Standard: General Template Labelling Standard for Distribution Equipment

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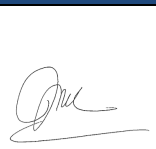
Author	**Name:** Andrew Nguyen **Position:** Standards and Plant Engineer		Digitally signed by Andrew Nguyen Date: 2023.09.28 10:06:59 +08'00'
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Revision Control		
Revision	**Date**	**Description**
3	28/09/2023	Document updated with the relevant and current Australian Standards, includes standards label of GMK, update the Appendix B- Schedule of Label Requirements
2	1/11/2019	Document updated based on regional improvement suggestions, mini pillar labelling added and introduction of Standalone Power System labelling. Fusesaver Information added.

STAKEHOLDERS The following positions shall be consulted if an update or review is required:	
Asset Managers	Works Delivery Managers
	Asset Services Delivery Manager

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1 PURPOSE

The purpose of this document is to provide a standard general template for consistency in labelling of distribution primary equipment.

2 APPLICATION

This Standard covers all labelling to be secured to distribution primary equipment on Horizon Power's distribution network and represents the minimum requirements applicable to all labels applied to the distribution primary equipment.

3 NORMATIVE REFERENCES

3.1 Standards

3.1.1 Australian Standards

The following standards are available at http://www.saiglobal.com.

[1]. *AS 1319, Safety signs for the occupational environment,* Standards Australia, 2005

[2]. *AS 2067, Substations and high voltage installations exceeding 1 kV a.c.,* Standards Australia, 2016

[3]. *AS/NZS 3000, Electrical Installations (known as Australian/New Zealand Wiring Rules)*, Standards Australia, 2018 (Amdt 2:2021)

[4]. *AS/NZS 4777.2, Grid connection of energy systems via inverters*, Standards Australia, 2022

[5]. *AS/NZS 5033, Installation and safety requirements for photovoltaic (PV) arrays*, Standards Australia, 2021

[6]. *AS/NZS 61439, Low voltage switchgear and controlgear assemblies – General rules*, Standards Australia, 2016

3.1.2 Other References

[7]. *WAER, Western Australian Electricity Requirements*, WA Electrical Requirements (WAER) | Department of Mines, Industry Regulation and Safety (commerce.wa.gov.au)

[8]. *WASIR, Western Australian Service and Installation Requirements*, https://www.westernpower.com.au

3.2 Abbreviations

1) CAPT: Capacitor
2) CBOX: Control Box
3) CBHV: MV Circuit Breaker
4) CBLV: LV Circuit Breaker
5) DDOF: Drop Out Fuse

6) DPTS: Pole Top Switch
7) DRMU: Ring Main Unit
8) DSUB: Distribution Substation
9) DTTX: Distribution Transformer
10) EASW: Earth Switch
11) NMTR: Medium Voltage Customer Metering Unit
12) FDIS: Fuse Disconnector LV
13) FLIN: Fault Indicator
14) FUSV: Fusesaver
15) FUSW: Fuse Switch
16) GMK: Ground Mounted Kiosk
17) GIS: Horizon Power's Geographic Information System
18) HVDI: MV Disconnector
19) ISTX: Isolating Transformer
20) LUMI: Luminaire
21) LV: Low Voltage <1000 volts ac
22) LVDI: Low Voltage Disconnector
23) LVFM: Low Voltage Distribution Frame
24) SPS: Standalone Power System
25) MV: Medium Voltage >1000 volts ac; <36 000 volts ac
26) PILL: Pillar (used for mini and universal pillars and wall-mounted boxes)
27) POLE: Pole
28) REAC: Reactor
29) RECL: Recloser
30) RETX: Voltage Regulator
31) SURD: Surge Diverter
32) SECT: Sectionaliser
33) SLCB: Street Light Control Box
34) SWTC: Switch Disconnector
35) WAER: Western Australian Electrical Requirements

3.3 Definitions

1) **Critical Information**: Information that needs to be prominently displayed in comparison to other information on a Label.
2) **Equipment Number**: A unique identification number assigned to each item in GIS/Ellipse and 'PowerOn Fusion'.

3) **Label:** An inscribed board, plaque or other delineated space on which a combination of words and/or symbols is used to identify a piece of equipment.

4) **SPS:** Standalone Power System.

5) **PowerOn Fusion:** Human Machine Interface System for SCADA.

6) **RMU:** Ring Main Unit.

7) **SCADA:** Supervisory Control and Data Acquisition.

8) **Sign:** An inscribed board, plaque or other delineated space on which a combination of legend and/or symbolic shape is used to convey a message.

4 RESPONSIBILITIES

The fixing of permanent labels is the responsibility of the equipment installer. However, the commissioning officer must identify and confirm the presence and correctness of all labels fitted to distribution equipment. No equipment as specified in this standard shall be commissioned and placed into service without permanent labels installed.

The maintenance of labels is the responsibility of the relevant regional maintenance power systems officers; however the switching operator must identify and confirm the presence and correctness of all labels fitted to distribution primary equipment at the time of switch operation.

The installer has the responsibility of ensuring that information included in a label can be interpreted by others, particularly for operators that do not have local knowledge of the area. If the installer deems that the information provided by the standard format is insufficient for a particular asset, it is the installer's responsibility to seek advice.

5 GENERAL REQUIREMENTS

Equipment labels are used to identify plant and also to assist operators in the field during switching and incident responses.

Distribution primary equipment shall be legibly and indelibly labelled to clearly identify the equipment, what it is connected to, and where applicable indicate the portion of the electrical installation that it controls.

Labelling shall be located on or adjacent to the equipment, in a position adjacent to the means of operation. Where access is provided to equipment at the side or rear, such labelling shall also be located on a fixed portion at the alternate location.

The following represents the minimum requirements for material to be used for distribution primary equipment labels.

5.1 Material

The labels shall be capable of being adhered or fastened to any smooth, clean surface inclusive of wood, metalwork, and concrete. Details are:

1) Yellow vinyl adhesive-backed tape with a minimum of 10 years' adhesiveness.

2) Minimum outdoor life (UV tolerant) of 10 years and remain legible.
3) Must provide for the text to have a viewing distance of 6 metres as per AS 1319 [1].
4) Up to four lines of text, arial bold type.
5) Length is dependent on entered text.

5.2 Graffiti Resistance

Labels shall have a graffiti resistant laminate or coating applied for environments where graffiti may be applied.

5.3 Housekeeping Rules

1) Where a location is provided for a referenced asset, the 'at' @ symbol can be used to improve readability as often the address is provided with other details.
2) Where a referenced asset shares the same site as the asset being labelled, the referenced asset's location can simply be 'local'.
3) If there is space in a label, the installer can include an upstream isolation point with the use of the word 'VIA' if preferred.
4) Do not use business names for locations as business names are likely to change over the life of the asset.
5) If a lot or street number is not signed or available at the site, the label must include further information that will enable operators to locate the referenced asset e.g. Brockman Park, High School, Hospital.
6) Addresses in locations shall have the lot number shown by including an 'L' in front of the number with no space between, and then the house number and street name following a comma (e.g. *L100, 2 Smith St.).*
7) If a pole rural number is large and does not fit in one line using 13 mm text, multiple lines may be used with the final line having the largest text.
8) If a label contains all adequate information and there is room to spare using the specified text sizes, the text sizes may be increased to fill the label so long as the text sizes remain in proportion to the sizes specified.

5.3.1 Label Size, Formatting & Colour

All labels shall have black text on a yellow background and must also have a thin frame border.

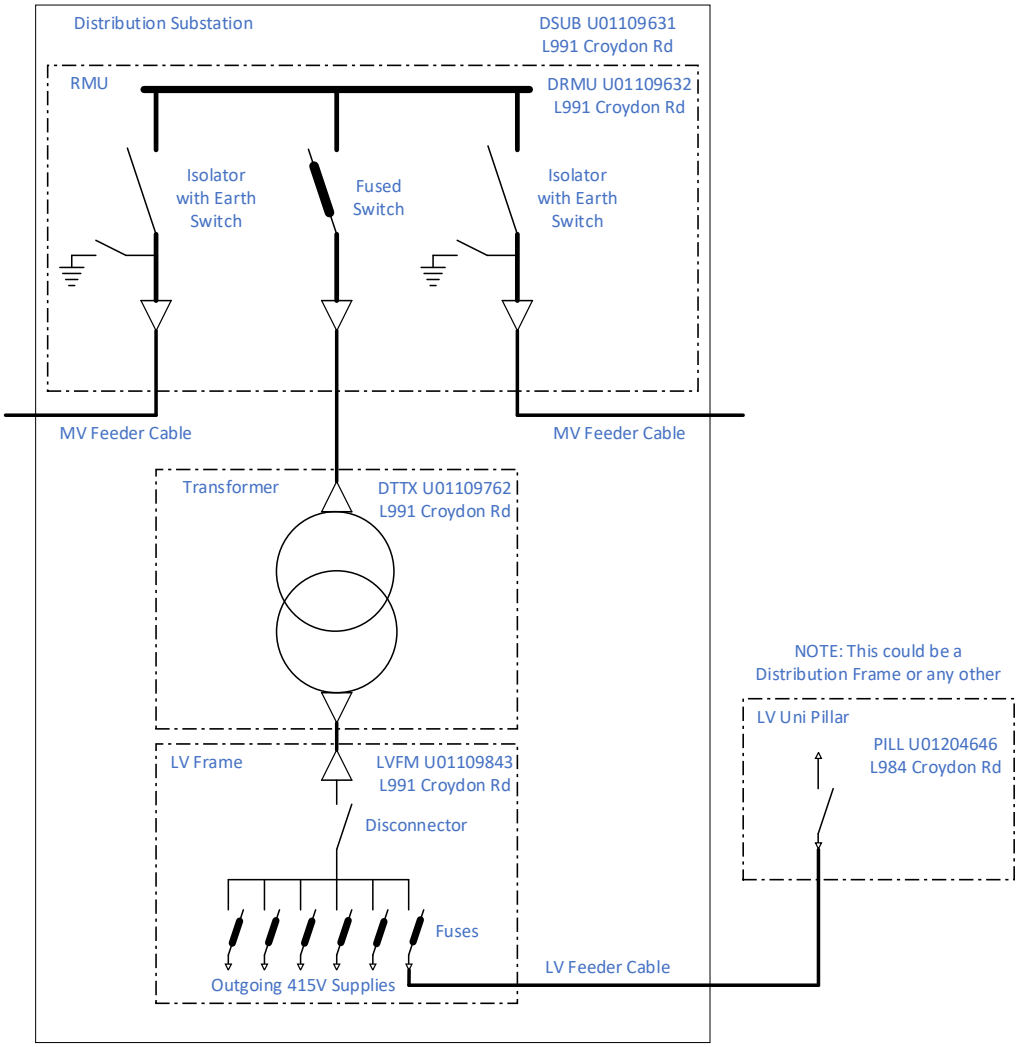
Standard labels size shall be with minimum:

- 50 mm roll width
- 13 mm font size for lines with critical information
- 7 mm font size for other lines.

6 GROUND-MOUNTED SYSTEM EQUIPMENT

All labelling shall be affixed directly to the equipment.

Figure 1 – Schematic Diagram of a typical underground network.



The schematic diagram of a typical underground network has been used to derive the ground-mounted equipment labels including the following:

1) Distribution Substations
2) Distribution Transformers
3) Metering Transformers
4) Voltage Regulators
5) Fault Indicators
6) Ring Main Units (RMU's)
7) HV Switch Disconnector

8) HV Fuse Switch Disconnectors
9) HV Distribution Recloser in Kiosks
10) LV Distribution Frames
11) LV Disconnectors
12) LV Fuse Disconnectors
13) Universal Pillars
14) Mini Pillars
15) Streetlights
16) Wall Mounted Boxes

Labels shall be attached to the equipment as indicated in the following sections.

6.1 Distribution Substations – Ground Mounted

Distribution substations are representative of a group of assets inclusive of a distribution transformer or high voltage switchgear. A substation label shall be used where there is a physical enclosure to which it can be attached. If a non-enclosed distribution substation consists of only ground-mounted assets which are individually identified with a label, then a substation label is not required.

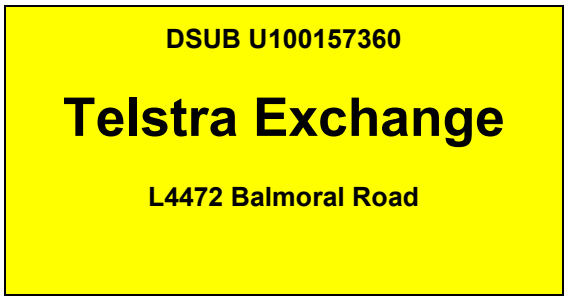
A substation shall be primarily identified with the abbreviation DSUB followed by a system-generated number. In addition, the name of the distribution substation and the location address shall also be included.

Labels for distribution substations shall have a roll width of 50 mm and be of the following format:

Table 1 - Ground mounted substation label format.

Line 1	**[DSUB]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Substation name]**	Text: 13 mm
Line 3	**[Location]**	Text: 7 mm
Line 4	Space	Text: 7 mm

Figure 2 – Distribution Substation label example.



6.1.1 Label Location - Brick Enclosures

Where the substation enclosure has a door, the label shall be fitted at a height of approximately 1.8 m above the finished floor level, on the inside of the door. An additional label may be fitted at a height of approximately 1.8 m above the finished floor level, on the outside of the door.

Where the doors are removable, the label shall be fitted inside the substation, adjacent to the doors and on the same face of the substation as the doors. Alternatively the label may be placed inside the substation at a conspicuous location in full view of the operator.

Figure 3 – Brick enclosure Substation.

6.1.2 Label Location - Non-brick enclosures

This may include cyclone or sheeted perimeter fencing. Where the substation enclosure has a door, the label shall be fitted at a height of approximately 1.8 m above the finished floor level on the outside of the door, otherwise on the outside of the fence. An additional label shall be fitted inside the substation at a conspicuous location in full view of the operator.

6.2 Distribution Transformers – Ground Mounted

A ground-mounted transformer shall be primarily identified with the abbreviation DTTX, followed by a system-generated number. The substation name is displayed in the second line with the location of the transformer in the third line. Details of the supplying asset and location are included in the fourth line.

Labels for ground-mounted distribution transformers shall have a roll width of 50 mm and be of the following format:

Table 2 - Ground mounted distribution transformer label format.

Line 1	**[DTTX]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Substation name]**	Text: 13 mm
Line 3	**[Location]**	Text: 7 mm
Line 4	**[From]** and **[Switch name and Asset name]** for a RMU switch or **[Pole number]** and **[Location]**	Text: 7 mm

Figure 4 – Distribution Transformer label examples.

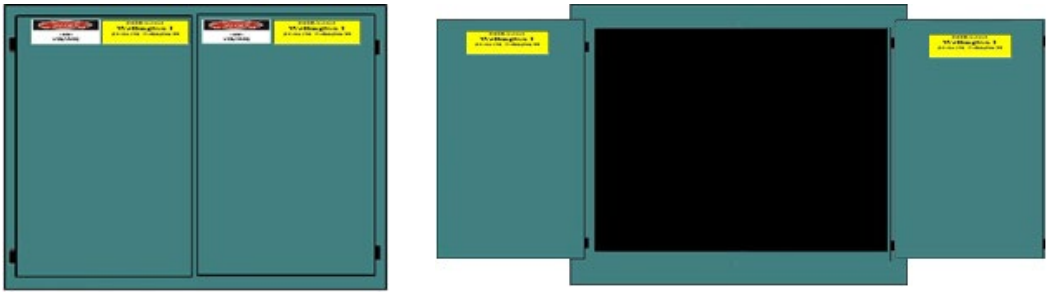
6.2.1 Label Location - Brick buildings, Brick compounds, or Non-brick enclosures

Distribution transformers located in brick buildings, brick compounds, or non-brick enclosures are free standing. There may be more than one transformer in any one substation. As such, the transformer label shall be fitted to the transformer tank, adjacent to the transformer nameplate.

6.2.2 Label Location - Ground Mounted Transformers (standalone)

Access to the nameplate of ground-mounted transformers located inside kiosks is not readily available. Therefore, labels shall be fitted to the inside and outside of the doors to the LV and HV compartments. The label sizes in the figure below are only informative; the proper label sizes shall be used.

Figure 5 – Ground-mounted Transformer label positions.



6.3 Metering Transformer – Ground Mounted

A ground-mounted metering transformer shall be primarily identified with the abbreviation NMTR, followed by the system-generated number. Its name and physical address is also included. In addition to this, the equipment number and location address from which the metering transformer is supplied is also included.

Labels for ground-mounted metering transformers shall have a roll width of 50 mm and be of the following format:

Table 3 - Ground mounted metering transformer label format.

Line 1	**[NMTR]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Substation name]**	Text: 13 mm
Line 3	**[Location]**	Text: 7 mm
Line 4	**[From]** and **[Switch name and Asset name]** for a RMU switch or **[Pole number]** and **[Location]**	Text: 7 mm

Figure 6 – Metering Transformer label example.

The label shall be placed on the front panel of the metering unit, in full view of the operator.

6.4 Voltage Regulator – Ground Mounted

A voltage regulator shall be primarily identified with the abbreviation RETX, followed by the system-generated number. The name is included in the second line and the location of the regulator is included in the third. In addition to this, the details and location from which the regulator is supplied is also included.

Labels for voltage regulators shall have a roll width of 50 mm and be of the following format:

Table 4 - Ground mounted voltage regulator label format.

Line 1	**[RETX]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Name]**	Text: 13 mm
Line 3	**[Location]**	Text: 7 mm
Line 4	**[From:]** and **[Switch name and Asset name]** for a RMU switch or **[Pole number]** and **[Location]**	Text: 7 mm

Figure 7 – Voltage Regulator label example.

The labels shall be placed on the exterior surface of the control panel door and the body of the tank (opposite the control panel but not on the cooling fins).

6.5 Fault Indicator (Relay & Flag Type) – Ground Mounted

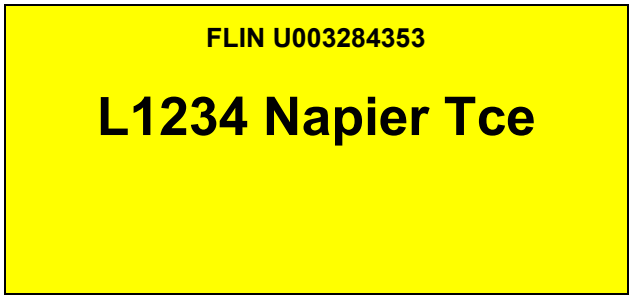
A fault indicator shall be primarily identified with the abbreviation FLIN, followed by a system-generated number. Its physical address is also included.

Labels for fault indicators shall have a roll width of 50 mm and be of the following format:

Table 5 – Ground mounted fault indicator label format.

Line 1	**[FLIN]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	Spare	Text: 7 mm
Line 4	Spare	Text: 7 mm

Figure 8 – Fault Indicator label example.



The label shall be fixed to the fault indicator or placed adjacent to the fault indicator, on the switchgear panel. The following examples in Figures 9.1 & 9.2 illustrate the placement of labels for fault indicators.

Figure 9.1 – 'Relay and Flag' Fault Indicator label example.

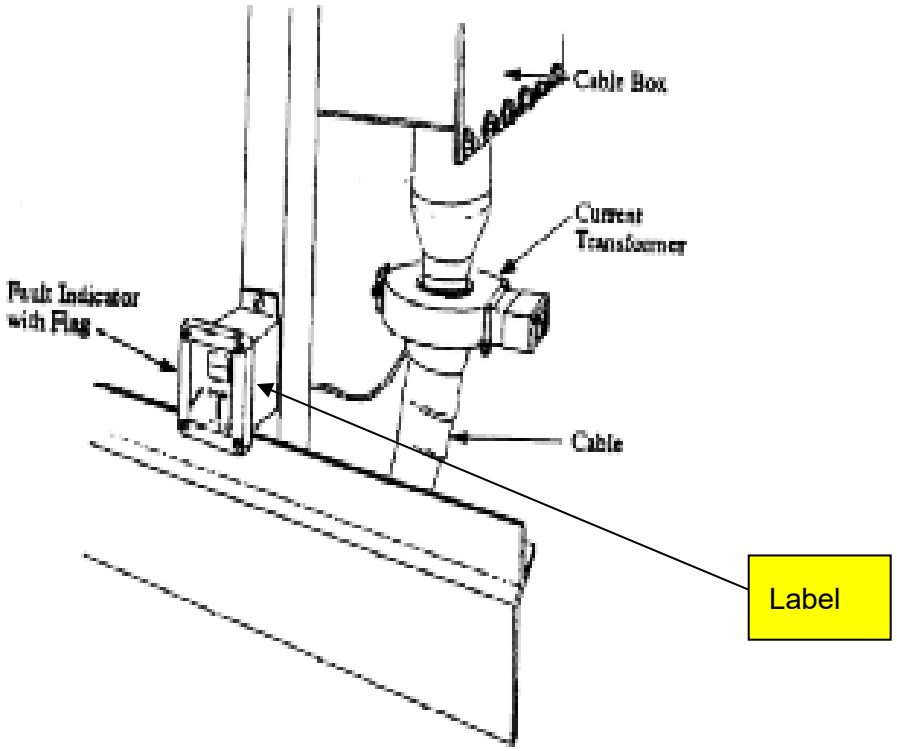
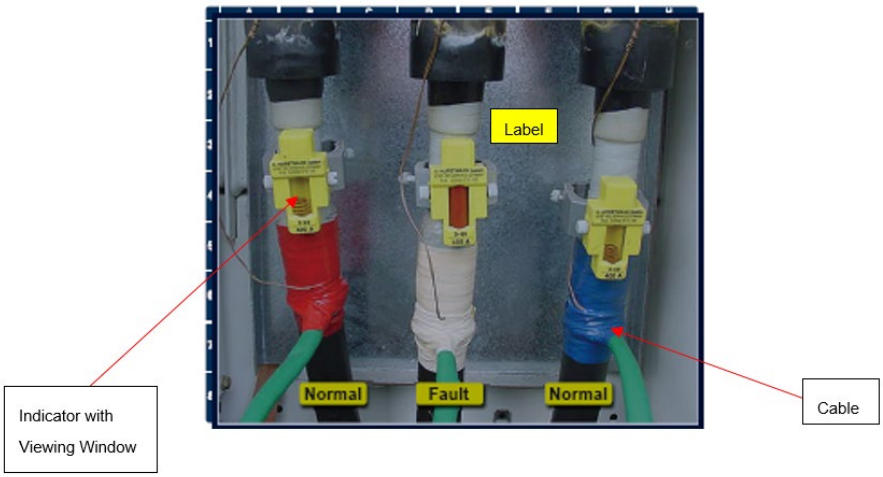


Figure 9.2 – 'Horstmann Fluid type' Fault Indicator label example.



6.6 Ring Main Unit (RMU) – Ground Mounted

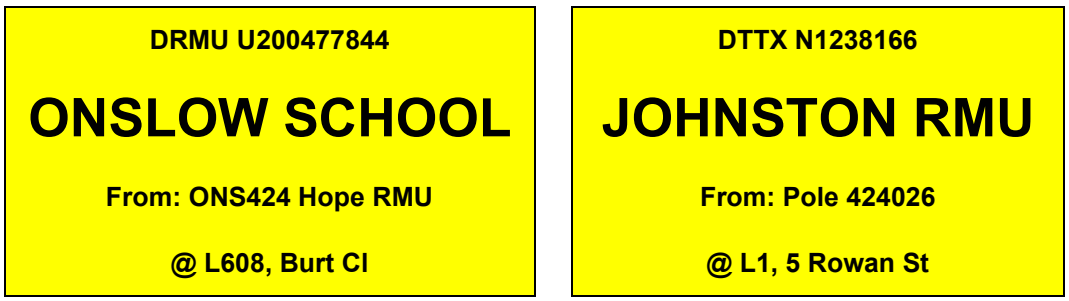
A ring main unit shall contain the abbreviation DRMU followed by a system-generated number for identification with the system. The substation name is shown in the second line and details as well as the location of where the RMU is supplied from shall be included in the third and fourth line to assist operators.

Labels for RMUs shall have a roll width of 50 mm and be of the following format:

Table 6 – Ground mounted RMU label format.

Line 1	**[DRMU]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Substation Name]** (This should not include the equipment abbreviation, but should include the town code if this is used in PoA)	Text: 13 mm
Line 3	**[From:]** and **[Feeder number + Substation name]** for a zone substation or power station, or **[Switch name and Substation name]** for a RMU switch, or **[Pole number]** for a HV cable termination	Text: 7 mm
Line 4	**[Location]**	Text: 7 mm

Figure 10 – RMU label examples.



Labels shall be fixed to the inside and outside of both doors and also on the RMU front panel.

6.7 HV Switch Disconnector – Ground Mounted

A switch disconnector shall contain the abbreviation SWTC followed by a system-generated number for identification with the system. Its name and details of where the switch's cable is connected to shall also be included in order assist operators.

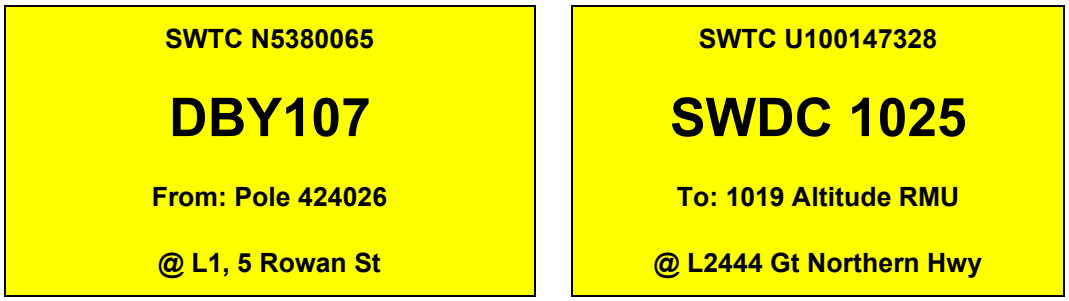
The location of the switch itself is not necessary as this is included in the label for the RMU.

Labels for HV switch disconnectors shall have a roll width of 50 mm and be of the following format:

Table 7 - Ground mounted HV switch disconnector label format.

Line 1	**[SWTC]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Switch name]** Do not include any earth switch details if included in the name, for example *289/ES66* is to be labelled with its name as *SWDC 289*.	Text: 13 mm
Line 3	**[From/To:]** and **[Feeder number + Substation name]** for a zone substation or power station, or **[Switch name and Substation name]** for a RMU switch or **[Pole number]** for a HV cable termination.	Text: 7 mm
Line 4	**[Location]**	Text: 7 mm

Figure 11 – HV Switch Disconnector label examples.



In most cases the label shall be placed on the label placard, or front panel, of the RMU. The examples later in this section illustrate the placement of labels for switch disconnectors.

6.7.1.1 Alstom RMU Label Locations

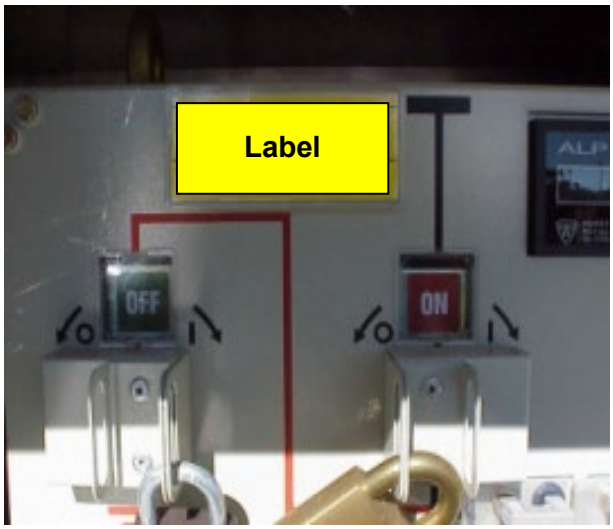
The label shall be placed on the label placard on the front panel of the RMU.

Figure 12 – 'Alstom' RMU label location.

6.7.1.2 F&G RMU Label Locations

The label shall be placed on the label placard of the RMU.

Figure 13 – 'F&G' RMU label location.



6.7.1.3 Merlin Gerin RMU Label Locations

The label shall be placed on the front panel of the RMU, adjacent to the operating mechanism.

Figure 14 – 'Merlin Gerin' RMU label location.

6.7.1.4 Long & Crawford RMU Label Locations

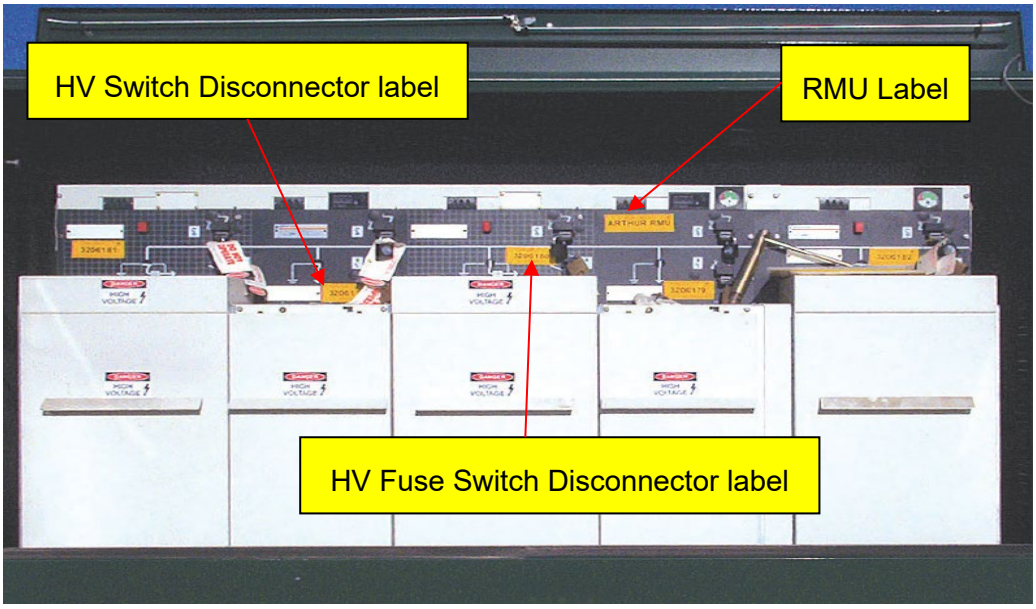
The label shall be placed on the front panel of the RMU, adjacent to the operating mechanism.

Figure 15 – 'Long & Crawford' RMU label location.

6.7.1.5 Schneider RMU Label Locations

The label shall be placed on the front panel of the RMU, in the designated area.

Figure 16 – 'Schneider RM6' RMU label location.



6.8 HV Fuse Switch Disconnector – Ground Mounted

A fuse switch disconnector shall contain the abbreviation FUSW followed by a system-generated number for identification with the system. Its name and details of where the fuse switch's cable is connected to is also included in order assist operators. The location of the fuse switch itself is not necessary as this is included in the label for the RMU.

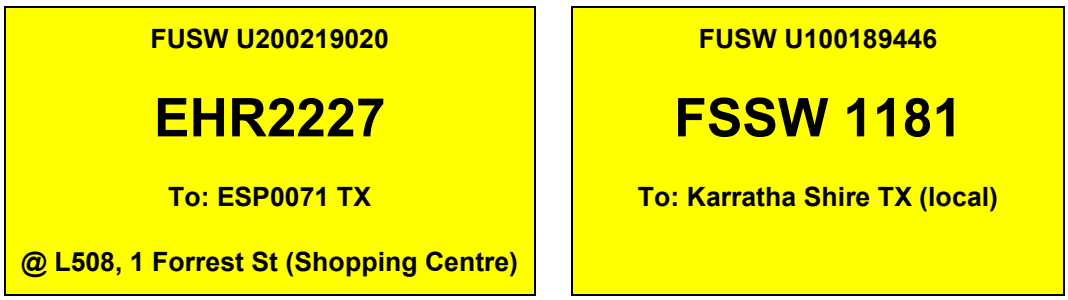
In most cases the label shall be placed on the label placard, or front panel, of the RMU.

Labels for HV fuse switch disconnectors shall have a roll width of the 50 mm and format shall be as follows:

Table 8 - Ground mounted HV switch disconnector label format.

Line 1	**[FUSW]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Fuse switch name]** Do not include any earth switch details if included in the name, for example 290/ES67 is to be labelled with its name as *FSSW 290*.	Text: 13 mm
Line 3	**[To:]** and **[Substation name]** for a transformer or **[Pole number]** for a HV cable termination.	Text: 7 mm
Line 4	**[Location:]**	Text: 7 mm

Figure 17 – HV Fuse Switch Disconnector label examples.



6.9 HV Distribution Recloser in Kiosk – Ground Mounted

A Ground Mounted Recloser Kiosk shall contain the acronym RECL followed by a system-generated number for identification with the system. The name or number of the GMK shall be contained in the second line. In addition, GMK's physical address is included in the third line.

The label shall be placed on the front panel of the GMK.

Labels for Ground Mounted Recloser Kiosk shall have a roll width of the 50 mm and format shall be as follows:

Table 9 – Ground mounted HV Distribution Recloser in a kiosk.

Line 1	**[RECL]** and **[System-generated number]**	Text 7 mm
Line 2	**[GMK RECLOSER]** and **[Number]**	Text 13 mm
Line 3	**[Location]**	Text 7 mm
Line 4	Spare	Text 7 mm

Figure 18 – HV Distribution Recloser label example.

Figure 19 – HV Distribution Recloser label location.

6.10 LV Distribution Frame – Ground Mounted

A low voltage distribution frame, shall be identified with the abbreviation LVFM, followed by a system-generated number. Its physical address is also included.

In most cases, labels shall be placed on the centre of both sides of each door.

Labels for LV distribution frames shall have a roll width of 50 mm and be of the following format:

Table 1 – Ground mounted LV distribution frame label format.

Line 1	**[LVFM]** and **[System-generated number]** and **[Substation Name]** if applicable	Text: 13 mm
Line 2	**[Location]** (Location to be included only if the LV kiosk is not located within a substation site.)	Text: 7 mm
Line 3	**[From:]** and **[Circuit Number + Substation name]** for a distribution substation or **[Abbreviation + system-generated number]** for universal pillars standalone frames or **[Pole number]** for a LV cable termination.	Text: 7 mm
Line 4	**[Location:]**	Text: 7 mm

Figure 20 – LV Distribution Frame label examples.

6.10.1.1 LV Distribution Frames in Kiosks, Label Locations

Where a distribution frame is located within a kiosk, labels shall be placed on the inside and outside of the kiosk door. The labels shall be placed on the centre of the door.

6.10.1.2 LV Distribution Frames in Wall Mounted Feeder Pillars, Label Locations

Where a distribution frame is located in wall-mounted boxes, labels shall be placed on the inside and outside of the kiosk door. The labels shall be placed in the centre of the door.

6.10.1.3 Freestanding LV Distribution Frames in Substations, Label Locations

Where a distribution frame is located in a substation and is freestanding, the label shall be fixed to the distribution frame and also placed on the inside of the substation door, at a height of approximately 1.5 m above the finished floor level and located just below the substation label. If more than one LV Frame exists in the substation, then each label must be fixed to the appropriate distribution frame.

6.11 LV Disconnector – Ground Mounted

A LV disconnector shall be primarily identified with the abbreviation LVDI, followed by a system-generated number for identification with the system. Its physical address is not necessary as this shall be included in the label for the LV frame or Modular Package Substation transformer kiosk. The circuit number as well as details of the connected asset of the outgoing cable shall be included to assist operators.

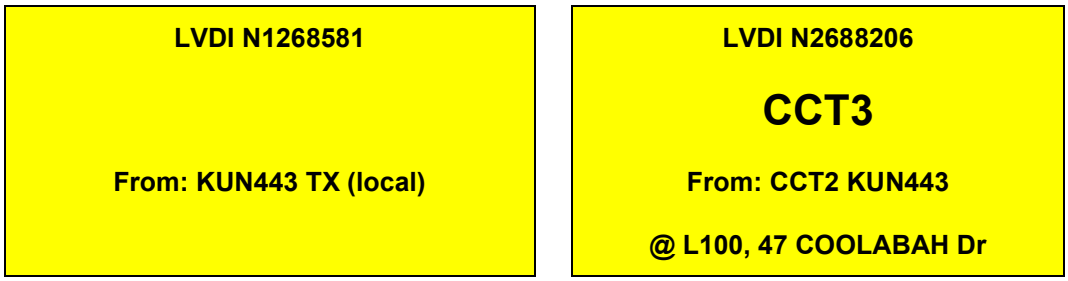
In most cases the label shall be placed on the transformer disconnector label placard or on the disconnector panel. More specific details for label placements are given later in this section.

Labels for LV disconnectors in ground-mounted equipment shall have a roll width of 50 mm and be of the following format:

Table 11 - Ground mounted LV disconnector label format.

Line 1	**[LVDI]** and **[System-generated number]**	Text: 4 mm
Line 2	**[Circuit number]** (This line is not required for LV disconnectors used as a transformer isolator)	Text: 6 mm
Line 3	**[From/To:]** and **[Circuit Number + Substation Name]** for substations or **[Abbreviation + system-generated number]** for pillars or standalone frames, or **[Customer Switchboard Name]** for consumer mains.	Text: 4 mm
Line 4	**[Location:]**	Text: 4 mm

Figure 21 – LV Disconnector label examples.



6.11.1.1 Pronutec Disconnector

The label shall be placed on the disconnector top space, as shown:

Figure 22 – 'Pronutec' LV Disconnector label location.

6.11.1.2 ABB Isolator (Disconnector) Label Location

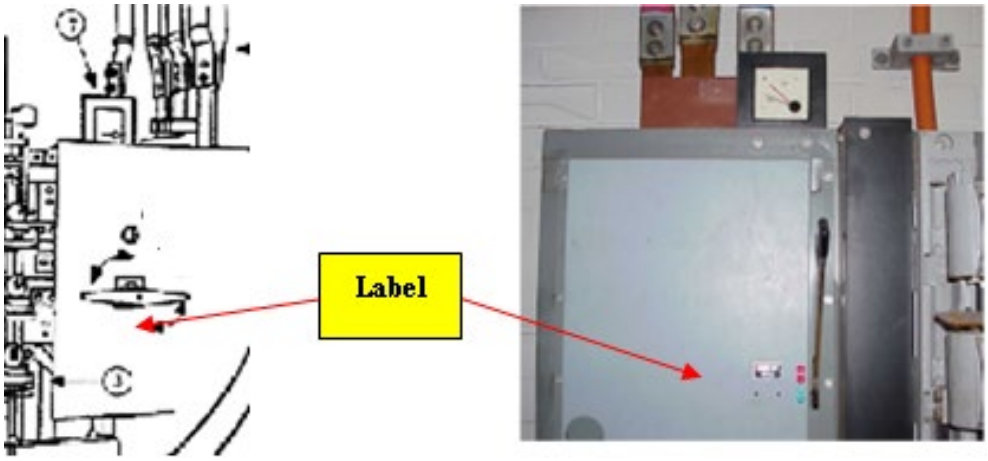
The label shall be placed on the transformer disconnector label placard, as shown:

Figure 23 – 'ABB' LV Disconnector label location.

6.11.1.3 Lever Operated Isolator (Disconnectors) Label Location

The label shall be placed on the transformer disconnector panel, as shown:

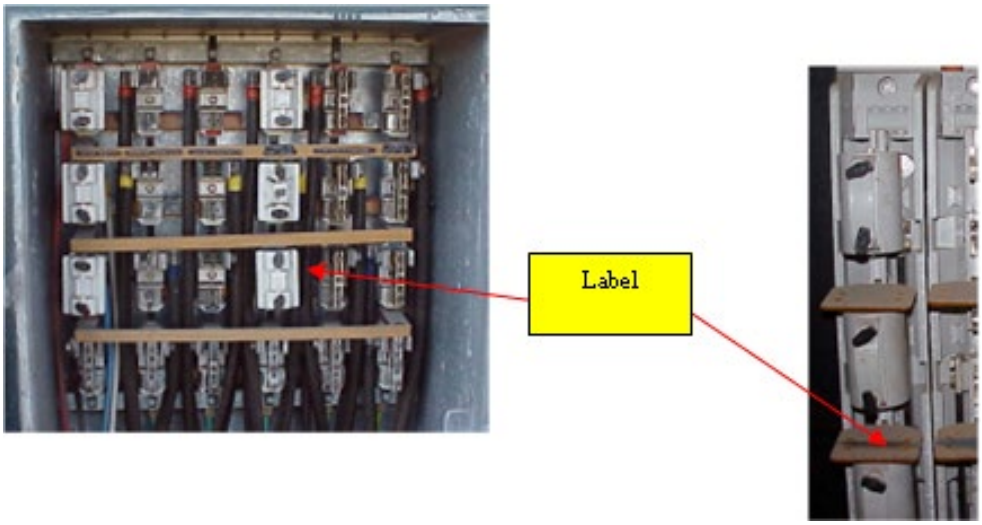
Figure 24 – 'Level Operated' LV Isolator label location.



6.11.1.4 Extractable Links Label Location

The label shall be placed on the middle transformer disconnector label placard, as shown.

Figure 25 – 'Extractable' Links label location.



6.12 LV Fuse Disconnector – Ground Mounted

A low voltage fuse disconnector shall be primarily identified with the abbreviation FDIS, followed by a system-generated number for identification with the system. The circuit number (fuse ways numbered from left to right) and also the 'to/from' information for the terminated cable is included to assist operators.

In most cases the label shall be placed on the label placard provided with the LV fuse disconnector. Examples of label locations are provided later in this section.

The format of the label shall be of the table below:

Table 12 - Ground mounted LV fuse disconnector label format.

Line 1	**[FDIS]** and **[System-generated number]**	Text: 4 mm
Line 2	**[Circuit number]**	Text: 6 mm
Line 3	**[To:]** and **[Abbreviation + system-generated number]** for pillars or stand-alone frames, or **[Customer Switchboard]** for consumer mains.	Text: 4 mm
Line 4	**[Location:]**	Text: 4 mm

Figure 26 – LV Fuse Disconnector label examples.

FDIS N1268584 **CCT2** **To: POST OFFICE** **@ L2227, 89 COOLABAH Dr**	**FDIS N1268613** **CCT1** **To: PILL S455055** **@ L560, 106 COOLABAH Dr**

6.12.1.1 Pronutec Fuse Switch Label Location

The label shall be placed on the fuseswitch disconnector label placard, as shown.

Figure 27 – 'Pronutec' Fuse Switch label location.

6.12.1.2 ABB Fuse Switch Label Location

The label shall be placed on the fuse switch disconnector label placard, as shown.

Figure 28 – 'ABB' Fuse Switch label location.

6.13 Universal Pillar – Ground Mounted

A universal pillar shall be primarily identified with the abbreviation PILL, followed by a system-generated number for identification with the system. Its physical address shall be given in the second line. The physical addresses of the equipment in which any LV mains cable is connected to are also included to assist operators.

The lid of the universal pillar displays the words 'HORIZON POWER - DANGER ELECTRICAL CABLES' as per specification - 'Low Voltage Underground Distribution Pillars'.

Labels for universal pillars shall have a roll width of 50 mm and be of the format below:

Table 13 – Ground mounted universal pillar label format.

Line 1	**[PILL]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	**[Top:]** and **[Abbreviation + system-generated number]** for pillars or stand-alone frames, or **[Circuit Number + Substation name]** for a distribution substation or **[Pole Number]** and **[Location]**	Text: 7 mm
Line 4	**[Bottom]** and **[Abbreviation + system-generated number]** for pillars or stand-alone frames, or **[Circuit Number + Substation name]** for a distribution substation or **[Pole Number]** and **[Location]** for both left and right bars if applicable.	Text: 7 mm

Figure 29 – Universal Pillar label examples.

PILL U100181045

L164, 19 Withnell Wy

Top: L170, 33 Richardson Wy

Bottom L: Withnell TX – R: L163, @ 17 Withnell Wy

PILL S2241244

L18, 20 William St

Top: Pole 581047 @ William St

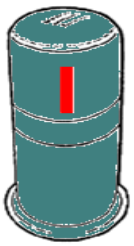
Bottom L: Local pillar - R: Pole 581930 @ Windich St

Figure 30 – Universal Pillar label locations.

The label shall be placed on the top of the orange plastic covering, located inside the universal pillar. If preferred an additional label can be placed on the exterior of the universal pillar facing an area where it will be best visible, preferably on the road side of the pillar.

In addition, universal pillars functioning as normally-open points shall have a reflective red 'I' marking on the outer case of the pillar lid, to indicate the open point status. As open points are changed, the lid with the 'I' marking may move with the open point. The marking shall be placed on the roadside of the pillar. This marking is shown in the following diagram:

Figure 31 – Universal Pillar with Normally-Open point marked with 'I'.



Where required, and where the universal pillar has a LV disconnector or LV fuse disconnector fitted, a label may be fitted for these items as per Clause 6.13 and 6.14.

6.14 Mini Pillar – Ground Mounted

The lid of the mini pillar displays the words 'HORIZON POWER - DANGER ELECTRICAL CABLES'.

A mini pillar shall be primarily identified with the abbreviation PILL, followed by a system-generated number for identification with the system. The pillar's physical address is included in the second line.

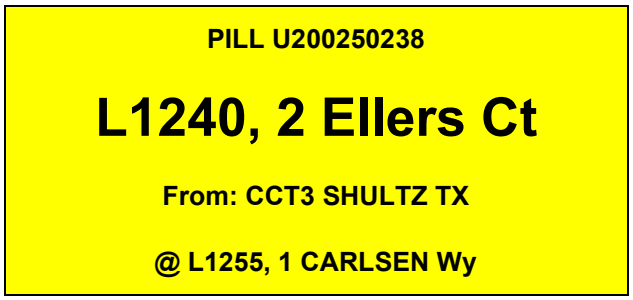
For pillars of an LV circuit supplied by an underground transformer, the supplying transformer name, circuit number and address shall be displayed on the third and fourth lines to assist operators.

Labels for mini pillars shall have a roll width of 50 mm and where the pillar is supplied by a ground-mounted transformer, the format of the label shall be that of the table below:

Table 14 – Ground mounted mini pillar label format for underground systems.

Line 1	**[PILL]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	**[From:]** and **[Circuit Number + Substation name]** for the distribution substation.	Text: 7 mm
Line 4	**[Location:]**	Text: 7 mm

Figure 32 – Mini Pillar label for LV circuit with ground-mounted transformer example.



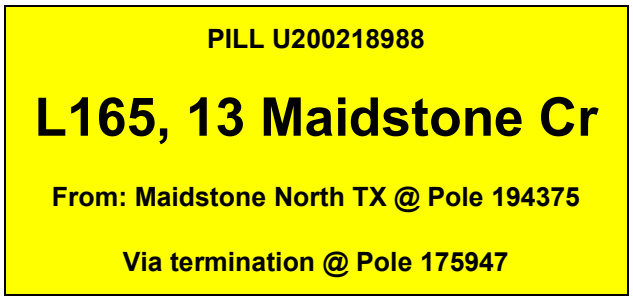
For mini pillars of an LV circuit supplied by a pole-mounted transformer, the transformer name and pole number shall be displayed in the third line to assist operators. The final line shall contain the pole number at which the LV section connects to the overhead network.

Where the pillar is supplied by a pole-mounted transformer, the format of the label shall be that of the table below:

Table 15 – Ground mounted mini pillar label format for overhead systems.

Line 1	**[PILL]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	**[From:]** supplying transformer **[Name]** and **[Pole Number]**	Text: 7 mm
Line 4	**[VIA]** cable termination **[Pole number]**	Text: 7 mm

Figure 33 – Mini Pillar label for LV network with pole-mounted transformer example.



The label shall be placed on the exterior of the pillar facing an area where it will be best visible, preferably on the road side of the pillar.

6.15 Streetlight Poles & Luminaires – Ground Mounted

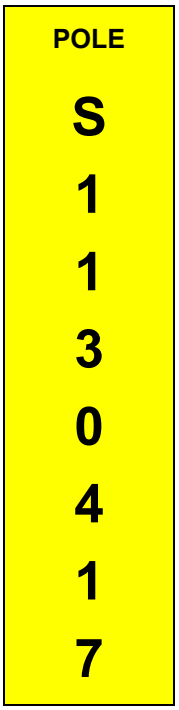
A streetlight standard pole is to be primarily identified with the abbreviation POLE, followed by a system-generated number shown vertically. The label shall be affixed to the pole at a height of 1.8 metres.

Labels for streetlight poles and shall have a roll width of 50 mm and be that of the format below:

Table 16 – Ground mounted streetlight pole label format.

Line 1	**[POLE]**	Text: 7 mm
Line 2	**[System-generated number]** (shown vertically)	Text: 13 mm

Figure 34 – Streetlight Pole label example.



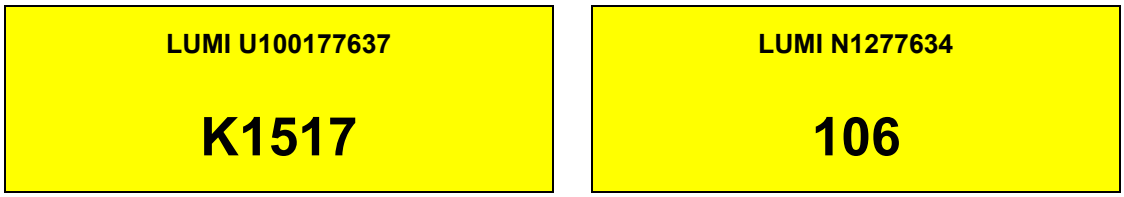
Luminaire numbers on the streetlight pole may also be included as a separate label, these are to include the abbreviation LUMI followed by a system-generated number in the first line. The second line shall contain the streetlight number if available. Luminaire labels shall be affixed to the pole beneath the pole label.

The label format for a streetlight pole label shall be that of the table below:

Table 17 – Ground mounted streetlight luminaire label format.

Line 1	**[LUMI]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Luminaire number]**	Text: 13 mm

Figure 35 – Streetlight Luminaire label examples.



6.16 Wall Mounted Box – Ground Mounted

A wall-mounted box shall be primarily identified with the abbreviation PILL, followed by a system-generated number for identification with the system. The pillar's physical address is included in the second line.

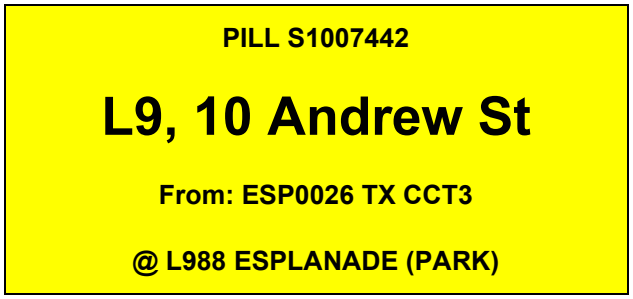
For wall-mounted boxes of an LV circuit supplied by an underground transformer, the supplying transformer name, circuit number and address shall be displayed on the third line to assist operators. The fourth line may be used for additional information such as upstream isolation point details etc. if preferred.

Where the wall-mounted box is supplied by a ground-mounted transformer, the format of the label shall be that of the table below:

Table 18 – Ground mounted wall mounted box label format for underground systems.

Line 1	**[PILL]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	**[From:]** supplying transformer **[Substation name]** and **[Circuit Number]**	Text: 7 mm
Line 4	**[Location:]**	Text: 7 mm

Figure 36 – Wall-mounted box label for LV circuit with ground-mounted transformer example.



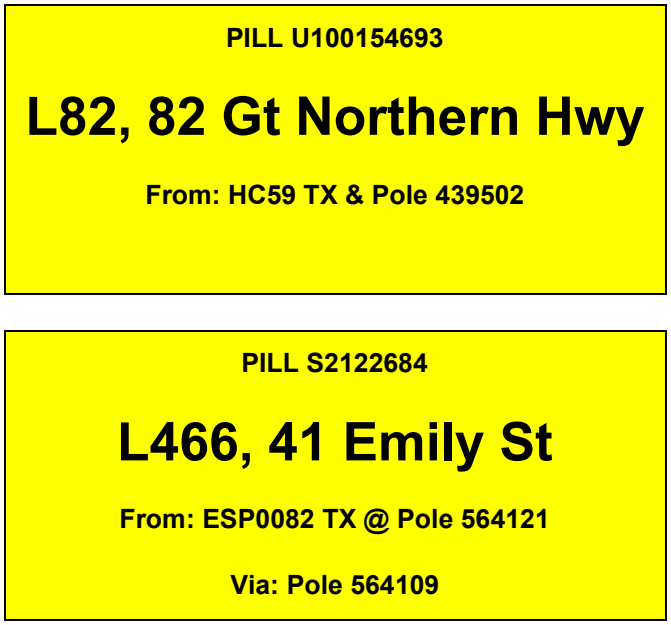
For wall-mounted boxes of an LV circuit supplied by an overhead transformer, the transformer name, pole number and pole location shall be displayed in the third line to assist operators. If the LV underground section terminates to a pole that is not shared by the supplying transformer, then this pole may be labelled in the fourth line. The pole number shall be the rural or short plant ID whichever is considered easiest to locate and identify for the pole.

Where the wall-mounted box is supplied by an overhead transformer, the format of the label shall be that of the table below:

Table 19 – Ground mounted wall mounted box label format for overhead systems.

Line 1	**[PILL]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	**[From:]** supplying **[Substation name]** and **[Pole Number]**	Text: 7 mm
Line 4	**[VIA]** cable termination @ **[Pole number]**	Text: 7 mm

Figure 37 – Wall-mounted box label for LV circuit with pole-mounted transformer examples.



7 UNDERGROUND EQUIPMENT

Underground equipment generally does not have visibility of individual items from above ground.

Labelling shall have two components, one of the individual components within the underground portion and one allowing easy identification from above the ground.

This covers the following equipment:

1) Un-metered supply pit
2) Underground cables
3) Underground supply pit

7.1 Un-metered Supplies

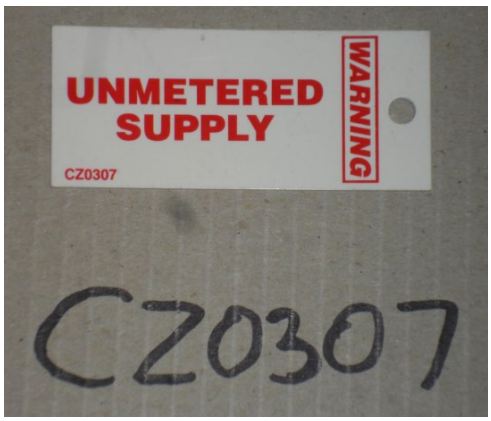
7.1.1 Pits

The concrete lid of the un-metered supply pit indicates the Horizon Power and customer cables as per standard – 'Un-Metered Supply Standard'. Main power fuse inside the pit shall be tagged with a label "Unmetered Supply" – Stock Item No: CZ0307. No other labels are fixed to LV un-metered supply pits.

7.1.2 Pillars

The un-metered supply cable from a mini pillar shall be tagged with a label "Unmetered Supply" – Stock Item No: CZ0307.

Figure 38 – Unmetered Supply label example.



7.2 Underground Cables

In some cases a label displaying the words 'Horizon Power – DANGER – Underground Electrical Cables in the Vicinity' may be required (ref Horizon Power manuals 'Underground Distribution Schemes', 'Single Phase Underground Rural Supply', and 'Single Phase Underground Distribution System'. This label is commonly placed on a marker post, in close proximity to the cable.

No other labelling shall be fixed to underground cables.

7.3 Underground Supply Pit

The concrete lid of the underground supply pit displays the words 'HORIZON POWER - DANGER ELECTRICAL CABLES'.

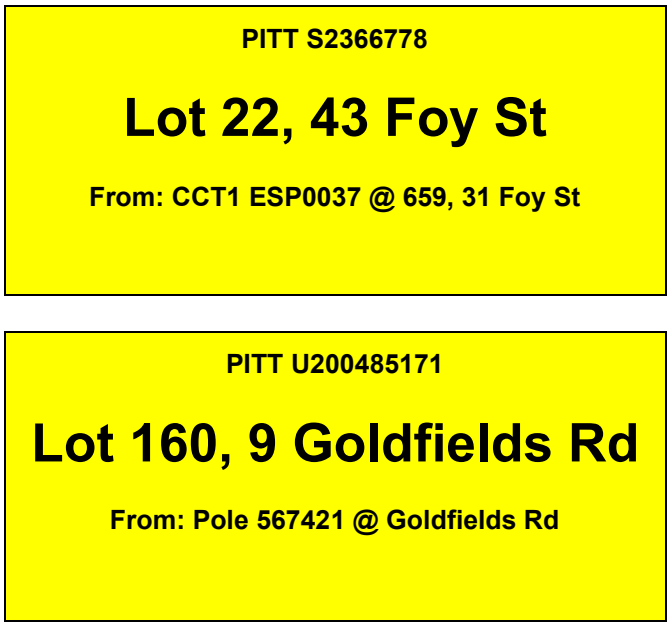
An underground supply pit shall be primarily identified with the abbreviation PITT followed by a system-generated number.

For an underground supply pit, the format of the label shall be that of the table below:

Table 20 - Underground supply pit label format.

Line 1	**[PITT]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Location]**	Text: 13 mm
Line 3	**[From:]** and **[Abbreviation + system-generated number]** for pillars or stand-alone frames, o**r** **[Circuit Number + Substation name]** for a distribution substation, or **[Pole Number]** and **[Location]**	Text: 7 mm
Line 4	**[To:]** and **[Abbreviation + system-generated number]** for pillars or stand-alone frames, or **[Circuit Number + Substation name]** for a distribution substation or **[Pole Number]** and **[Location]**	Text: 7 mm

Figure 39 – Underground Supply Pit label examples.



The label shall be tagged on to the neutral of the incoming cable, or neutral connector.

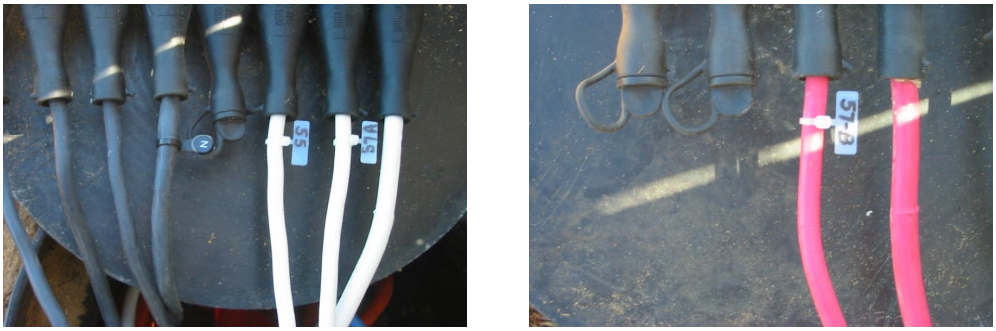
7.3.1 Consumer Service Cable ID Tag

The tag shall be used to identify consumer services within underground pits and pillars.

Single phase services are tagged on the phase of the service cable with the corresponding house number clearly marked on the tag using a permanent marker pen.

Three phase services are tagged on the red phase of the service cable and similarly the house number is included on the tag.

Figure 40 – Consumer Service Cable ID Tag label examples.



8 OVERHEAD SYSTEM EQUIPMENT

This section covers the following equipment:

1) Poles
2) Pole Top Switches
3) Drop Out Fuses
4) Fusesavers
5) Distribution Transformers
6) Load Break Switches
7) Reclosers
8) HV Disconnectors
9) LV Disconnectors
10) LV Fuse Disconnectors
11) Sectionalisers
12) Metering Transformers
13) Fault Indicators
14) Voltage Regulators
15) Capacitor Banks
16) Reactors
17) Streetlights

8.1 Poles

8.1.1 Warning sign for poles with high voltage

High Voltage poles require the fitting of a ‘HORIZON POWER DANGER HIGH VOLTAGE’ warning sign (stock number CZ0230).

The sign shall be positioned directly on the pole surface. The label shall be positioned approximately to 1.8 m above ground level and located for viewing on the best approachable side of the pole.

Figure 41 – Warning label for poles with high voltage.

8.1.2 Pole Labelling

Where the surface of the pole is not appropriate to fix a sign or label, the label may be affixed to a plate (stock item no: CZ5005) and the plate shall be fixed to the pole surface using silicon sealant, Sikaflex sealant or liquid nails.

Figure 42 – Label plate CZ5055.

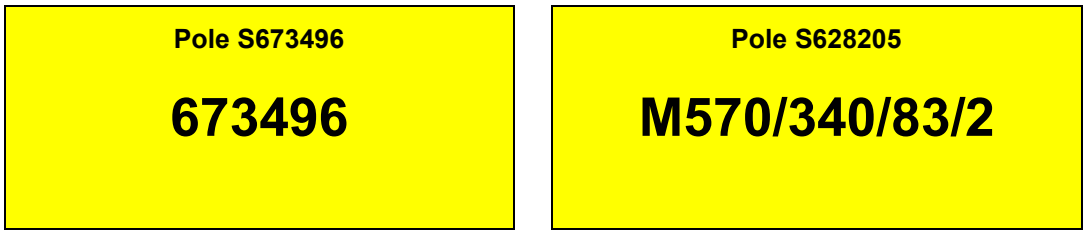
A pole is to be primarily identified with the abbreviation POLE, followed by a system-generated number. The pole number shall be placed either in a vertical or horizontal position appropriate for the type of pole and the surface area. If the rural number of a pole is large and does not fit it one line, multiple lines may be used with the final line having 13 mm font.

Labels for poles shall have a roll width of 50 mm and when labelled horizontally, the format shall be of that the table below:

Table 21 - Pole label horizontal format.

Line 1	**[POLE]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Pole Number]**	Text: 13 mm

Figure 43 – Distribution pole horizontal label examples.

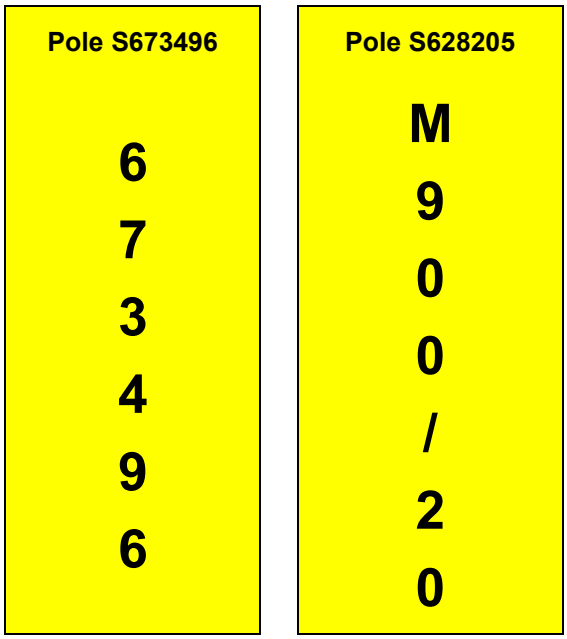


When labelled vertically, the format shall be of the table below:

Table 22 - Pole label vertical format.

Line 1	**[POLE]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Pole Number]** (displayed vertically)	Text: 13 mm

Figure 44 – Distribution pole horizontal label examples.



8.1.3 Pole Equipment Label Positioning

Pole equipment labels shall be attached to the danger plate below the pole label or to the pole below the danger plate.

8.2 Pole Top Switch

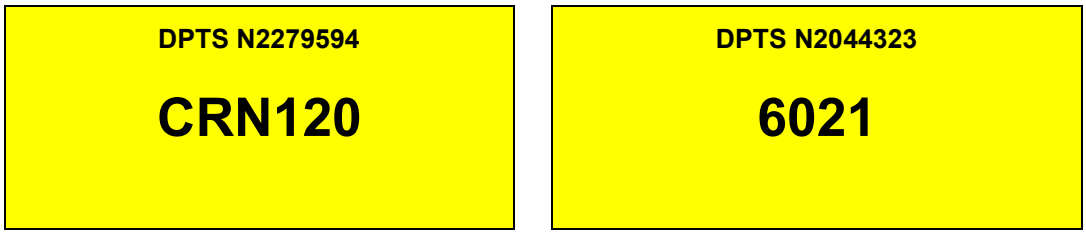
Pole top switches shall be labelled with the acronym DPTS followed by a system-generated number for identification with the system. The name or number of the switch shall be contained in the second line.

Labels for pole top switches shall have a roll width of 50 mm and the format shall be that of the table below:

Table 23 - Pole top switch label format.

Line 1	**[DPTS]** and **[System-generated number]**	Text: 7 mm
Line 2	Switch **[Name]** or **[Number]**	Text: 13 mm

Figure 45 – Pole Top Switch label examples.



8.3 Drop Out Fuse

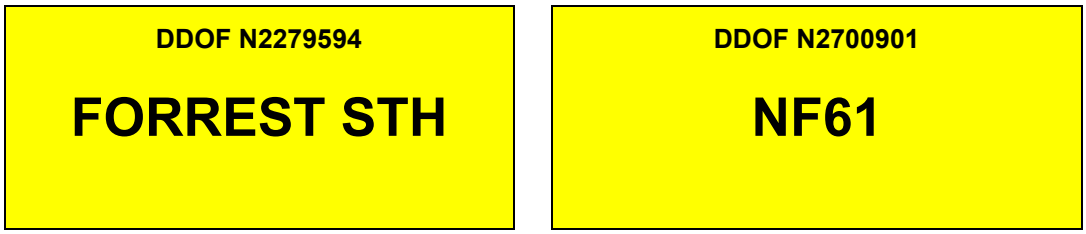
Drop-out fuses may be labelled with the acronym DDOF followed by a system-generated number for identification with the system. The name or number of the drop out fuse/s shall be contained in the second line.

Labels for drop out fuses shall have a roll width of 50 mm and the format shall be that of the table below:

Table 24 - Drop out fuse label format.

Line 1	**[DDOF]** and **[System-generated number]**	Text: 7 mm
Line 2	Drop out fuse **[Name]** or **[Number]**	Text: 13 mm

Figure 46 – Drop Out Fuse label examples.



8.4 Fusesaver

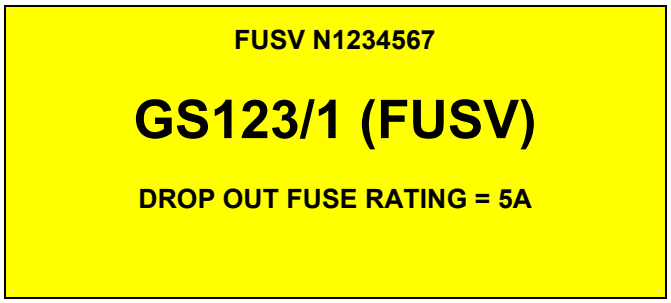
Fusesavers may be labelled with the acronym FUSV followed by a system-generated number for identification with the system. The name of the fusesaver associated with the area spur name and pole number shall be contained in the second line. The third line shall contain the drop out fuse rating.

Labels for fusesavers shall have a roll width of 50 mm and the format shall be that of the table below:

Table 25 - Fusesaver label format.

Line 1	**[FUSV]** and **[System-generated number]**	Text: 7 mm
Line 2	Fusesaver **[Name]**	Text: 13 mm
Line 3	**[DROP OUT FUSE RATING =]** insert DOF rating **[A]**	Text: 7 mm

Figure 47 – Fusesaver label example.



8.5 Distribution Transformer – Pole Mounted

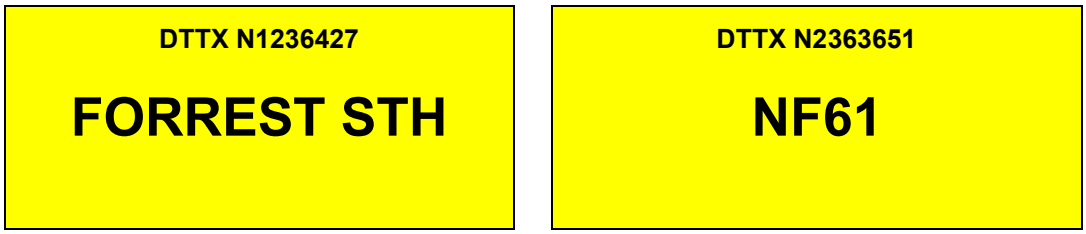
Distribution transformers shall be labelled with the acronym DTTX followed by a system-generated number for identification with the system. The name of the distribution transformer shall be contained in the second line. If the rural number of a pole is used for the transformer name and this number is large, multiple lines may be used with the final line having 13 mm font.

Labels for pole mounted distribution transformer shall have a roll width of 50 mm and the format shall be that of the table below:

Table 26 - Pole mounted distribution transformer label format.

Line 1	**[DTTX]** and **[System-generated number]**	Text: 7 mm
Line 2	Transformer **[Name]**	Text: 13 mm

Figure 48 – Pole-mounted Distribution Transformer label examples.



8.6 Load Break Switch

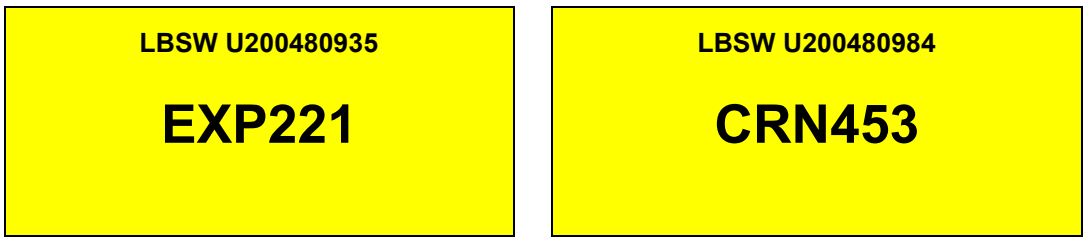
Load break switches shall be labelled with the acronym LBSW followed by a system-generated number for identification with the system. The name or number of the load-break switch shall be contained in the second line.

Labels for load break switches shall have a roll width of 50 mm and the format shall be that of the table below:

Table 27 - Load break switch label format.

Line 1	**[LBSW]** and **[System-generated number]**	Text: 7 mm
Line 2	Load Break Switch **[Number]**	Text: 13 mm

Figure 49 – Load Break Switch label examples.



8.7 Recloser

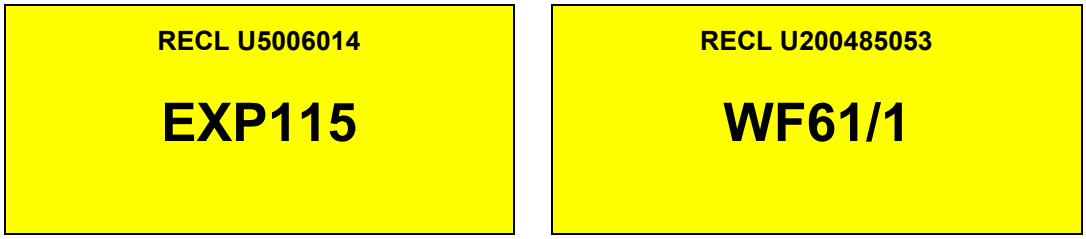
Reclosers shall be labelled with the acronym RECL followed by a system-generated number for identification with the system. The name or number of the recloser shall be contained in the second line.

Labels for reclosers shall have a roll width of 50 mm and the format shall be that of the table below:

Table 28 - Recloser label format.

Line 1	**[RECL]** and **[System-generated number]**	Text: 7 mm
Line 2	Recloser **[Number]**	Text: 13 mm

Figure 50 – Recloser label examples.



8.8 HV Disconnector – Pole Mounted

HV disconnector may be labelled with the acronym HVDI followed by a system-generated number for identification with the system. The name or number of the HV disconnector shall be contained in the second line.

Labels for pole-mounted HV disconnector shall have a roll width of 50 mm and the format shall be that of the table below:

Table 29 - Pole mounted HV disconnector label format.

Line 1	**[HVDI]** and **[System-generated number]**	7 mm
Line 2	HV disconnector switch **[Number]**	13 mm

Figure 51 – HV Disconnector label example.

8.9 LV Disconnector – Pole Mounted

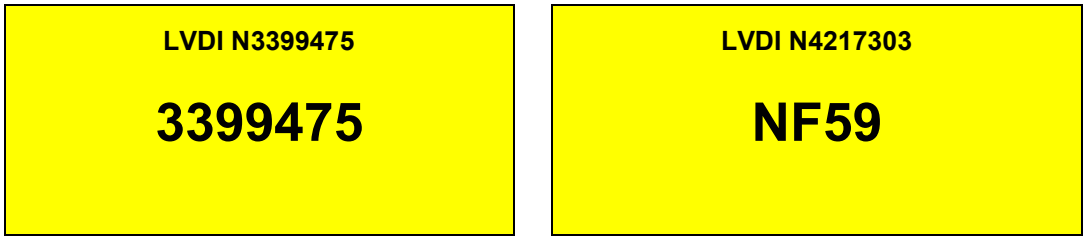
LV disconnectors may be labelled with the acronym LVDI followed by a system-generated number for identification with the system. The name of the LV disconnector shall be contained in the second line.

Labels for pole-mounted LV disconnectors shall have a roll width of 50 mm and the format shall be that of the table below:

Table 30 - Pole mounted LV disconnector label format.

Line 1	**[LVDI]** and **[System-generated number]**	Text: 7 mm
Line 2	**[Name]**	Text: 13 mm

Figure 52 – LV Disconnector label examples.



8.10 LV Fuse Disconnector – Pole Mounted

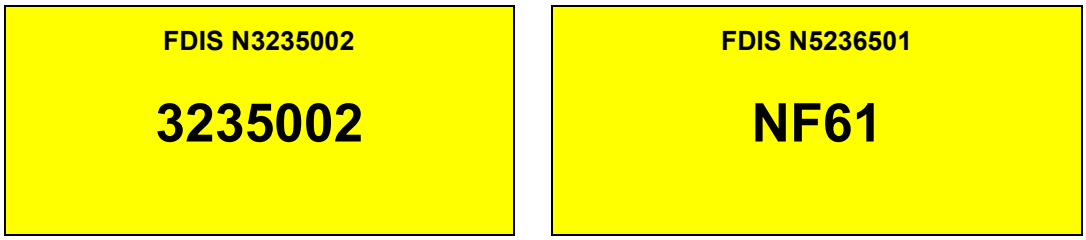
LV fuse disconnectors may be labelled with the acronym FDIS followed by a system-generated number for identification with the system. The name or number of the LV fuse disconnector shall be contained in the second line.

Labels for pole-mounted LV fuse disconnectors shall have a roll width of 50 mm and the format shall be that of the table below:

Table 31 - Pole mounted LV fuse disconnector label format.

Line 1	**[FDIS]** and **[System-generated number]**	Text: 7 mm
Line 2	LV fuse disconnector **[Name]** or **[Number]**	Text: 13 mm

Figure 53 – LV Fuse Disconnector label examples.



8.11 Sectionaliser

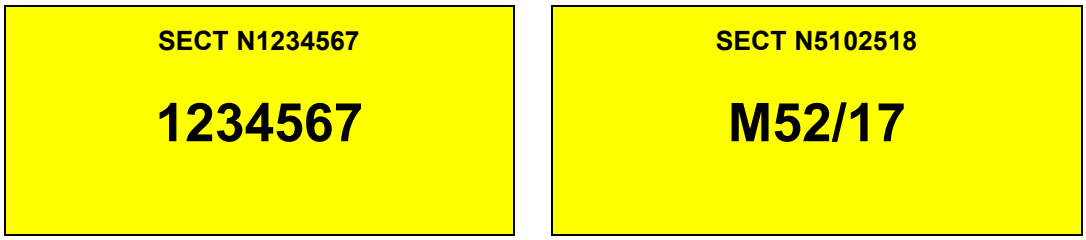
Sectionalisers may be labelled with the acronym SECT followed by a system-generated number for identification with the system. The name or number of the HV disconnector shall be contained in the second line followed by the location or pole rural number if available in the third line.

Labels for pole-mounted sectionalisers shall have a roll width of 50 mm and the format shall be that of the table below:

Table 32 - Sectionaliser label format.

Line 1	**[SECT]** and **[System-generated number]**	Text: 7 mm
Line 2	Sectionaliser **[Name]** or **[Number]**	Text: 13 mm

Figure 54 – Sectionaliser label examples.



8.12 Metering Transformer – Pole Mounted

Metering transformers shall be labelled with the acronym NMTR followed by a system-generated number for identification with the system. The name of the metering transformer shall be contained in the second line, and the location in the third.

Labels for pole-mounted metering transformers shall have a roll width of 50 mm and the format shall be that of the table below:

Table 33 - Pole mounted metering transformer label.

Line 1	**[NMTR]** and **[System-generated number]**	Text: 7 mm
Line 2	Metering Transformer **[Name]** or **[Number]**	Text: 13 mm
Line 3	**[Location]**	Text: 7 mm

Figure 55 – Metering Transformer label example.

8.13 Fault Indicator – Pole Mounted

Fault indicators may be labelled with the acronym FLIN followed by a system-generated number for identification with the system. The name or number of the fault indicator shall be contained in the second line.

Labels for pole-mounted fault indicators shall have a roll width of 50 mm and the format shall be that of the table below:

Table 34 - Pole mounted fault indicator label format.

Line 1	**[FLIN]** and **[System-generated number]**	Text: 7 mm
Line 2	Fault indicator **[Name]** or **[Number]**	Text: 13 mm
Line 3	**[Location]** or **[Rural number]** if available	Text: 7 mm

Figure 56 – Fault Indicator label example.

8.14 Voltage Regulator – Pole Mounted

Voltage regulators shall be labelled with the acronym RETX followed by a system-generated number for identification with the system. The name of the fault indicator shall be contained in the second line.

Labels for pole-mounted voltage regulators shall have a roll width of 50 mm and the format shall be that of the table below:

Table 35 - Pole mounted voltage regulator.

Line 1	**[RETX]** and **[System-generated number]**	Text: 7 mm
Line 2	Voltage regulator **[Name]**	Text: 13 mm

Figure 57 – Voltage Regulator label example.

8.15 Capacitor Bank

Capacitor banks shall be labelled with the acronym CAPT followed by a system-generated number for identification with the system. The name of the capacitor bank shall be contained in the second line.

Labels for capacitor banks shall have a roll width of 50 mm and the format shall be that of the table below:

Table 36 - Capacitor bank label format.

Line 1	**[CAPT]** and **[System-generated number]**	Text: 7 mm
Line 2	Capacitor bank **[Name]**	Text: 13 mm

Figure 58 – Capacitor Bank label example.

8.16 Reactor – Pole Mounted

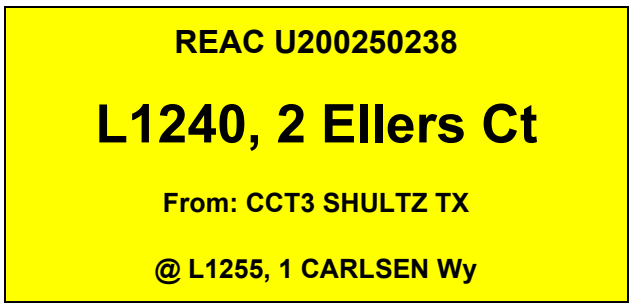
Reactors shall be labelled with the acronym REAC followed by a system-generated number for identification with the system. The name or number of the reactor shall be contained in the second line.

Labels for pole-mounted reactors shall have a roll width of 50 mm and the format shall be that of the table below:

Table 37 - Pole mounted reactor label format.

Line 1	**[REAC]** and **[System-generated number]**	Text: 7 mm
Line 2	Capacitor bank **[Name]** or **[Number]**	Text: 13 mm

Figure 59 – Reactor label example.



8.17 Luminaries – Pole Mounted

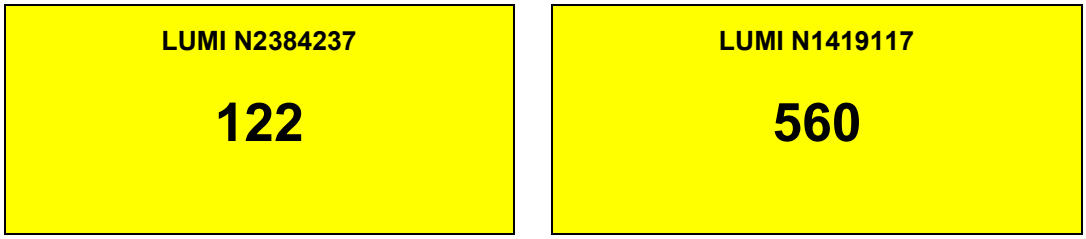
Pole-mounted luminaires shall be labelled with the abbreviation LUMI, followed by a system-generated number. The streetlight number shall be contained in the second line.

Labels for pole-mounted luminaires shall have a roll width of 50 mm and the format shall be that of the table below:

Table 38 - Pole mounted luminaire label format.

Line 1	**[LUMI + System-generated number]**	Text: 7 mm
Line 2	**[Luminaire number]**	Text: 13 mm

Figure 60 – Luminaire label examples.



9 STANDALONE POWER SYSTEM

Standalone Power System (SPS) is a distribution plant equipment comprises of a Diesel generator, PV Solar array, Battery and Battery cabinet, Battery inverters, PV inverters and an electrical switchboard, the electrical equipment installed within an enclosed fencing with a lockable access gate.

Figure 61 – Typical Standalone Power System (SPS) site label location.

Standalone Power System (SPS) shall be labelled with a sign of a system-generated number for identification of the system, the location shall be contained in the second line.

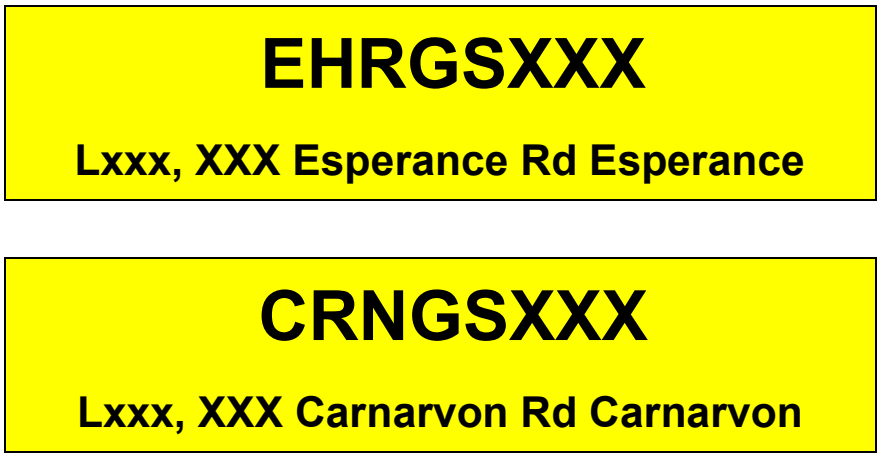
Location of the labels shall be installed on the access gate, labels for Standalone Power System shall have a roll width of 50 mm and the format shall be that of the table below:

Note: Labels of individual equipment within the SPS compound such as Generator, Batteries, and Inverters etc. shall be supplied and installed by others.

Table 39 – Standalone power system label format.

Line 1	**[System-generated number]**	Text: 19.5 mm
Line 2	**[Location]**	Text: 13 mm

Figure 62 – Standalone Power System label examples.



APPENDIX A - REVISION INFORMATION

(Informative) Horizon Power has endeavoured to provide standards of the highest quality and would appreciate notification if any errors are found or even queries raised.

Each Standard makes use of its own comment sheet which is maintained throughout the life of the standard, which lists all comments made by stakeholders regarding the standard.

A comment sheet found in **DM# 1565365**, can be used to record any errors or queries found in or pertaining to this standard, which can then be addressed whenever the standard gets reviewed.

Date	Rev No.	Notes
15/04/2013	0	Original Issue
19/07/2016	1	Revised to incorporate new equipment numbering and label format
1/11/2019	2	Revised to include more information, mini pillar, fusesaver and Standalone Power System labelling added.
28/09/2023	3	Document updated with the relevant and current Australian Standards, includes standards label of GMK, update the Appendix B- Schedule of Label Requirements

APPENDIX B - SCHEDULE OF LABEL REQUIREMENTS

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Capacitor Bank – Pole Mounted	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• CAPT and system-generated number • Capacitor bank name or number	**CAPT**	
Concrete Pole	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• POLE and system-generated number. • Pole/rural number.	**POLE**	High Voltage poles require the fitting of a 'HORIZON POWER DANGER HIGH VOLTAGE' warning sign (stock number **CZ0230**) at a height of approximately 1.8 m above ground.
Ring main Unit	✓	**50 mm**	**Yellow vinyl**	The labels shall be fixed to the inside and outside of both doors and also on the RMU front panel.	• DRMU and system-generated number. • Substation name • Feeder number and substation name or Switch name and Substation name or Pole number • Location	**DRMU**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000** **'AUTHORISED PERSONS ONLY sign in accordance with AS/NZS 3000**
Distribution Substation – Brick Building	✓	**50 mm**	**Yellow vinyl**	The label shall be fitted at a height of approximately 1.8 m above the finished floor level, on the inside of the door.	• DSUB and system-generated number. • Substation name • Location	**DSUB**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000** **'AUTHORISED PERSONS ONLY sign in accordance with AS/NZS 3000**

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Distribution Substation – Brick Compound	✓	**50 mm**	**Yellow vinyl**	The label shall be fitted at a height of approximately 1.8 m above the finished floor level, on the inside of the door.	• DSUB and system-generated number. • Substation name • Location.	**DSUB**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.** **'AUTHORISED PERSONS ONLY sign in accordance with AS/NZS 3000.**
Distribution Substation – Fenced Compound	✓	**50 mm**	**Yellow vinyl**	The label shall be fitted at a height of approximately 1.8 m above the finished floor level, on the door, using the metal plate.	• DSUB and system-generated number. • Substation name. • Location.	**DSUB**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.** **'AUTHORISED PERSONS ONLY sign in accordance with AS/NZS 3000.**
Distribution Substation – Modular Package Substation/Non-Modular Package Substation	✘	**50 mm**	**Yellow vinyl**	Labels shall be fitted on the inside of the door to the LV switchgear only where applicable.	• DSUB and system-generated number. • Substation name. • Location.	**DSUB**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.** **'AUTHORISED PERSONS ONLY sign in accordance with AS/NZS 3000.**
Distribution Transformer – Modular Package Substation & Non-Modular Package Substation	✓	**50 mm**	**Yellow vinyl**	The label shall be fitted to the inside and outside of the transformer doors.	• DTTX and system-generated number. • Substation name. • Information for where and what the transformer is supplied from. See relevant section.	**DTTX**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.**
Distribution Transformer – Pole-mounted	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• DTTX and system-generated number. • Substation name.	**DTTX**	

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Drop Out Fuse	✘	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• DDOF and system-generated number • Name or number of drop-out fuse.	**DDOF**	
Fault Indicator – Pole Top	✘	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• FLIN and system-generated number. • Name or number of fault indicator.	**FLIN**	
Fault Indicator – Relay & Flag	✓	**25 mm**	**Yellow vinyl**	The label shall be placed on the side of the relay unit, or directly underneath the relay on the relay panel.	• Fault Indicator Number. • Location.	**FLIN**	
Fusesaver	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• FUSV and system-generated number. • Name of fusesaver associated with the area spur name and pole. • Drop Out Fuse Rating.	**FUSV**	
HV Fuse Switch Disconnector – Inside RMU	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the label placard, or front panel, of the ring main switchgear unit.	• FUSW and system-generated number • Fuse switch name • Information for where and what the remote end of the terminated cable is connected to. See relevant section. • Location.	**FUSW**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.**

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
HV Distribution Recloser in Kiosk – Ground Mounted Equipment	✓	**50 mm**	**Yellow vinyl**	The label shell be placed on the label placard, or front panel of the Ground Mounted kiosk	• RECL and system-generated number. • GMK number. • Location.	**RECL**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000. Warning: Arc Flash and Shock Hazard sign**
HV Switch Disconnector – Inside RMU	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the label placard, or front panel, of the ring main switchgear unit.	• SWTC and system-generated number. • Switch name or number. • Information for where and what the remote end of the terminated cable is connected to. See relevant section. • Location.	**SWTC**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.**
HV Isolator – Pole Mounted	✘	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• HVDI and system-generated number. • HV isolator name or number.	**HVDI**	
Joints, Terminations, Line Hardware	✘	**-**	**-**	-	-	**-**	**-**
Load Break Switch	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• LBSW and system-generated number. • Load break switch number.	**LBSW**	

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Luminaire – Pole Mounted	✖	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• LUMI and system-generated number. • Streetlight number.	**LUMI**	
LV Disconnector – Ground Mounted Asset	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the LV disconnector label placard.	• LVDI and system-generated number. • Circuit number • Information for where and what the remote end of the terminated cable is connected to. See relevant section.	**LVDI**	
LV Disconnector – Pole Mounted	✖	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• LVDI and system-generated number. • Switch disconnector name.	**LVDI**	
LV Distribution Frame	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the inside and outside of the kiosk door. The label shall be placed in the centre of the door. For freestanding frames in substations the label shall be attached to the frame.	• LVFM and system-generated number. • Location. • Information for where and what the frame is supplied from. See relevant section.	**LVFM**	

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
LV Fuse Disconnector – Pole-mounted	✘	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• FDIS and system-generated number. • Fuse switch disconnector name.	**FDIS**	
LV Fuse Disconnector – Ground-mounted Asset	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the fuse disconnector label placard.	• FDIS and system-generated number. • Circuit number. • Information for where and what the remote end of the terminated cable is connected to. See relevant section. • Location.	**FDIS**	
Metal Pole	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• POLE and system-generated number. • Pole/rural number.	**POLE**	High Voltage poles require the fitting of a 'HORIZON POWER DANGER HIGH VOLTAGE' warning sign (stock number **CZ0230**) at a height of approximately 1.8 m above ground.
Metering Unit – Ground-mounted Asset	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the front panel of the metering transformer unit.	• NMTR and system-generated number. • Substation name. • Location. • Information for where and what the metering transformer is supplied from. See relevant section.	**NMTR**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.**

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Metering Unit – Pole-mounted	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• NMTR and system-generated number. • Substation name. • Location or pole rural number.	**NMTR**	
Mini Pillar	✓	**50 mm**	**Yellow vinyl**	Label shall be placed on the exterior of the mini pillar on a side most easily visible to operators.	• PILL and system-generated number. • Location. • Transformer name and relevant circuit number if underground transformer. Transformer name and pole number if overhead transformer. • LV cable termination pole and location for LV cable termination to pole if applicable. See relevant section.	**PILL**	
Overhead Conductor	✘	**-**	**-**	-	• -	**-**	**-**
Pole Top Switch	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• DPTS and system-generated number. • Switch Name.	**DPTS**	
Reactor – Pole-mounted	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• CAPT and system-generated number. • Substation name or number.	**REAC**	

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Recloser	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• RECL and system-generated number. • Recloser number.	**RECL**	
Ring Main Unit	✓	**50 mm**	**Yellow vinyl**	Labels shall be affixed to both sides of each door and to the front panel of the RMU.	• DRMU and system-generated number. • Substation name. • Information for where and what the RMU is supplied from. See relevant section.		
Sectionaliser	✘	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• SECT and system-generated number. • Sectionaliser name or number.	**SECT**	
Stays & Anchors	✘	**-**	**-**	-	• -	**-**	**-**
Streetlight Pole	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole at approximately 1.8 m above ground.	• POLE and system-generated number.	**POLE**	
Streetlight Pole Luminaires	✘	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole at approximately 1.8 m above ground, below the pole label.	• LUMI and system-generated. • Luminaire number.	**LUMI**	
Surge Diverter	✘	**-**	**-**	-	• -	**SURD**	**-**

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Transformer – Ground-mounted in Brick or Non-Brick Enclosures	✓	**50 mm**	**Yellow vinyl**	The label shall be fitted adjacent to the transformer nameplate.	• DTTX and system-generated number. • Substation name. • Information for where and what the transformer is supplied from. See relevant section.	**DTTX**	
Underground Cable	✘	**-**	**-**	-	• -	**-**	**-**
Underground Supply Pit	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the neutral incoming cable, or neutral connector.	• PITT and system-generated number. • Location. • Information for where and what the pit is supplied from and also where and what the pit supplies if the pit supplies a Horizon Power asset. See relevant section.	**PITT**	
Universal Pillar	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the top of the orange plastic covering, located inside the universal pillar. An additional label can also be placed on the exterior of the pillar if preferred.	• PILL and system-generated number. • Location. • Information for where and what the pit is supplied from and also where and what the pit supplies if the pit supplies a Horizon Power asset. See relevant section.	**PILL**	Universal pillars functioning as normally open points shall have a reflective red or white 'I' marking on the outer case of the pillar lid.
Un-Metered Supply Pit	✘	**-**	**-**	-	• -	**-**	**-**

Equipment Type	Label Mandatory?	Label Tape Size	Label Type	Label Placement	Label Contents (L1, L2, L3, L4)	Handimark Filename	Other Requirements
Voltage Regulator – Ground-mounted	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the exterior surface of the control panel door.	• RETX and system-generated number. • Locations. • Information for where and what the voltage regulator is supplied from, see relevant section.	**RETX**	**'DANGER – HIGH VOLTAGE' sign in accordance with AS/NZS 3000.**
Voltage Regulator – Pole-mounted	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• RETX and system-generated number. • Regulator name.	**RETX**	
Wall Mounted Box	✓	**50 mm**	**Yellow vinyl**	The label shall be placed on the exterior surface of the Wall Mounted Box.	• PILL and system-generated number. • Location. • Information for where and what the Wall Mounted Box is supplied from, see relevant section.	**PILL**	
Wood Pole	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed to the road side of the pole on the bottom of the danger plate or separately.	• POLE Number • Voltage/Substation/ Feeder name/Tee-Off-Number/Name (optional).	**POLE**	High Voltage poles require the fitting of a 'HORIZON POWER DANGER HIGH VOLTAGE' warning sign (stock number **CZ0230**) at a height of approximately 1.8 m above ground.
Standalone Power System	✓	**50 mm**	**Yellow vinyl**	The label shall be affixed on the access gate of the site.	• SPS and system generated number. • Location.	**SPS**	**'AUTHORISED PERSONS ONLY' sign in accordance with AS/NZS 3000.**