure 12 for 'Typical Securing LV Cables'.

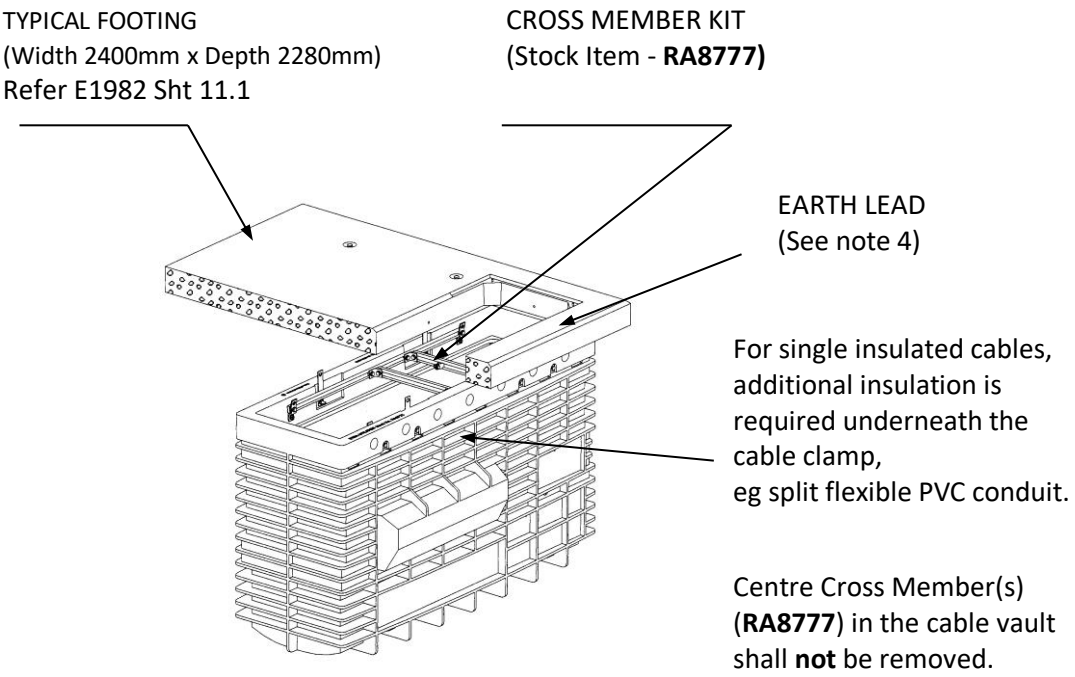

Figure 12
Typical Securing LV Cables

Notes:

1. Where more than one cross member kit is used for securing cables, one steel angle bracket and one copper angle bracket (as supplied in the kit) shall be used to avoid magnetic loops around single core cables.
2. Channels, brackets, spring nuts and setscrews are Unistrut components or equivalent.
3. In CMEN areas bond framework to transformer LV earth bar using earth lead and in MEN areas bond framework to transformer case using an earth lead.

9. Who Should You Talk To?

For all General Enquiries:

In the first instance, please contact Builders and Electrical Contractors Service on 1300 650 014 (8am to 5pm, Mon to Fri) or send an Email: appointments@sapowernetworks.com.au

Dial Before You Dig Enquiries:

Call '1100' during business hours, and / or visit their internet website at www.1100.com.au

Customer Connections Information and Customer Solutions Managers:

The SA Power Networks Customer Connections Information and Customer Solutions Managers contact details are available on the internet, click here:
https://www.sapowernetworks.com.au/public/download/?id=221664

For Documentation Access or For Approval of Non-Standard Special Purpose E Drawings:

For E-Drawings, Non-Standard Special Purpose E Drawings (E SP), AutoCAD standard templates and Instructional manuals, please contact 'Standards and Equipment Team' via Hotline on (08) 8404 4200 or send an email to: networkstandards@sapowernetworks.com.au.

For 'Service & Installation Rules':

If your question relates to our 'Service & Installation Rules', you should contact our Network Connections Manager on (08) 8404 4898 or send an email to:
appointments@sapowernetworks.com.au

Appendices

A Definitions

Applicant (or Customer)	Person applying for access to the SA Power Networks. Applicant/Customer has the meaning given to that term in the Electricity Act 1996, namely a person who has a supply of electricity available from a transmission or distribution network for consumption by that person and includes: 1. The occupier for the time being of a place to which electricity is supplied; 2. Where the context requires, a person seeking an electricity supply; 3. A person of a class declared by regulation to be Customers; and 4. Applicant (or Customer) may or may not necessarily be the landowner but may be a (Authorised) person in charge of the premises.
Contractor	Includes but is not limited to licensed subcontractors, consultants and sub consultants engaged by the Applicant.
Condition of Offer	Means the SA Power Networks project specific Terms and Conditions of Offer as issued by the relevant SA Power Networks Manager.
Development	Means the development proposed by the Applicant on the Land and any land external to that land included in the Applicant's proposal.
Easement Standard	Means the Easement Standard for Distribution Networks TS102, issued by SA Power Networks as varied from time to time.
Electrical Works	includes: 1. All cable laying, cable jointing, installation of poles and overhead mains and street lighting required to service the Applicants requirements, and any works required to connect the to the SA Power Networks distribution system but does not include Low Voltage electricity reticulation beyond the first point of supply that is either on private property and remaining in private ownership, or is in the common property, or a strata development and remains in the ownership of the strata corporation. 2. Transformer and switching cubicle installation and ancillary equipment associated with overhead and underground line constructions.
Project Manager	Means the SA Power Networks Project Manager, Network Project Officer, Network Service Officer, Customer Service Officer, Strategic Project Manager or any Officer/Supervisor who is ultimately responsible for the project management.
Network Access Permit (NAP)	Is the SA Power Networks - Network Access Permit (NAP) issued by NAO and is a notification process for a contractor and any third-party contractor.
NECF	Means 'National Electricity Customer Framework'.
Property	For the purpose of this brochure 'Property' means either what is commonly described, as a Torrens Title allotment, a Community Title Scheme or Land, which is owned by the Crown on which the owner/occupier has the right to the installation of an electricity supply. A property may include any combination of contiguous (adjacent) land and/or an individual title that constitutes a single development, to which an owner/occupier or a Customer has the right to the installation of an electricity supply.
Shall	Is to be understood as mandatory.
Terms and Conditions	Means SA Power Networks Publication Construction Terms (Non-Contestable & Contestable) as amended from time to time.
URD	Means the Underground Residential Development for the supply of electricity.
Works Agreement	Means the Agreement for the Design, Construction and Testing of Electrical Services entered by SA Power Networks and the Applicant for the Development of the Land.

B References

The following listed documents are for additional information but may not be a conclusive list and other documentation may be required on a project specific basis. Refer to the following SA legislative acts and regulations, SA Electricity Code, the SA Power Networks publications, relevant AS/NZS and ENA standards for more detail and you have used the latest version.

Please note: It's your responsibility to ensure you have complied with all relevant standards and you have used the latest version. For civil contractors conducting regular civil works for any the SA Power Networks installations, there are E Drawings Group: 40 - Civil Construction available on request, which detail many project specific aspects of civil works that may not be detailed in this standard.

South Australian Legislations:

- Electricity Act 1996 and Electricity (General) Regulations 2012
- Electricity (Principles of Vegetation Clearance) Regulations 2010
- Environment Protection Act 1993 and Environment Protection Regulations 2009
- Development Act 1993 and Development Regulations 2008
- Telecommunications Act 1997 and Telecommunications Code of Practice 1997
- Work Health & Safety Act 2012 and Work Health & Safety Regulations 2012

Essential Services Commission of South Australia (ESCOSA) Codes:

- SA Electricity Distribution Code (EDC)
- SA Electricity Metering Code (EMTC)

Energy Networks Association (ENA) Publications:

- ENA NENS 03: National Guidelines for Safe Access to Electrical and Mechanical Apparatus
- ENA NENS 04: National Guidelines for Safe Approach Distances to Electrical and Mech. Apparatus

Australian Energy Market Commission (AEMC) Publications: National Electricity Rules (NER)

The Department of Planning Transport and Infrastructure (DPTI) Publications:

The Office of Technical Regulator (OTR) Publications:

Standards Australia Publications:

AS 1319	1994	Safety Signs for the Occupational Environment
AS 1428 (Set)	2010	Design for access and mobility set
AS 1824.1	1995	Insulation co-ordination – Definitions, principles and rules
AS 1931.1	1996	High voltage - Test techniques - General definition and test requirements
AS 2067	2016	Substations and high voltage installations exceeding 1 kV a.c.
AS 2467	2008	Maintenance of Electrical Switchgear
AS 4678 - 2002/ Amdt 2	2008	Earth-retaining structures
AS 4799	2000	Installation of underground utility services and pipelines within railway boundaries
AS 60038	2012	Standard voltages
AS 60068.1	2003	Environmental testing - General and Guidance
AS 60529	2004	Degrees of Protection Provided by Enclosures (IP Code)
AS/ACIF S009	2013	Installation requirements for customer cabling (Telecommunications Wiring Rules)
AS/NZS 1768	2007	Lightning protection
AS/NZS 2053.1	2016	Conduits and fittings for electrical installations Part 1: General requirements
AS/NZS 2648.1	1995	Underground marking tape - Non-detectable tape
AS/NZS 3000	2018	Electrical Installations (known as the wiring rules)

SA Power Networks Documents:

Manuals (for Examples):

Manual 14	Safety, Reliability, Maintenance & Technical Management Plan
Manual 18	Network Tariff & Negotiated Services
Manual 32	Service and Installation Rules

Technical Standards & NICC Brochures (for Examples):

NICC400	Information for an applicant undertaking a contestable extension
NICC401	Information on Network Design and Installation by an External Contractor
NICC404	Working in the Vicinity of SA Power Networks Infrastructure - Network Access Permit Process
TS085	Trenching and Installation of Underground Conduits and Cables (up to and including 33kV)
TS100	Electrical Design Std for Underground Distribution Cable Networks (up to & including 33kV)
TS102	Easement standard for distribution networks
TS108	Technical Standard for Distribution Equipment and Transformer Rooms

Relevant E Drawing Series