

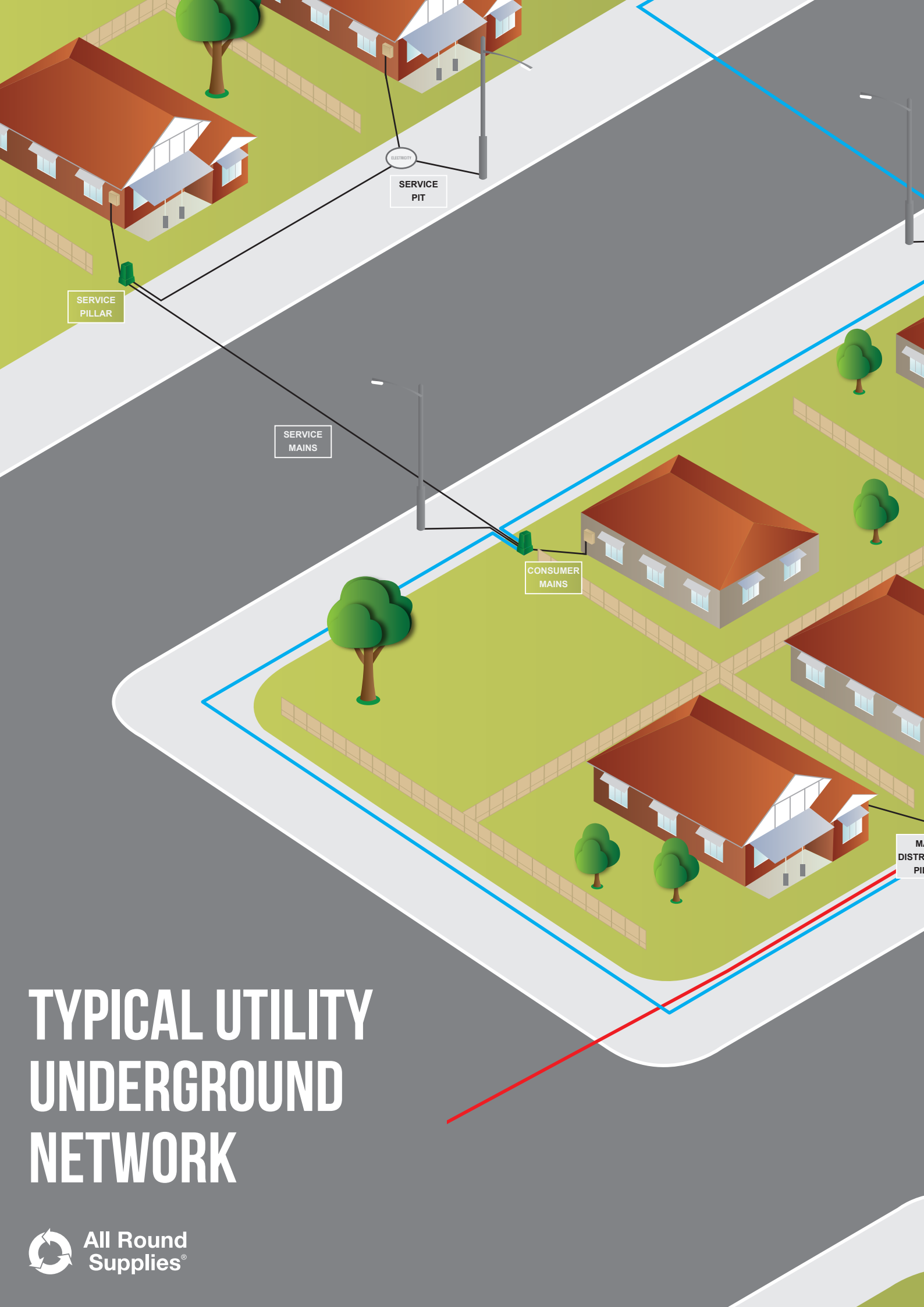


All Round  
Supplies

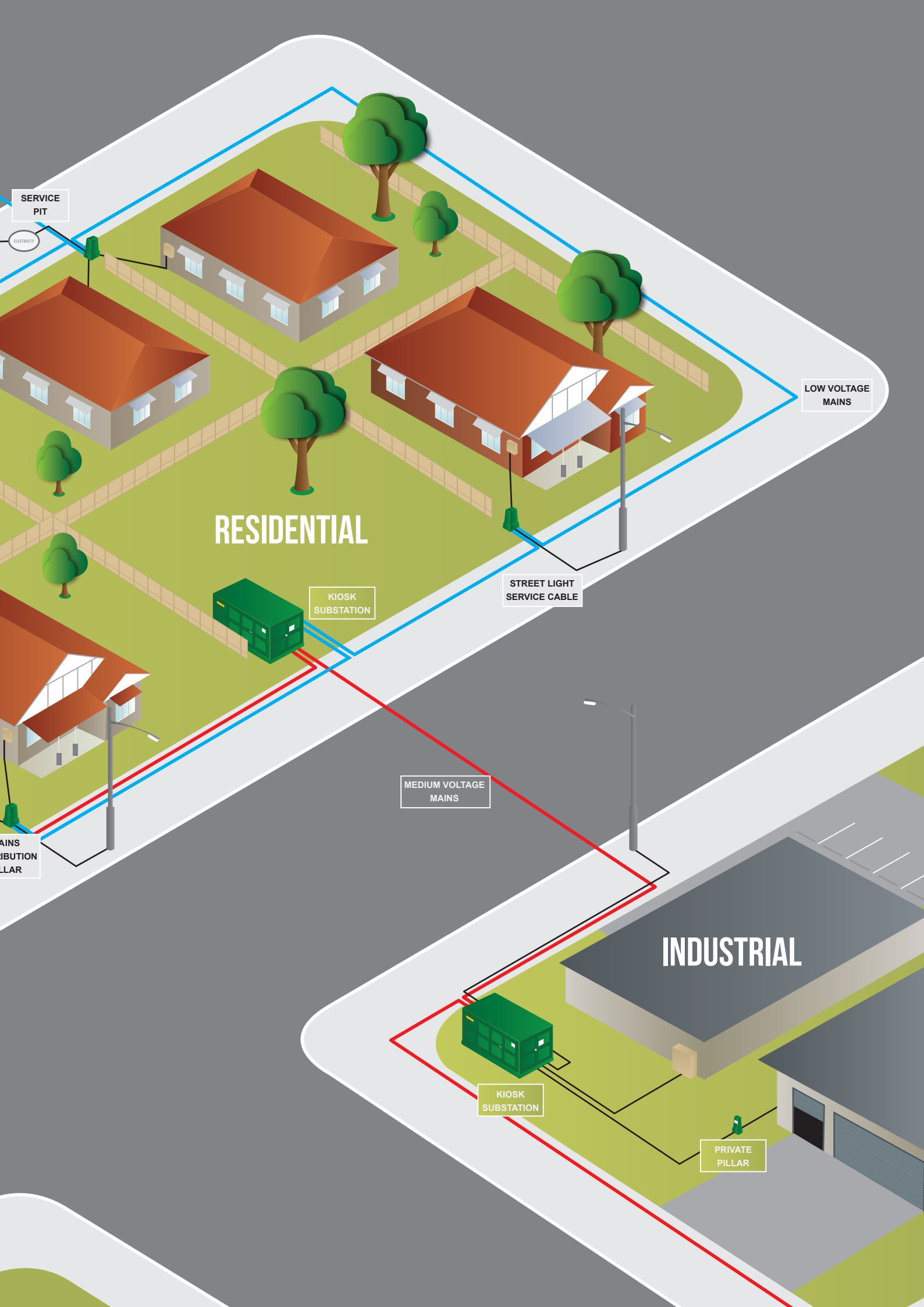


Ausgrid

# Medium Voltage Underground



# TYPICAL UTILITY UNDERGROUND NETWORK







## AUSGRID MEDIUM VOLTAGE UNDERGROUND CATALOGUE

All Round Supplies is your one-stop specialist distributor for all the materials an electrical contractor needs. We carry an extensive range of utility-approved products for use on electrical infrastructure networks across Australia.

Our range of products make it easy for you to complete your overhead or underground project saving you time and money. We are committed to providing you with the best products, brands and service from many of the world's leading manufacturers.

All Round Supplies has a branch network covering Sydney (Prestons), Nowra and Newcastle (Beresfield), each staffed with industry specialists that understand your needs and are waiting to help.

### WHAT WE OFFER:

- ▶ Huge range of stock in all branch locations.
- ▶ Project-specific packaging & labelling of deliveries.
- ▶ Coordinate deliveries to meet project deadlines.
- ▶ Kitting and ARSsemblies for ease of ordering.
- ▶ Ability to order in non-stocked items on request.
- ▶ Technical expertise and advice.
- ▶ Utility approved products.



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Heatshrink  
Joints



Resin  
Joints



UG/OH  
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# AUSGRID CABLE NOMENCLATURE

## WHAT THE CODE LETTERS MEAN:

|                |                                   |                               |            |                                         |          |                                   |
|----------------|-----------------------------------|-------------------------------|------------|-----------------------------------------|----------|-----------------------------------|
| <b>415V</b>    | <b>240</b>                        | <b>AL3</b>                    | <b>XQ</b>  | <b>CU (NW)</b>                          | <b>Z</b> | <b>/SAC</b>                       |
|                |                                   |                               |            |                                         |          |                                   |
| Voltage rating | Conductor size (mm <sup>2</sup> ) | Conductor type & no. of cores | Insulation | Neutral or screen wires (if applicable) | Sheath   | Other information (if applicable) |

### BEFORE SLASH /

PHASE-TO-PHASE VOLTAGE, CROSS-SECTIONAL AREA (MM<sup>2</sup>), NUMBER OF CORES, INSULATING AND PROTECTING LAYERS.

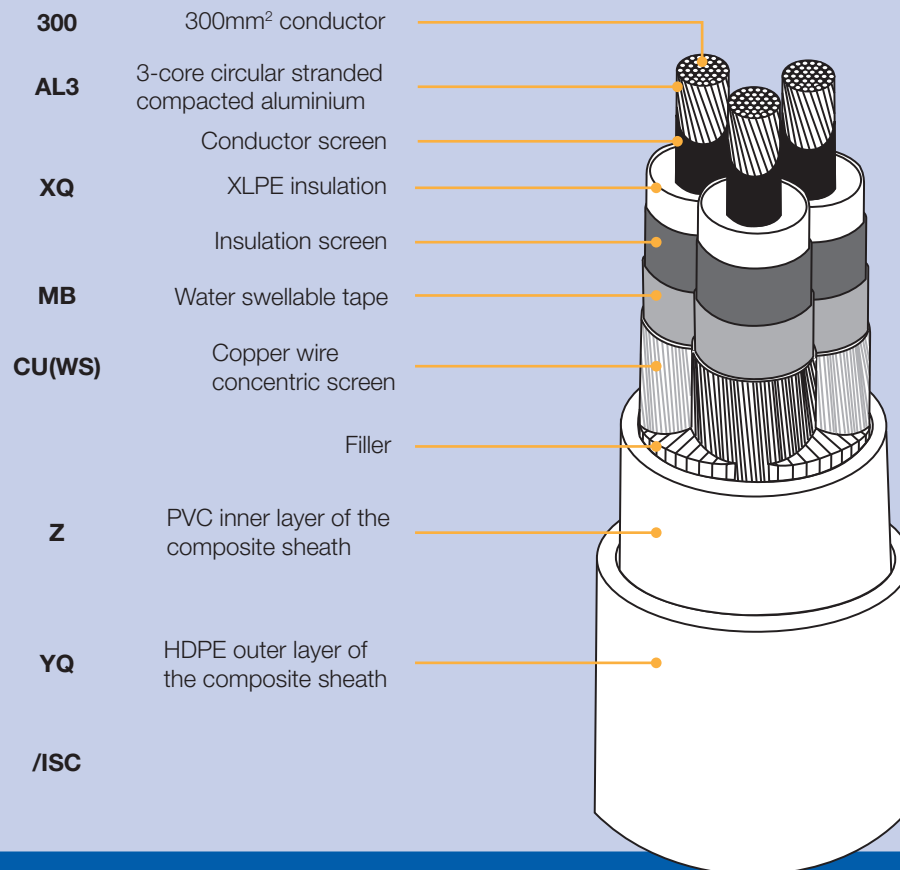
|             |                               |
|-------------|-------------------------------|
| <b>AL</b>   | Aluminium                     |
| <b>AW</b>   | Alumoweld                     |
| <b>BR</b>   | Butyl Rubber                  |
| <b>CDCU</b> | Cadmium Copper                |
| <b>CM</b>   | Cambric                       |
| <b>CQ</b>   | Cellular Polythene            |
| <b>CU</b>   | Copper                        |
| <b>CW</b>   | Copper Weld                   |
| <b>DB</b>   | Double Brass Tape             |
| <b>DRT</b>  | Double Steel Reinforcing Tape |
| <b>DT</b>   | Double Steel Tape Armour      |
| <b>DW</b>   | Double Steel Wire Armour      |
| <b>E</b>    | Thermo Plastic Elastomer      |
| <b>EPR</b>  | Ethylene Propylene Rubber     |
| <b>F</b>    | Filled Core                   |
| <b>FE</b>   | Steel                         |
| <b>FO</b>   | Fibre Optic Equipped          |
| <b>G</b>    | Semiconductive Screen         |
| <b>H</b>    | Hochstadter Screen            |
| <b>J</b>    | Jute or Hessian Sheath        |
| <b>L</b>    | Lead Sheath                   |
| <b>MB</b>   | Moisture Barrier              |

|             |                                             |
|-------------|---------------------------------------------|
| <b>MF</b>   | Water Swellable Yarns                       |
| <b>MQ</b>   | Medium-Density Polyethylene                 |
| <b>(N)</b>  | Concentric Neutral                          |
| <b>(NW)</b> | Wavewound Concentric Neutral                |
| <b>NY</b>   | Nylon (Termite Barrier)                     |
| <b>P</b>    | Paper Insulation                            |
| <b>PA</b>   | Polyethylene/Aluminium Tape Laminate Sheath |
| <b>PR</b>   | Pair                                        |
| <b>Q</b>    | Polyethylene Insulation                     |
| <b>R</b>    | Rubber Insulation                           |
| <b>SF</b>   | Single Fibre-reinforced Plastic Rod Armour  |
| <b>SL</b>   | Single Lead Sheath                          |
| <b>SS</b>   | Stainless Steel Sheath                      |
| <b>ST</b>   | Single Steel Tape Armour                    |
| <b>SW</b>   | Single Steel Wire Armour                    |
| <b>TR</b>   | Tough Rubber Insulation                     |
| <b>TRXQ</b> | Tree Retardant Cross-Linked Polyethylene    |
| <b>(TS)</b> | Taped Screen                                |
| <b>(WS)</b> | Stranded Wire Screen                        |
| <b>XQ</b>   | Cross-linked Polyethylene                   |
| <b>YQ</b>   | High-density Polyethylene                   |
| <b>Z</b>    | Polyvinyl Chloride (PVC)                    |

### / AFTER SLASH

|            |                              |
|------------|------------------------------|
| <b>SAC</b> | Solid Aluminium Conductor    |
| <b>TX</b>  | Triplex                      |
| <b>LDS</b> | Light Duty Individual Screen |
| <b>ZFR</b> | Fire Retardant PVC           |
| <b>ISC</b> | Individually Screen Cores    |
| <b>COM</b> | Compacted Conductor          |
| <b>HDS</b> | High Duty Individual Screen  |

## Ausgrid Cable Example:

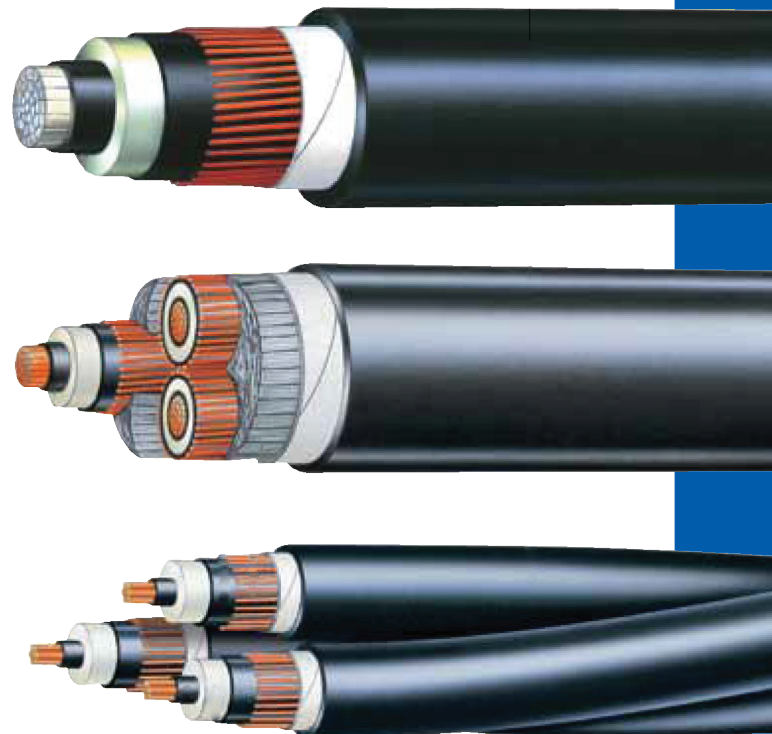


## Cable Configurations:

*Single Core Cable*

*Three Core Cable*

*Triplex Cable*





## Cable - 11kV Underground

| Description                              | Cable Diameter | Code   | Unit of Measure |
|------------------------------------------|----------------|--------|-----------------|
| 11kV 70 CU1 TRXQ 16 CU(WS) YQ            | 26mm           | 05095  | M               |
| 11kV 185 CU1 TRXQ 70 CU(WS) Z YQ/Triplex | 36mm           | 06304N | M               |
| 11kV 300 CU1 TRXQ 70 CU(WS) Z YQ/Triplex | 40mm           | 04389N | M               |
| 11kV 300 AL3 TRXQ 35 CU(WS) Z YQ         | 78mm           | 02932  | M               |
| 11kV 400 AL3 TRXQ 35 CU(WS) Z YQ         | 85mm           | 02794N | M               |
| 11kV 500 AL3 TRXQ 35 CU(WS) Z YQ         | 93mm           | 03317N | M               |
| 11kV 500 CU3 TRXQ 35 CU(WS) Z YQ         | 93mm           | 06422N | M               |

## Triple End Seal Kits

| Description                                                    | Code  | Unit of Measure |
|----------------------------------------------------------------|-------|-----------------|
| TRIPLE END SEAL, 185-300 1C HV CABLE EA (1 required per phase) | 05040 | Each            |
| TRIPLE END SEAL, 300-500 MULTICORE EA                          | 05039 | Each            |
| WIRE, FUSE 80AMP 1.63MM                                        | 03793 | Coil 0.5kg      |

## Heatshrink End Caps – Adhesive Lined

| Description                          | Code  | Unit of Measure |
|--------------------------------------|-------|-----------------|
| HEATSHRINK,END CAP 4-8 OD BLK LIN    | 04072 | Each            |
| HEATSHRINK,END CAP 8-17 OD BLK LIN   | 02646 | Each            |
| HEATSHRINK,END CAP 17-30 OD BLK LIN  | 02194 | Each            |
| HEATSHRINK,END CAP 30-45 OD BLK LIN  | 02422 | Each            |
| HEATSHRINK,END CAP 45- 65 OD BLK LIN | 00197 | Each            |
| HEATSHRINK,END CAP 65-95 OD BLK LIN  | 02496 | Each            |
| HEATSHRINK,END CAP 95-115 OD BLK LIN | 05034 | Each            |

## Heatshrink Tubing - Adhesive Lined

| Description                              | Code  | Unit of Measure |
|------------------------------------------|-------|-----------------|
| HEATSHRINK,TUBE LV 35/12MW BLK LND 1.2M  | 00318 | 1.2m Lgth       |
| HEATSHRINK,TUBE LV 50/16MW BLK LND 1.2M  | 00129 | 1.2m Lgth       |
| HEATSHRINK,TUBE LV 63/19MW BLK LND 1.2M  | 00547 | 1.2m Lgth       |
| HEATSHRINK,TUBE LV 140/42MW BLK LND 1.5M | 04892 | 1.5m Lgth       |

# ELECTRICAL SHORTING AND MOISTURE SEALING CABLES

In accordance with The Ausgrid network standards all power and control cables shall be protected against moisture ingress at all times, including while being laid, regardless of site and/or weather conditions.

Cable ends which are not intended to be worked on immediately after laying must be electrically shorted and sealed against moisture ingress as soon as they are cut. This requirement applies to all cable ends, including cables in pillars and pillar-standards, cables intended to be abandoned or temporarily decommissioned, and cables still on cable drums.

The seals and electrical shorts must not be removed until the cables are

ready to be connected. Stripping of the outer sheathing of LV service cables and connection of any of the cores must not be carried out until connection of supply is required.

Where LV cables/service cables enter a customer's premises, the cable shall be at least single sealed to avoid the risk of water entering the premises via the cable.

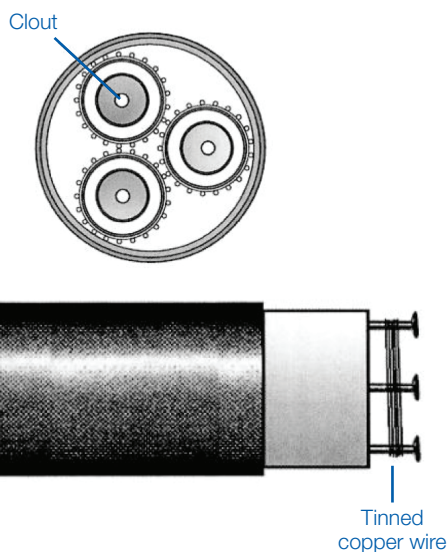
A triple end seal arrangement is required for all HV cables. A triple end seal arrangement is required for all exposed LV Distributor cables. Only a single seal cap is required for LV Distributor cables which are enclosed (e.g. cables left in a LV pillar or inside a kiosk for future connection).

## ELECTRICAL SHORTING OF CABLES

Single core and Triplex cables



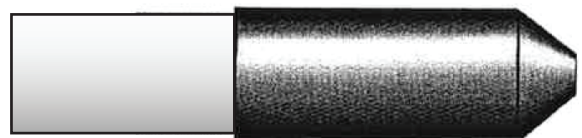
Three core cables



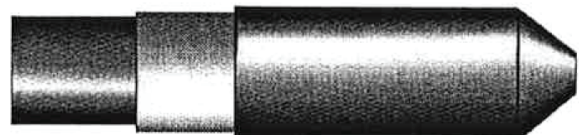
## MOISTURE SEALING OF CABLES

Note that cable surfaces which will come into contact with adhesive-lined heatshrink components must be thoroughly cleaned, then degreased and abraded before applying the heatshrink components.

Single end seal



Triple end seal\*



\*Triple end seals shall be constructed in accordance with the installation instruction supplied in the triple end seal kit.

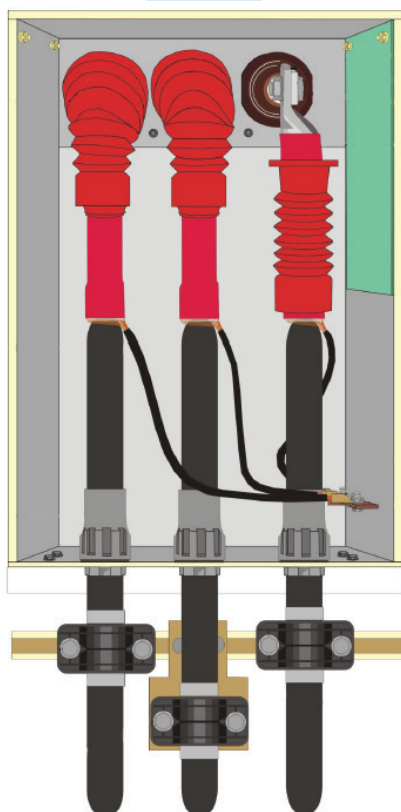
# Termination Kits – Switchgear (ARSEMBLIES)



| Description                                                     | Ausgrid Ref | ARS Code | UOM |
|-----------------------------------------------------------------|-------------|----------|-----|
| EAHVSUB,11KV 1C 70 CU XLPE SAFELINK                             | HV1-54      | A0936    | Kit |
| EAHVSUB,11KV 1C 70 CU XLPE LUCY VRN6A                           | HV1-53      | A0631    | Kit |
| EAHVSUB,11KV 1C 70 CU XLPE LUCY HEAT FRMU                       | HV1-51      | A0608    | Kit |
| EAHVSUB,11KV 3 X 1C 185 CU TRIPLEX SDAF3                        | HV1-50      | A0866    | Kit |
| EAHVSUB,11KV 3 X 1C 185 CU TRIPLEX RM6                          | HV1-52      | A0867    | Kit |
| EAHVSUB,11KV 3 X 1C 185 CU TRIPLEX SAFELINK                     | HV1-54      | A0938    | Kit |
| EAHVSUB,11KV 3 X 1C 300 CU TRIPLEX SDAF3                        | HV1-50      | A0460    | Kit |
| EAHVSUB,11KV 3 X 1C 300 CU TRIPLEX RM6 (with cable clamps)      | HV1-52      | A0468    | Kit |
| EAHVSUB,11KV 3 X 1C 300 CU TRIPLEX RM6 N (without cable clamps) | HV1-52      | A1004    | Kit |
| EAHVSUB,11KV 3 X 1C 300 CU TRIPLEX SAFELINK                     | HV1-54      | A0861    | Kit |
| EAHVSUB,11KV 3 X 1C 300 CU TRIPLEX LUCY VRN6A                   | HV1-53      | A0630    | Kit |
| EAHVSUB,11KV 3 X 1C 300 CU TRIPLEX LUCY FRMU                    | HV1-51      | A0602    | Kit |
| EAHVSUB,11KV 3C 300 AL XLPE SDAF3 HEAT                          | HV1-50      | A0293    | Kit |
| EAHVSUB,11KV 3C 300 AL XLPE RM6 HEAT                            | HV1-52      | A0467    | Kit |
| EAHVSUB,11KV 3X1C 185 CU TRIPLEX RM6 IAC                        | HV1-52      | A1207    | Kit |
| EAHVSUB,11KV 3X1C 300 CU TRIPLEX RM6 IAC                        | HV1-52      | A1208    | Kit |

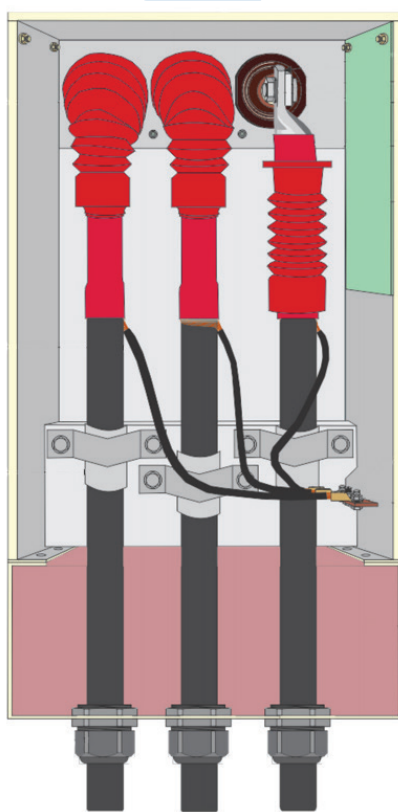
## CABLE TERMINATION FOR RM6 SWITCHGEAR WITHOUT ARC-RATED CHAMBER

**HV1-52**



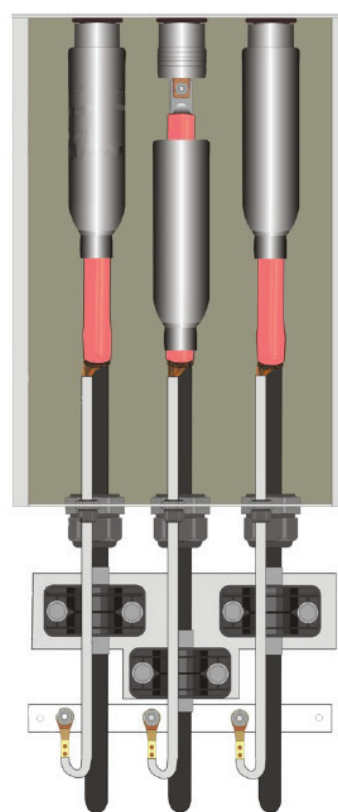
## CABLE TERMINATION FOR RM6 SWITCHGEAR WITH ARC-RATED CHAMBER

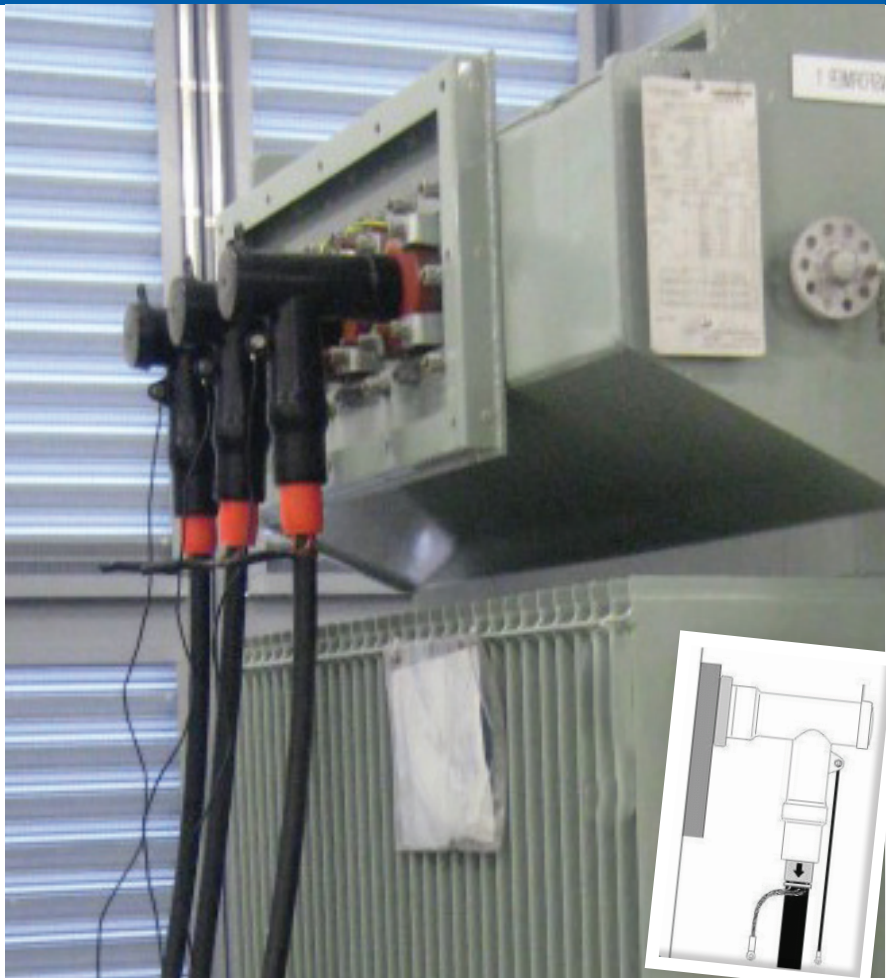
**HV1-52**



## CABLE TERMINATION FOR ABB SAFELINK

**HV 1-54**





# Termination Kits – Transformers

| Description                                            | ARS Code | UOM      |
|--------------------------------------------------------|----------|----------|
| SCREENED ELBOW KIT, 11KV 1C 70 CU XLPE TO 630A BUSHING | 05936    | Set of 3 |
| LUG, MECHANICAL, UP TO 35MM2 M12 1 HOLE                | 02908    | Each     |
| HEATSHRINK,TUBE LV 10/5TW G/Y UNL 50M                  |          | 50m Roll |

03776

## LOCTITE NICKEL ANTI-SEIZE COMPOUND

Loctite is a lubricant that protects metal parts from corrosion and seizure up to 760°C. It's made from a premium nickel/graphite mixture which can also be used where copper-free and lead-free composition is needed. No copper, lead, sulphides, chlorides or fluorides are used in Loctite Nickel Anti-Seize.



## WHAT IS AN ARSEMBLY?

At All Round Supplies, our aim is to make things as easy as possible for our customers. Our ARSembles are complete kits put together based on utility construction drawings , with every non-variable component already collected and ready to ship as a single package.

Australia’s electrical networks include many complex constructions, specific to each utility and region. At All Round Supplies, we’ve engineered an extensive range of underground and overhead construction kits or ARSembles® which can be ordered with one simple stock code. All ARSembly® stock codes begin with an ‘A’ so they can easily be distinguished from individual stock items.

ARSembles® include all of the components on the construction drawing that are not variable – that is, they would not change if a different cable or conductor size were to be used. Components that are not included in ARSembles® may include items such as conductor fittings (deadends, armor rods, ties etc) and bolts (kingbolts, eyebolts). When ordering an ARSembly,

an ARS staff member will go through all of the variable items that are not included in the kit and will help you to source the correct, approved products for your specific job.

Our ARSembles® have been hugely popular with our customers over the years, because they simplify both the estimating and ordering processes, saving contractors the valuable time and energy that would otherwise go into sourcing each individual, utility-approved component. And because they’re engineered to meet utility construction design standards, ARSembles only include utility-approved materials, giving our customers peace of mind and the confidence that an item won’t be forgotten in the field. Multiple kits can also be packaged to meet project-specific requirements.



# MV UG/OH Construction

1

## BONDING MATERIALS

These are the items required to make the connection between the overhead mains conductors and the underground cable at the termination plates on the surge arresters.

At overhead termination poles, the tails of the mains conductors are used for this connection, lugs and conductor cover to suit the overhead conductor are required to complete the connection. At overhead through mains poles, dropper tails are used and will require PG clamps along with the lugs and conductor cover to complete the connection.

2

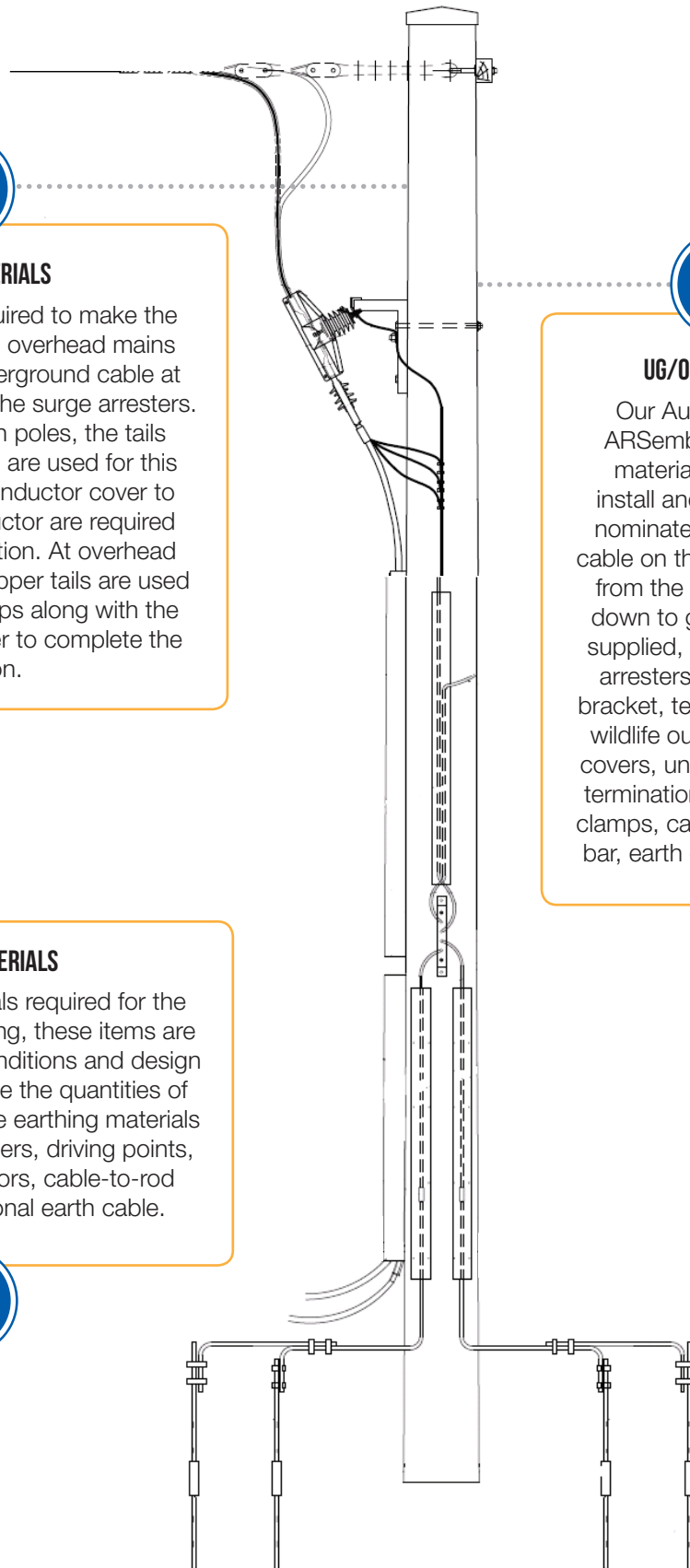
## UG/OH ARSEMBLY

Our Ausgrid UG/OH ARSembly kit includes materials required to install and terminate the nominated underground cable on the pole. Materials from the surge arresters down to ground level are supplied, including; surge arresters and mounting bracket, termination plates, wildlife outage protection covers, underground cable termination kit, lugs, cable clamps, cable covers, earth bar, earth cable and more.

## EARTHING MATERIALS

This refers to the materials required for the below ground level earthing, these items are sold individually as soil conditions and design requirements may change the quantities of the materials required. The earthing materials include; earth rods, couplers, driving points, cable-to-cable connectors, cable-to-rod connectors and additional earth cable.

3





# 1

## Bonding Materials – HV UG/OH

| Description                 | Overhead Cable Type |            |           |            |            |            |           |
|-----------------------------|---------------------|------------|-----------|------------|------------|------------|-----------|
|                             | AL 7/4.50           | AL 19/3.25 | AL CCT 80 | AL CCT 120 | AL CCT 180 | Cu 19/2.00 | Cu 7/2.03 |
| Overhead Conductor Tail Lug | 08756               | 04931      | 04981     | 02592      | TBA        | 04929      | 04930     |
| Conductor Cover             | 08949               | 08950      | N/A       | N/A        | N/A        | 08949      | 08949     |

## PG Clamps

| Description                                     | ARS Code | UOM  |
|-------------------------------------------------|----------|------|
| CLAMP, PG 6-70 ALUMINIUM 2 BOLT                 | TBA      | Each |
| CLAMP, PG 16-120 ALUMINIUM 2 BOLT               | 03052    | Each |
| CLAMP, PG 35-185 ALUMINIUM 2 BOLT               | 03961    | Each |
| CLAMP, PG 35-185 ALUMINIUM 3 BOLT               | 04739    | Each |
| CLAMP, PG 35-300 ALUMINIUM 3 BOLT               | TBA      | Each |
| CLAMP, PG 185-630 ALUMINIUM 3 BOLT              | 02876    | Each |
| CLAMP, PG 16-120 COPPER 2 BOLT                  | 03050    | Each |
| CLAMP, PG 25-150 ALUMINIUM 10-95 COPPER 2 BOLT  | 02662    | Each |
| CLAMP, PG 35-185 ALUMINIUM 35-185 COPPER 3 BOLT | 06840    | Each |

# 2

## Termination Kits – UG/OH (ARSEMBLIES®)



| Description                              | Ausgrid Ref | ARS Code | UOM |
|------------------------------------------|-------------|----------|-----|
| EAHVUGOH 11KV 3 X 1C 185 CU TRIPLEX HEAT | 160354      | A0216    | Kit |
| EAHVUGOH 11KV 3 X 1C 300 CU TRIPLEX HEAT | 160354      | A0461    | Kit |
| EAHVUGOH 11KV 3C 300 AL XLPE HEAT        | 160354      | A0292    | Kit |

# 3

## Earthing Materials – (Below Ground)

| Description                                                                      | ARS Code | UOM  |
|----------------------------------------------------------------------------------|----------|------|
| ROD, EARTH CU BONDED 15MM 1.83M POINTED                                          | 03048    | Each |
| COUPLER, 15MM EARTH ROD CU POINTED                                               | 02141    | Each |
| DRIVING POINT, HARD, 15MM CU POINTED                                             | 08877    | Each |
| CONNECTOR "C" CABLE 50-70 WIDE JAW                                               | 03967    | Each |
| CONNECTOR "6" ROD 13-15 TAP 70                                                   | 02138    | Each |
| CABLE COVER, POLYMERIC W300MMXT5MMXL 1.2 (1 supplied in UG/OH kit)               | 03015    | Each |
| CABLE, LV 70 CU 1C PVC BLACK NON-COMP - 100M DRUM                                | 05726    | M    |
| CABLE, LV 70 CU 1C PVC BLACK NON-COMP - CUT IN HOUSE (16m supplied in UG/OH kit) | 05726C   | M    |





# Straight-Through Joints for Single Core Cables (Polymeric to Polymeric) HV2-21

NOTE: Single phase kits – one required per phase.

## NS177 – Table 21 (Joint Kits)

| Single Core Cable Sizes |                        | ARS Code |
|-------------------------|------------------------|----------|
| 35mm <sup>2</sup> Al    | 35mm <sup>2</sup> Al   | TBA*     |
| 70mm <sup>2</sup> Cu    | 70mm <sup>2</sup> Cu   | TBA*     |
| 185mm <sup>2</sup> Cu   | 185mm <sup>2</sup> Cu  | 02912*   |
| 300mm <sup>2</sup> Cu   | 300mm <sup>2</sup> Cu  | 02913*   |
| 630mm <sup>2</sup> Cu   | 630mm <sup>2</sup> Cu  | TBA      |
| 1000mm <sup>2</sup> Cu  | 1000mm <sup>2</sup> Cu | TBA      |

## NS177 – Table 22 (Joint Kit Ranges)

| Cable Range                                     | ARS Code |
|-------------------------------------------------|----------|
| 35mm <sup>2</sup> -95mm <sup>2</sup> Al or Cu   | TBA*     |
| 95mm <sup>2</sup> -240mm <sup>2</sup> Al or Cu  | 02912*   |
| 185mm <sup>2</sup> -400mm <sup>2</sup> Al or Cu | 02913*   |





# Straight-Through Joints for Three Core Cables

## (Polymeric to Polymeric) HV2-22

### NS177 – Table 23 (Joint Kits)

| Three Core Cable Sizes      |                             | ARS Code |
|-----------------------------|-----------------------------|----------|
| 95mm <sup>2</sup> Al        | 95mm <sup>2</sup> Al        | 05663*   |
| 150mm <sup>2</sup> Cu       | 150mm <sup>2</sup> Cu       | 04735*   |
| 185mm <sup>2</sup> Al       | 95mm <sup>2</sup> Al        | 04735*   |
| 185mm <sup>2</sup> Al       | 185mm <sup>2</sup> Al       | 04735*   |
| 300mm <sup>2</sup> Al       | 185mm <sup>2</sup> Al       | 02883*   |
| 300mm <sup>2</sup> Al       | 300mm <sup>2</sup> Al       | 02883*   |
| 400mm <sup>2</sup> Al       | 300mm <sup>2</sup> Al       | 02883*   |
| 400mm <sup>2</sup> Al       | 400mm <sup>2</sup> Al       | 02883*   |
| 500mm <sup>2</sup> Al or Cu | 300mm <sup>2</sup> Al       | 06290*   |
| 500mm <sup>2</sup> Al or Cu | 400mm <sup>2</sup> Al       | 06290*   |
| 500mm <sup>2</sup> Al or Cu | 500mm <sup>2</sup> Al or Cu | 06289*   |

### NS177 – Table 24 (Joint Kit Ranges)

| Cable Range                                                           | ARS Code |
|-----------------------------------------------------------------------|----------|
| 35mm <sup>2</sup> -95mm <sup>2</sup> Al or Cu                         | 05663*   |
| 95mm <sup>2</sup> -240mm <sup>2</sup> Al or Cu                        | 04735*   |
| 185mm <sup>2</sup> -400mm <sup>2</sup> Al or Cu                       | 02883*   |
| 500mm <sup>2</sup> to 300mm <sup>2</sup> -400mm <sup>2</sup> Al or Cu | 06290*   |
| 500mm <sup>2</sup> -500mm <sup>2</sup> Al or Cu                       | 06289*   |

\*Joint kits include mechanical connectors for both the core conductor and screen wires.





## Three-To-One Joint (Polymeric to Polymeric) HV2-23

### NS177 – Table 25 (Joint Kits for Single Core Cables with 35mm<sup>2</sup> Screen Wires)

| Three-to-One Joint    |                                                 | Kit Stockcode |
|-----------------------|-------------------------------------------------|---------------|
| From 3-core           | To single core                                  |               |
| 95mm                  | 70mm <sup>2</sup> Cu (16mm <sup>2</sup> Screen) | 05663*        |
| 300mm <sup>2</sup> Al | 185mm <sup>2</sup> Cu                           | 02883*        |
| 300mm <sup>2</sup> Al | 300mm <sup>2</sup> Cu                           | 02883*        |
| 400mm <sup>2</sup> Al | 185mm <sup>2</sup> Cu                           | 02883*        |

\*Joint kits include mechanical connectors for both the core conductor and screen wires.

| Three-to-One Joint          |                       | Accessory Pack Stock Code | Base Kit Stock Code |
|-----------------------------|-----------------------|---------------------------|---------------------|
| From 3-core                 | To single core        |                           |                     |
| 500mm <sup>2</sup> Al or Cu | 185mm <sup>2</sup> Cu | 07952                     | 06287*              |
| 500mm <sup>2</sup> Al or Cu | 300mm <sup>2</sup> Cu | 07952                     | 06287*              |

\*Joint kits include mechanical connectors for the core conductors.

### NS177 – Table 26 (Joint Kit Ranges)

| Cable Range                                     | Kit Stock Code |
|-------------------------------------------------|----------------|
| 35mm <sup>2</sup> -95mm <sup>2</sup> Al or Cu   | 05663*         |
| 95mm <sup>2</sup> -240mm <sup>2</sup> Al or Cu  | 04735*         |
| 185mm <sup>2</sup> -400mm <sup>2</sup> Al or Cu | 02883*         |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.

### NS177 – Table 27 (Joint Kits for Single Core Cables with 70mm<sup>2</sup> Screen Wires – Triplex Cables)

| Three-to-One Joint          |                       | Kit Stockcode |
|-----------------------------|-----------------------|---------------|
| From 3-core                 | To single core        |               |
| 185mm <sup>2</sup> Al       | 185mm <sup>2</sup> Cu | 06288*        |
| 185mm <sup>2</sup> Al       | 300mm <sup>2</sup> Cu | 06288*        |
| 300mm <sup>2</sup> Al       | 185mm <sup>2</sup> Cu | 06288*        |
| 300mm <sup>2</sup> Al       | 300mm <sup>2</sup> Cu | 06288*        |
| 400mm <sup>2</sup> Al       | 185mm <sup>2</sup> Cu | 06288*        |
| 400mm <sup>2</sup> Al       | 300mm <sup>2</sup> Cu | 06288*        |
| 500mm <sup>2</sup> Al or Cu | 185mm <sup>2</sup> Cu | 06287*        |
| 500mm <sup>2</sup> Al or Cu | 300mm <sup>2</sup> Cu | 06287*        |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.



## NS177 – Table 28 (Joint Kit Ranges)

| Three-to-One Joint                        |                                           | Kit Stockcode |
|-------------------------------------------|-------------------------------------------|---------------|
| From 3-core                               | To single core                            |               |
| 185mm <sup>2</sup> -400mm <sup>2</sup> Al | 185mm <sup>2</sup> -300mm <sup>2</sup> Cu | 06288*        |
| 500mm <sup>2</sup> Al or Cu               | 185mm <sup>2</sup> -300mm <sup>2</sup> Cu | 06287*        |

## NS177 – Table 29 (Joint Kits for Single Core Cables with 150mm<sup>2</sup> Screen Wires)

| Three-to-One Joint          |                       | Kit Stockcode |
|-----------------------------|-----------------------|---------------|
| From 3-core                 | To single core        |               |
| 300mm <sup>2</sup> Al       | 300mm <sup>2</sup> Cu | TBA           |
| 400mm <sup>2</sup> Al       | 300mm <sup>2</sup> Cu | TBA           |
| 500mm <sup>2</sup> Al or Cu | 300mm <sup>2</sup> Cu | TBA           |

## NS177 – Table 30 (Joint Kit Ranges)

| Three-to-One Joint                        |                       | Kit Stockcode |
|-------------------------------------------|-----------------------|---------------|
| From 3-core                               | To single core        |               |
| 300mm <sup>2</sup> -400mm <sup>2</sup> Al | 300mm <sup>2</sup> Cu | TBA           |
| 500mm <sup>2</sup> Al or Cu               | 300mm <sup>2</sup> Cu | TBA           |



# Quick Reference Guide

This reference guide is designed to make it easy for you to find joints and terminations for XLPE cables. All joint kits are supplied with mechanical connectors included.

## TERMINATION KITS

| Cable Type                                       | Switchgear Type    |                          |                                          |                            |                     |                       | Transformer Connection (630A) | UG/OH |
|--------------------------------------------------|--------------------|--------------------------|------------------------------------------|----------------------------|---------------------|-----------------------|-------------------------------|-------|
|                                                  | ABB SDAF3 (HV1-50) | Lucy FRMU + EFS (HV1-51) | Schneider RM6 (HV1-52)                   | Schneider RM6-IAC (HV1-52) | Lucy VRN6a (HV1-53) | ABB Safelink (HV1-54) |                               |       |
| 11kV 70mm <sup>2</sup><br>1c Cu XLPE             |                    | A0608                    |                                          |                            | A0631               | A0936                 | 05936                         |       |
| 11kV 185mm <sup>2</sup><br>1c Cu XLPE (Triplex)* | A0866              |                          | A0867                                    | A1207                      |                     | A0938                 |                               | A0216 |
| 11kV 300mm <sup>2</sup><br>1c Cu XLPE (Triplex)* | A0460              | A0602                    | A0468 (with clamps)<br>A1004 (no clamps) | A1208                      | A0630               | A0861                 |                               | A0461 |
| 11kV 300mm <sup>2</sup><br>3c Al XLPE            | A0293              |                          | A0467                                    |                            |                     |                       |                               | A0292 |

\*Cable with 70mm<sup>2</sup> CWS

## INLINE JOINT KITS

| Cable Type                                       | 11kV 185mm <sup>2</sup><br>1c Cu XLPE (Triplex)* | 11kV 300mm <sup>2</sup><br>1c Cu XLPE (Triplex)* | 11kV 300mm <sup>2</sup><br>3c Al XLPE | 11kV 400mm <sup>2</sup><br>3c Al XLPE | 11kV 500mm <sup>2</sup><br>3c Al XLPE |
|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 11kV 185mm <sup>2</sup><br>1c Cu XLPE (Triplex)* | 02912<br>(1 per phase)                           | 02913<br>(1 per phase)                           | 02688                                 | 06288                                 | 06287                                 |
| 11kV 300mm <sup>2</sup><br>1c Cu XLPE (Triplex)* | 02913<br>(1 per phase)                           | 02913<br>(1 per phase)                           | 06288                                 | 06288                                 | 06287                                 |
| 11kV 300mm <sup>2</sup><br>3c Al XLPE            | 06288                                            | 06288                                            | 02883                                 | 02883                                 | 06290                                 |
| 11kV 400mm <sup>2</sup><br>3c Al XLPE            | 06288                                            | 06288                                            | 02883                                 | 02883                                 | 06290                                 |
| 11kV 500mm <sup>2</sup><br>3c Al XLPE            | 06287                                            | 06287                                            | 06290                                 | 06290                                 | 06289                                 |

\*Cable with 70mm<sup>2</sup> CWS.

## TEE JOINT KITS (HEATSHRINK)

| Cable Type                                          | 11kV 185mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex)* | 11kV 300mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex)* |
|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| 11kV 185mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex)* | 07411<br>(1 per phase)                              | N/A                                                 |
| 11kV 300mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex)* | N/A                                                 | 05515<br>(1 per phase)                              |

\*Cable with 70mm<sup>2</sup> CWS

## TEE JOINT KITS (RESIN)

| Cable Type                                         | 11kV 185mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex) | 11kV 300mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex) | 11kV 300mm <sup>2</sup><br>3c Al XLPE | 11kV 400mm <sup>2</sup><br>3c Al XLPE |
|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|---------------------------------------|---------------------------------------|
| 11kV 185mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex) | 1 x 09090<br>10 x 02922                            |                                                    | 1 x 09090<br>9 x 02922                | 1 x 09090<br>9 x 02922                |
| 11kV 300mm <sup>2</sup><br>1c Cu XLPE<br>(Triplex) |                                                    | 1 x 09090<br>9 x 02922                             | 1 x 09090<br>9 x 02922                | 1 x 09090<br>9 x 02922                |
| 11kV 300mm <sup>2</sup><br>3c Al XLPE              | 1 x 09090<br>9 x 02922                             | 1 x 09090<br>9 x 02922                             | 1 x 09090<br>9 x 02922                | 1 x 09090<br>9 x 02922                |
| 11kV 400mm <sup>2</sup><br>3c Al XLPE              | 1 x 09090<br>9 x 02922                             | 1 x 09090<br>9 x 02922                             | 1 x 09090<br>9 x 02922                | 1 x 09090<br>9 x 02922                |





## Transition Straight-Through Joints for Single Core Cables (Polymeric to PILC) HV2-24

NOTE: Single phase kits – one required per phase.

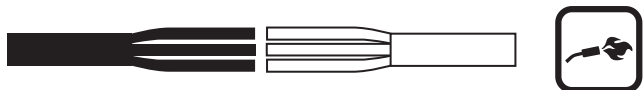
**NS177 – Table 31 (Joint Kits)**

| Single Core Cable Sizes |                 |                                                |                 | Transition Joint Base<br>Kit Stock Code | Connector Stock Code |
|-------------------------|-----------------|------------------------------------------------|-----------------|-----------------------------------------|----------------------|
| Polymeric               | Insulation Shim | PILC                                           | Insulation Shim |                                         |                      |
| 70mm <sup>2</sup> Cu    | N/A             | 50mm <sup>2</sup> Cu                           | N/A             | TBA                                     | 03315                |
| 70mm <sup>2</sup> Cu    | N/A             | 95mm <sup>2</sup> Cu                           | N/A             | TBA                                     | 05117                |
| 70mm <sup>2</sup> Cu    | 08733           | 0.15 inch <sup>2</sup> (97mm <sup>2</sup> ) Cu | N/A             | 03432                                   | 05117                |
| 185mm <sup>2</sup> Cu   | N/A             | 185mm <sup>2</sup> Cu                          | N/A             | 03432                                   | 03214                |
| 185mm <sup>2</sup> Cu   | N/A             | 0.3 inch <sup>2</sup> (194mm <sup>2</sup> ) Cu | N/A             | 03432                                   | 04012                |
| 185mm <sup>2</sup> Cu   | N/A             | 300mm <sup>2</sup> Cu                          | N/A             | 04139                                   | 03509                |
| 185mm <sup>2</sup> Cu   | N/A             | 0.5 inch <sup>2</sup> (323mm <sup>2</sup> ) Cu | N/A             | 04139                                   | 06107                |
| 300mm <sup>2</sup> Cu   | N/A             | 0.3 inch <sup>2</sup> (194mm <sup>2</sup> ) Cu | N/A             | 04139                                   | 04729                |
| 300mm <sup>2</sup> Cu   | N/A             | 0.5 inch <sup>2</sup> (323mm <sup>2</sup> ) Cu | N/A             | 04139                                   | 06737                |
| 300mm <sup>2</sup> Cu   | N/A             | 300mm <sup>2</sup> Cu                          | N/A             | 04139                                   | 04159                |
| 630mm <sup>2</sup> Cu   | N/A             | 500mm <sup>2</sup> Cu                          | N/A             | 04340                                   | TBA                  |
| 630mm <sup>2</sup> Cu   | N/A             | 630mm <sup>2</sup> Cu                          | N/A             | 04340                                   | 02752                |
| 630mm <sup>2</sup> Cu   | N/A             | 1000mm <sup>2</sup> Cu                         | N/A             | TBA                                     | TBA                  |
| 1000mm <sup>2</sup> Cu  | N/A             | 1000mm <sup>2</sup> Cu                         | N/A             | TBA                                     | TBA                  |

**NS177 – Table 32 (Joint Kit Ranges)**

| Single Core Cable Range                 |                                        | Kit Stockcode |
|-----------------------------------------|----------------------------------------|---------------|
| Polymeric                               | PILC                                   |               |
| 70mm <sup>2</sup>                       | 50mm <sup>2</sup> -95mm <sup>2</sup>   | TBA           |
| 95mm <sup>2</sup> -185mm <sup>2</sup>   | 95mm <sup>2</sup> -185mm <sup>2</sup>  | 03432         |
| 185mm <sup>2</sup> -300mm <sup>2</sup>  | 185mm <sup>2</sup> -300mm <sup>2</sup> | 04139         |
| 500mm <sup>2</sup> -630mm <sup>2</sup>  | 500mm <sup>2</sup> -630mm <sup>2</sup> | 04340         |
| 630mm <sup>2</sup> -1000mm <sup>2</sup> | 1000mm <sup>2</sup>                    | TBA           |





# Transition Straight-Through Joints for Three Core Cables

## (Polymeric to PILC) HV2-25

NS177 – Table 33 (Joint Kits)

| Three Core Cable Sizes |                 |                       |                 | Transition Joint Base<br>Kit Stock Code | Connector Stock Code |
|------------------------|-----------------|-----------------------|-----------------|-----------------------------------------|----------------------|
| Polymeric              | Insulation Shim | PILC                  | Insulation Shim |                                         |                      |
| 95mm2 Al               | N/A             | 95mm2 Al              | N/A             | 05241                                   | 02708                |
| 95mm2 Al               | 02906           | 240mm2 Al             | N/A             | 02918                                   | 03854                |
| 95mm2 Al               | 02906           | 300mm2 Al             | N/A             | 02918                                   | 05294                |
| 150mm2 Cu              | N/A             | 185mm2 Cu             | N/A             | 05241                                   | 04895                |
| 150mm2 Cu              | 02906           | 300mm2 Cu             | N/A             | 02918                                   | TBA                  |
| 185mm2 Al              | N/A             | 95mm2 Al              | N/A             | 05241                                   | TBA                  |
| 185mm2 Al              | N/A             | 240mm2 Al             | N/A             | 02918                                   | 00053                |
| 185mm2 Al              | N/A             | 300mm2 Al             | N/A             | 02918                                   | 00978                |
| 300mm2 Al              | N/A             | 0.2 inch2 (129mm2) Cu | N/A             | 02918                                   | TBA                  |
| 300mm2 Al              | N/A             | 0.3 inch2 (194mm2) Cu | N/A             | 02918                                   | 05824                |
| 300mm2 Al              | N/A             | 0.4 inch2 (258mm2) Cu | N/A             | 02918                                   | TBA                  |
| 300mm2 Al              | N/A             | 185mm2 Cu             | N/A             | 02918                                   | 03510                |
| 300mm2 Al              | N/A             | 240mm2 Al             | N/A             | 02918                                   | 00539                |
| 300mm2 Al              | N/A             | 240mm2 Cu             | N/A             | 02918                                   | 00675                |
| 300mm2 Al              | N/A             | 300mm2 Al             | N/A             | 02918                                   | 02079                |
| 300mm2 Al              | 02915           | 500mm2 Al             | N/A             | 02914                                   | 03343                |
| 400mm2 Al              | 02915           | 95mm2 Cu              | 04141           | 02914                                   | 04588                |
| 400mm2 Al              | 02915           | 0.15 inch2 (97mm2) Cu | 04141           | 02914                                   | 04588                |
| 400mm2 Al              | 02915           | 0.2 inch2 (129mm2) Cu | 04141           | 02914                                   | 04142                |
| 400mm2 Al              | 02915           | 150mm2 Al             | 04141           | 02914                                   | TBA                  |
| 400mm2 Al              | 02915           | 185mm2 Cu             | 2 x 02919       | 02914                                   | 04133                |
| 400mm2 Al              | 02915           | 0.3 inch2 (194mm2) Cu | 2 x 02919       | 02914                                   | 04189                |
| 400mm2 Al              | 02915           | 240mm2 Cu             | 02919           | 02914                                   | 04449                |
| 400mm2 Al              | 02915           | 0.4 inch2 (258mm2) Cu | 02919           | 02914                                   | TBA                  |
| 400mm2 Al              | 02915           | 300mm2 Cu             | 02919           | 02914                                   | 04792                |
| 400mm2 Al              | 02915           | 300mm2 Al             | 02919           | 02914                                   | 03549                |
| 400mm2 Al              | 02915           | 0.5 inch2 (323mm2) Cu | 02919           | 02914                                   | TBA                  |
| 400mm2 Al              | 02915           | 500mm2 Al             | N/A             | 02914                                   | 03235                |
| 500mm2 Al              | N/A             | 0.4 inch2 (258mm2) Cu | 02919           | 02914                                   | TBA                  |
| 500mm2 Al              | N/A             | 300mm2 Al             | 02919           | 02914                                   | 03343                |
| 500mm2 Al              | N/A             | 300mm2 Cu             | 02919           | 02914                                   | 03319                |
| 500mm2 Al              | N/A             | 0.5 inch2 (323mm2) Cu | 02919           | 02914                                   | 08049                |
| 500mm2 Al              | N/A             | 500mm2 Al             | N/A             | 02914                                   | 02979                |



## NS177 – Table 34 (Joint Kit Ranges)

| Three Core Cable Range                 |                                        | Kit Stockcode |
|----------------------------------------|----------------------------------------|---------------|
| Polymeric                              | PILC                                   |               |
| 95mm <sup>2</sup> -185mm <sup>2</sup>  | 95mm <sup>2</sup> -185mm <sup>2</sup>  | 05241         |
| 185mm <sup>2</sup> -300mm <sup>2</sup> | 185mm <sup>2</sup> -300mm <sup>2</sup> | 02918         |
| 500mm <sup>2</sup>                     | 500mm <sup>2</sup>                     | 02914         |



## Three-To-One Transition Joint

(Three Core Polymeric to Single Core PILC) HV2-26

## NS177 – Table 35 (Joint Kits)

| Three-to-One Joint    |                 |                       |                 | Transition Joint Base Kit Stock Code | Connector Stock Code |
|-----------------------|-----------------|-----------------------|-----------------|--------------------------------------|----------------------|
| Three Core Polymeric  | Insulation Shim | Single Core PILC      | Insulation Shim |                                      |                      |
| 150mm <sup>2</sup> Cu | N/A             | 185mm <sup>2</sup> Cu | N/A             | See note 1                           | 04895                |
| 300mm <sup>2</sup> Al | N/A             | 185mm <sup>2</sup> Cu | N/A             | TBA                                  | 03510                |
| 400mm <sup>2</sup> Al | 02915           | 185mm <sup>2</sup> Cu | 04134           | 04135                                | 04133                |
| 400mm <sup>2</sup> Al | 02915           | 300mm <sup>2</sup> Cu | N/A             | 04135                                | 04792                |
| 500mm <sup>2</sup> Al | N/A             | 185mm <sup>2</sup> Cu | 04134           | 04135                                | 02930                |

Note 1: Trifurcate three-core cables with 04635, then make three single-core joints with 03432.

## NS177 – Table 36 (Joint Kit Ranges)

| Three Core Cable Range                 |                                        | Kit Stockcode |
|----------------------------------------|----------------------------------------|---------------|
| Polymeric                              | PILC                                   |               |
| 185mm <sup>2</sup> -300mm <sup>2</sup> | 185mm <sup>2</sup> -300mm <sup>2</sup> | TBA           |
| 500mm <sup>2</sup>                     | 300mm <sup>2</sup>                     | 04135         |





# Three-To-One Transition Joint

(Three Core PILC to Single Core Polymeric) HV2-27

NS177 – Table 37 (Joint Kits)

| Three-to-One Joint     |                 |                       |                 | Transition Joint<br>Base Kit Stock<br>Code | Connector<br>Stock Code |
|------------------------|-----------------|-----------------------|-----------------|--------------------------------------------|-------------------------|
| Three Core PILC        | Insulation Shim | Single Core Polymeric | Insulation Shim |                                            |                         |
| 0.06 inch2 (39mm2) Cu  | N/A             | 185mm2 Cu             | N/A             | 06169                                      | 03221                   |
| 50mm2 Cu               | N/A             | 70mm2 Cu              | N/A             | TBA                                        | 03315                   |
| 95mm2 Al               | N/A             | 70mm2 Cu              | 08733           | 03431                                      | 03870                   |
| 95mm2 Cu               | N/A             | 70mm2 Cu              | 08733           | 03431                                      | 05117                   |
| 95mm2 Cu               | N/A             | 185mm2 Cu             | N/A             | 03431                                      | 04204                   |
| 95mm2 Cu               | 04435           | 300mm2 Cu             | N/A             | 02916                                      | 04625                   |
| 0.15 inch2 (97mm2) Cu  | N/A             | 185mm2 Cu             | N/A             | 03431                                      | 04204                   |
| 0.15 inch2 (97mm2) Cu  | 04435           | 300mm2 Cu             | N/A             | 02916                                      | 03509                   |
| 0.2 inch2 (129mm2) Cu  | N/A             | 185mm2 Cu             | N/A             | 03431                                      | TBA                     |
| 0.2 inch2 (129mm2) Cu  | 04435           | 300mm2 Cu             | N/A             | 02916                                      | TBA                     |
| 185mm2 Cu              | N/A             | 185mm2 Cu             | N/A             | 03431                                      | 03214                   |
| 185mm2 Cu              | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 03509                   |
| 0.3 inch2 (194mm2) Al  | N/A             | 185mm2 Cu             | N/A             | 03431                                      | 04395                   |
| 0.3 inch2 (194mm2) Cu  | N/A             | 185mm2 Cu             | N/A             | 03431                                      | 04012                   |
| 0.3 inch2 (194mm2) Cu  | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 04729                   |
| 240mm2 Al              | N/A             | 185mm2 Cu             | N/A             | 02916                                      | 02757                   |
| 240mm2 Cu              | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 00620                   |
| 0.4 inch2 (258mm2) Cu  | N/A             | 185mm2 Cu             | N/A             | 02916                                      | TBA                     |
| 0.4 inch2 (258mm2) Cu  | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 04796                   |
| 300mm2 Al              | N/A             | 185mm2 Cu             | N/A             | 02916                                      | 03510                   |
| 300mm2 Cu              | N/A             | 185mm2 Cu             | N/A             | 02916                                      | 03509                   |
| 300mm2 Al              | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 03698                   |
| 300mm2 Cu              | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 04159                   |
| 400mm2 Al              | 02919           | 300mm2 Cu             | 02915           | 02905                                      | 04792                   |
| 0.5 inch2 (323mm2) Cu  | N/A             | 185mm2 Cu             | N/A             | 02916                                      | 06107                   |
| 0.5 inch2 (323mm2) Cu  | N/A             | 300mm2 Cu             | N/A             | 02916                                      | 06737                   |
| 0.75 inch2 (484mm2) Al | N/A             | 300mm2 Cu             | 02915           | 02905                                      | 04967                   |
| 500mm2 Al              | N/A             | 185mm2 Cu             | 2 x 02906       | 02905                                      | 02930                   |
| 500mm2 Al              | N/A             | 300mm2 Cu             | 02915           | 02905                                      | 03319                   |

## NS177 – Table 38 (Joint Kits for Pit Applications Only)

| Three-to-One Joint    |                 |                       |                 | Transition Joint Base Kit Stock Code | Connector Stock Code |
|-----------------------|-----------------|-----------------------|-----------------|--------------------------------------|----------------------|
| Three Core PILC       | Insulation Shim | Single Core Polymeric | Insulation Shim |                                      |                      |
| 185mm2 Cu             | 02919           | 185mm2 Cu             | 2 x 03351       | 07106                                | 03214                |
| 185mm2 Cu             | 02919           | 300mm2 Cu             | 03351           | 07106                                | 03509                |
| 0.3 inch2 (194mm2) Cu | 02919           | 185mm2 Cu             | 2 x 03351       | 07106                                | 04012                |
| 0.3 inch2 (194mm2) Cu | 02919           | 300mm2 Cu             | 03351           | 07106                                | 04729                |
| 300mm2 Cu             | N/A             | 185mm2 Cu             | 2 x 03351       | 07106                                | 03509                |
| 300mm2 Cu             | N/A             | 300mm2 Cu             | 03351           | 07106                                | 04159                |
| 0.5 inch2 (323mm2) Cu | N/A             | 185mm2 Cu             | 2 x 03351       | 07106                                | 06107                |
| 0.5 inch2 (323mm2) Cu | N/A             | 300mm2 Cu             | 03351           | 07106                                | 06737                |

## NS177 – Table 39 (Joint Kit Ranges)

| Three Core Cable Range<br>PILC | Single Core Cable Range<br>Polymeric | Kit Stockcode |
|--------------------------------|--------------------------------------|---------------|
| 0.06 inch2 (39mm2) Cu          | 185mm2                               | 06169         |
| 50mm2-70mm2                    | 50mm2-70mm2                          | TBA           |
| 95mm2-185mm2                   | 95mm2-185mm2                         | 03431         |
| 185mm2-300mm2                  | 185mm2-300mm2                        | 02916         |
| 500mm2                         | 500mm2                               | 02905         |

## Pot End (Live End Seal) HV1–37

NOTE: Single phase kits – one required per phase.



## NS177 – Table 40 (Pot End Kits)

| Cable Range   | Kit Stock Code |
|---------------|----------------|
| 70mm2         | TBA            |
| 95mm2-240mm2  | 04634          |
| 300mm2-400mm2 | 02917          |
| 500mm2        | 07668          |

## NS177 – Table 41 (Trifurcation Kits for Three Core Cables)

| Cable Range   | Kit Stock Code |
|---------------|----------------|
| 95mm2-185mm2  | 04635          |
| 300mm2-500mm2 | 04636          |



## Polymeric Tee Joints

(Polymeric Main to Polymeric Tee) HV3–40

### NS177 – Table 42A (Cold Pour Resin Tee Joint Kits)

| Main Cable Size<br>Polymeric | Tee Cable Size<br>Polymeric | Tee Joint Base Kit Stock Code | Polyurethane Resin Stock Code |
|------------------------------|-----------------------------|-------------------------------|-------------------------------|
| 95mm2 Al 3 core              | 95mm2 Al 3 core             | 09090*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 185mm2 Cu 1 core            | 09090*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 400mm2 Al 3 core            | 09090*                        | 9 x 02922                     |
| 185mm2 Al 3 core             | 70mm2 Cu 1 core             | 09090*                        | 10 x 02922                    |
| 185mm2 Al 3 core             | 95mm2 Al 3 core             | 09090*                        | 10 x 02922                    |
| 185mm2 Al 3 core             | 185mm2 Al 3 core            | 09090*                        | 10 x 02922                    |
| 300mm2 Al 3 core             | 70mm2 Cu 1 core             | 09090*                        | 10 x 02922                    |
| 300mm2 Al 3 core             | 95mm2 Al 3 core             | 09090*                        | 10 x 02922                    |
| 300mm2 Al 3 core             | 185mm2 Al 3 core            | 09090*                        | 9 x 02922                     |
| 300mm2 Al 3 core             | 185mm2 Cu 1 core            | 09090*                        | 9 x 02922                     |
| 300mm2 Al 3 core             | 300mm2 Al 3 core            | 09090*                        | 9 x 02922                     |
| 300mm2 Al 3 core             | 400mm2 Al 3 core            | 09090*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 300mm2 Cu 1 core            | 09090*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 400mm2 Al 3 core            | 09090*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 70mm2 Cu 1 core             | 09090*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 300mm2 Cu 1 core            | 09090*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 300mm2 Al 3 core            | 09090*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 400mm2 Al 3 core            | 09090*                        | 9 x 02922                     |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.

### NS177 – Table 44 (Heatshrink Tee Joint Kits)



Note: Single phase kits – one required per phase.

| Main Cable Size<br>Polymeric | Tee Cable Size<br>PILC | Tee Joint Base Kit Stock Code |
|------------------------------|------------------------|-------------------------------|
| 185mm2 Cu 1 core             | 70mm2 Cu 1 core        | TBA*                          |
| 300mm2 Cu 1 core             | 70mm2 Cu 1 core        | TBA*                          |
| 185mm2 Cu 1 core             | 300mm2 Cu 1 core       | 05515*                        |
| 300mm2 Cu 1 core             | 300mm2 Cu 1 core       | 05515*                        |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.





## Transition Tee Joints

(Polymeric Main to PILC Tee) HV3–41

### NS177 – Table 46A (Cold Pour Resin Tee Joint Kits)

| Main Cable Size<br>Polymeric | Tee Cable Size<br>PILC | Tee Joint Base Kit Stock Code | Polyurethane Resin Stock Code |
|------------------------------|------------------------|-------------------------------|-------------------------------|
| 95mm2 Al 3 core              | 95mm2 Al 3 core        | 09092*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 95mm2 Al 3 core        | 09092*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 185mm2 Cu 1 core       | 09092*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 300mm2 Al 3 core       | 09092*                        | 9 x 02922                     |
| 185mm2 Al 3 core             | 95mm2 Al 3 core        | 09092*                        | 10 x 02922                    |
| 185mm2 Al 3 core             | 185mm2 Cu 1 core       | 09092*                        | 10 x 02922                    |
| 300mm2 Cu 1 core             | 95mm2 Al 3 core        | 09092*                        | 10 x 02922                    |
| 300mm2 Cu 1 core             | 97mm2 Cu 3 Core        | 09092*                        | 10 x 02922                    |
| 300mm2 Cu 1 core             | 185mm2 Cu 1 core       | 09092*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 300mm2 Cu 1 core       | 09092*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 300mm2 Al 3 core       | 09092*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 323mm2 Al 3 core       | 09092*                        | 9 x 02922                     |
| 300mm2 Al 3 core             | 95mm2 Al 3 core        | 09092*                        | 10 x 02922                    |
| 300mm2 Al 3 core             | 185mm2 Cu 1 core       | 09092*                        | 9 x 02922                     |
| 300mm2 Al 3 core             | 300mm2 Cu 1 core       | 09092*                        | 9 x 02922                     |
| 300mm2 Al 3 core             | 300mm2 Al 3 core       | 09092*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 95mm2 Al 3 core        | 09092*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 185mm2 Cu 1 core       | 09092*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 300mm2 Cu 1 core       | 09092*                        | 9 x 02922                     |
| 400mm2 Al 3 core             | 300mm2 Al 3 core       | 09092*                        | 9 x 02922                     |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.





## Transition Tee Joints

### (PILC Main to Polymeric Tee) HV3–42

**NS177 – Table 48A (Cold Pour Resin Tee Joint Kits)**

| Main Cable Size<br>PILC      | Tee Cable Size   | Tee Joint Base Kit Stock Code | Polyurethane Resin Stock Code |
|------------------------------|------------------|-------------------------------|-------------------------------|
|                              | Polymeric        |                               |                               |
| 0.06 inch2 (39mm2) Cu 3 core | 185mm2 Cu 1 core | 09091 & 3 x 09093             | 10 x 02922                    |
| 0.06 inch2 (39mm2) Cu 3 core | 300mm2 Cu 1 core | 09091 & 3 x 09093             | 10 x 02922                    |
| 95mm2 Al 3 core              | 95mm2 Al 3 core  | 09091*                        | 10 x 02922                    |
| 95mm2 Al 3 core              | 185mm2 Cu 1 core | 09091*                        | 10 x 02922                    |
| 95mm2 Al 3 core              | 185mm2 Al 3 core | 09091*                        | 10 x 02922                    |
| 95mm2 Al 3 core              | 300mm2 Al 3 core | 09091*                        | 10 x 02922                    |
| 95mm2 Cu 3 core              | 300mm2 Cu 1 core | 09091*                        | 10 x 02922                    |
| 0.15 inch2 (97mm2) Cu 3 core | 300mm2 Al 3 core | 09091*                        | 10 x 02922                    |
| 0.15 inch2 (97mm2) Cu 3 core | 400mm2 Al 3 core | 09091*                        | 10 x 02922                    |
| 0.2 inch2 (129mm2) Cu 3 core | 300mm2 Cu 1 core | 09091*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 185mm2 Cu 1 core | 09091*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 185mm2 Al 3 core | 09091*                        | 10 x 02922                    |
| 185mm2 Cu 1 core             | 300mm2 Cu 1 core | 09091*                        | 9 x 02922                     |
| 185mm2 Cu 1 core             | 300mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 185mm2 Cu 1 core             | 400mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 185mm2 Cu 3 core             | 185mm2 Cu 1 core | 09091*                        | 10 x 02922                    |
| 185mm2 Cu 3 core             | 300mm2 Cu 1 core | 09091*                        | 9 x 02922                     |
| 185mm2 Cu 3 core             | 300mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 185mm2 Cu 3 core             | 400mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 0.3 inch2 (194mm2) Cu 3 core | 185mm2 Cu 1 core | 09091*                        | 10 x 02922                    |
| 0.3 inch2 (194mm2) Cu 3 core | 300mm2 Cu 1 core | 09091*                        | 9 x 02922                     |
| 0.3 inch2 (194mm2) Cu 3 core | 400mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 240mm2 Cu 3 core             | 95mm2 Al 3 core  | 09091*                        | 10 x 02922                    |
| 240mm2 Cu 3 core             | 185mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 240mm2 Cu 3 core             | 400mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 240mm2 Al 3 core             | 95mm2 Al 3 core  | 09091*                        | 9 x 02922                     |
| 240mm2 Al 3 core             | 185mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 240mm2 Al 3 core             | 300mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 240mm2 Al 3 core             | 400mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 150mm2 Cu 3 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 185mm2 Cu 1 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 300mm2 Cu 1 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 300mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 1 core             | 400mm2 Al 3 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 3 core             | 150mm2 Cu 3 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 3 core             | 185mm2 Cu 1 core | 09091*                        | 9 x 02922                     |
| 300mm2 Cu 3 core             | 300mm2 Cu 1 core | 09091*                        | 9 x 02922                     |

|                                                       |                              |        |           |
|-------------------------------------------------------|------------------------------|--------|-----------|
| 300mm <sup>2</sup> Al 3 core                          | 95mm <sup>2</sup> Al 3 core  | 09091* | 9 x 02922 |
| 300mm <sup>2</sup> Al 3 core                          | 185mm <sup>2</sup> Cu 1 core | 09091* | 9 x 02922 |
| 300mm <sup>2</sup> Al 3 core                          | 185mm <sup>2</sup> Al 3 core | 09091* | 9 x 02922 |
| 300mm <sup>2</sup> Al 3 core                          | 300mm <sup>2</sup> Cu 1 core | 09091* | 9 x 02922 |
| 300mm <sup>2</sup> Al 3 core                          | 300mm <sup>2</sup> Al 3 core | 09091* | 9 x 02922 |
| 300mm <sup>2</sup> Al 3 core                          | 400mm <sup>2</sup> Al 3 core | 09091* | 9 x 02922 |
| 0.5 inch <sup>2</sup> (323mm <sup>2</sup> ) Cu 3 core | 185mm <sup>2</sup> Cu 1 core | 09091* | 9 x 02922 |
| 0.5 inch <sup>2</sup> (323mm <sup>2</sup> ) Cu 3 core | 300mm <sup>2</sup> Cu 1 core | 09091* | 9 x 02922 |
| 0.5 inch <sup>2</sup> (323mm <sup>2</sup> ) Cu 3 core | 400mm <sup>2</sup> Al 3 core | 09091* | 9 x 02922 |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.



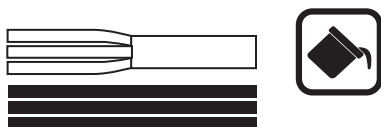
## Transition Tee Joints

### (Three Different Cables) HV3–44

#### NS177 – Table 50A (Cold Pour Resin Tee Joints)

| Cable 1                                | Cable 2                                                    | Cable 3                                | Tee Joint Base Kit Stock Code | Polyurethane Resin Stock Code |
|----------------------------------------|------------------------------------------------------------|----------------------------------------|-------------------------------|-------------------------------|
| 95mm <sup>2</sup> Cu 1 core PILC       | 185mm <sup>2</sup> Cu 1 core Polymeric                     | 300mm <sup>2</sup> Al 3 core PILC      | 09091*                        | 10 x 02922                    |
| 95mm <sup>2</sup> Cu 3 core PILC       | 185mm <sup>2</sup> Cu 1 core Polymeric                     | 185mm <sup>2</sup> Cu 3 core PILC      | 09091*                        | 10 x 02922                    |
| 95mm <sup>2</sup> Cu 3 core PILC       | 185mm <sup>2</sup> Cu 1 core Polymeric                     | 300mm <sup>2</sup> Al 3 core PILC      | 09091*                        | 10 x 02922                    |
| 185mm <sup>2</sup> Cu 1 core PILC      | 0.2 inch <sup>2</sup> (129mm <sup>2</sup> ) Cu 3 core PILC | 300mm <sup>2</sup> Cu 1 core Polymeric | 09091*                        | 9 x 02922                     |
| 185mm <sup>2</sup> Cu 1 core Polymeric | 400mm <sup>2</sup> Al 3 core Polymeric                     | 300mm <sup>2</sup> Cu 1 core Polymeric | 09090*                        | 9 x 02922                     |
| 300mm <sup>2</sup> Al 3 core PILC      | 185mm <sup>2</sup> Cu 1 core Polymeric                     | 185mm <sup>2</sup> Cu 1 core Polymeric | 09092*                        | 9 x 02922                     |
| 300mm <sup>2</sup> Al 3 core PILC      | 400mm <sup>2</sup> Al 3 core Polymeric                     | 185mm <sup>2</sup> Cu 3 core PILC      | 09091*                        | 9 x 02922                     |
| 300mm <sup>2</sup> Al 3 core PILC      | 400mm <sup>2</sup> Al 3 core Polymeric                     | 300mm <sup>2</sup> Cu 1 core Polymeric | 09092*                        | 9 x 02922                     |

\*Joint kits include mechanical connectors for both the core conductors and screen wires.



## Stub Tee Joints

### HV3–43

Refer to Table 42A for Polymeric to Polymeric stub tee joint kits.

Refer to Table 48A for Polymeric to PILC stub tee joint kits.

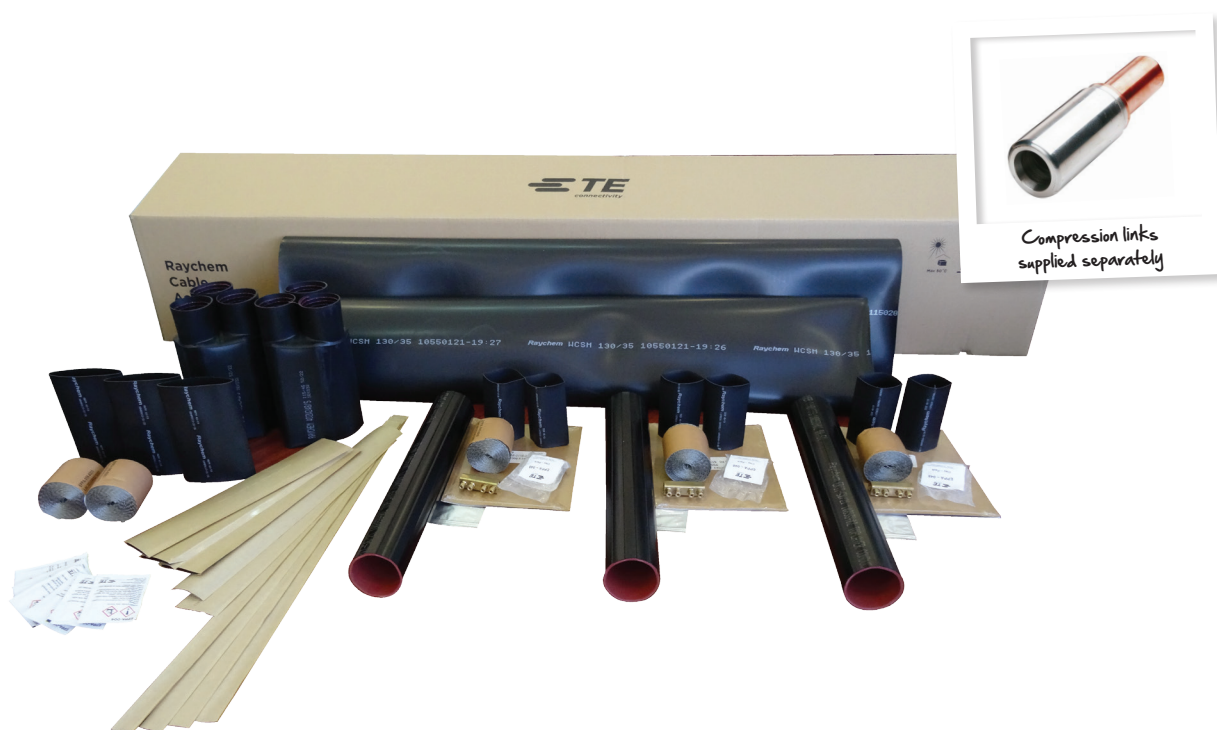


# Transition Joint Involving 33kV Cables

(33kV PILC to 11kV Polymeric) HV2-28

## NS177 – Table 52 (Transition Joint Kits)

| Transition Joint   |                     |                   |                     |                                      |                      |
|--------------------|---------------------|-------------------|---------------------|--------------------------------------|----------------------|
| From 33kV PILC     | Insulation Shim Kit | To 11kV Polymeric | Insulation Shim Kit | Transition Joint Base Kit Stock Code | Connector Stock Code |
| 0.25 Cu3 PL SWJ    | N/A                 | 300mm2 Cu 1 core  | 02915               | 02905                                | 05157                |
| 0.25 Cu3 PL SWJ    | N/A                 | 400mm2 Al 3 core  | 02915               | 02914                                | 04451                |
| 0.25 Cu3 P HSL SWJ | N/A                 | 300mm2 Cu 1 core  | N/A                 | TBA                                  | 05157                |



# MATERIAL TABLES FROM NS177



The tables below match those found throughout Ausgrid's Network Standard NS177 11kV Joints (including transition joints) and terminations – polymeric insulated cables.

Ausgrid's stock codes have been replaced with the corresponding ARS stock code, allowing you to quickly and accurately order the item you require.

## Table 2 – Termination Kits

| Cable Range            | Cable Type  | Term Type | ARS Code |
|------------------------|-------------|-----------|----------|
| 25-95mm <sup>2</sup>   | Single Core | Indoor    | 03724    |
|                        |             | Outdoor   | 03725    |
| 95-240mm <sup>2</sup>  | Single Core | Indoor    | 02901    |
|                        |             | Outdoor   | 03000    |
| 240-500mm <sup>2</sup> | Single Core | Indoor    | 02889    |
|                        |             | Outdoor   | 03001    |
| 500-800mm <sup>2</sup> | Single Core | Indoor    | TBA      |
|                        |             | Outdoor   | TBA      |
| 1000mm <sup>2</sup>    | Single Core | Indoor    | TBA      |
|                        |             | Outdoor   | TBA      |
| 95-240mm <sup>2</sup>  | Three Core  | Indoor    | TBA      |
|                        |             | Outdoor   | TBA      |

## Table 3 – Trifurcation Kits

| Cable Range            | ARS Code |
|------------------------|----------|
| 95-185mm <sup>2</sup>  | 03726    |
| 240-500mm <sup>2</sup> | 03012    |

## Table 4 – Rejacketing Tubing For Trifurcation Kits (Additional)

| Cable Range            | Length   | ARS Code |
|------------------------|----------|----------|
| 95-185mm <sup>2</sup>  | 25m Roll | 08171    |
| 240-500mm <sup>2</sup> | 15m Roll | 08180    |

## Table 5 – Crimp Lugs

| Cable Size and Type              | Indoor | Outdoor |
|----------------------------------|--------|---------|
| 35mm <sup>2</sup> Aluminium M12  | 02980  | 02980   |
| 70mm <sup>2</sup> Copper M12     | 02593  | 02593   |
| 70mm <sup>2</sup> Copper M16     | 02986  | N/A     |
| 95mm <sup>2</sup> Aluminium M12  | 02896  | 02896   |
| 185mm <sup>2</sup> Copper M12    | 02907  | 02982   |
| 185mm <sup>2</sup> Aluminium M12 | 02990  | 02990   |
| 300mm <sup>2</sup> Copper M12    | 02971  | 03299   |
| 300mm <sup>2</sup> Aluminium M12 | 02995  | 02995   |

## Table 6 – Screen Wire Lugs

| Cable Size                                                                             | Screen Wire Lug Range                 | ARS Code |
|----------------------------------------------------------------------------------------|---------------------------------------|----------|
| 185mm <sup>2</sup> and 300mm <sup>2</sup> cables with 70mm <sup>2</sup> Cu wire screen | 70mm <sup>2</sup>                     | 02593    |
| 95mm <sup>2</sup> 3c cable                                                             | 35mm <sup>2</sup> -60mm <sup>2</sup>  | 04929    |
| 185mm <sup>2</sup> 3c cable                                                            | 50mm <sup>2</sup> -120mm <sup>2</sup> | TBA      |
| 35mm <sup>2</sup> -500mm <sup>2</sup>                                                  | Up to 35mm <sup>2</sup>               | 02908    |
| 630mm <sup>2</sup>                                                                     | 50mm <sup>2</sup> -120mm <sup>2</sup> | TBA      |

## Table 7 – Rayvolve Sleeves

| Cable Range            | ARS Code |
|------------------------|----------|
| 70mm <sup>2</sup>      | 05758    |
| 95-185mm <sup>2</sup>  | 02902    |
| 240-300mm <sup>2</sup> | 02885    |



# CROSS REFERENCE LIST

TE Connectivity termination & joint kit part numbers



| TE Part Number | ARS Code |
|----------------|----------|
| IXSU-FSY122    | 03724    |
| IXSU-FSY123    | 02901    |
| IXSU-FSY124    | 02889    |
| OXSU-FSY127    | 03725    |
| OXSU-FSY156    | 03000    |
| OXSU-FSY157    | 03001    |
| SMOE-SY120     | 03726    |
| SMOE-SY121     | 03012    |
| MXSU-SY138     | 02912    |
| MXSU-SY139     | 02913    |
| MXSU-SY141     | 05663    |
| MXSU-SY142     | 04735    |
| MXSU-SY143     | 02883    |
| MXSU-SY206     | 06287    |
| MXSU-SY207     | 06290    |



| TE Part Number | ARS Code |
|----------------|----------|
| MXSU-SY208     | 06289    |
| MXSU-SY210     | 06288    |
| EPKJ-SY145     | 03432    |
| EPKJ-SY146     | 04139    |
| EPKJ-SY147     | 04340    |
| EPKJ-SY148     | 05241    |
| EPKJ-SY149     | 02918    |
| EPKJ-SY150     | 02914    |
| EPKJ-SY153     | 04135    |
| EPKJ-SY167     | 03431    |
| EPKJ-SY169     | 02916    |
| EPKJ-SY159     | 02905    |
| MXSE-SY233     | 04634    |
| MXSE-SY234     | 02917    |
| MXSE-SY235     | 07668    |

# REFERENCE TABLE

Annealed aluminium and copper stranded conductors

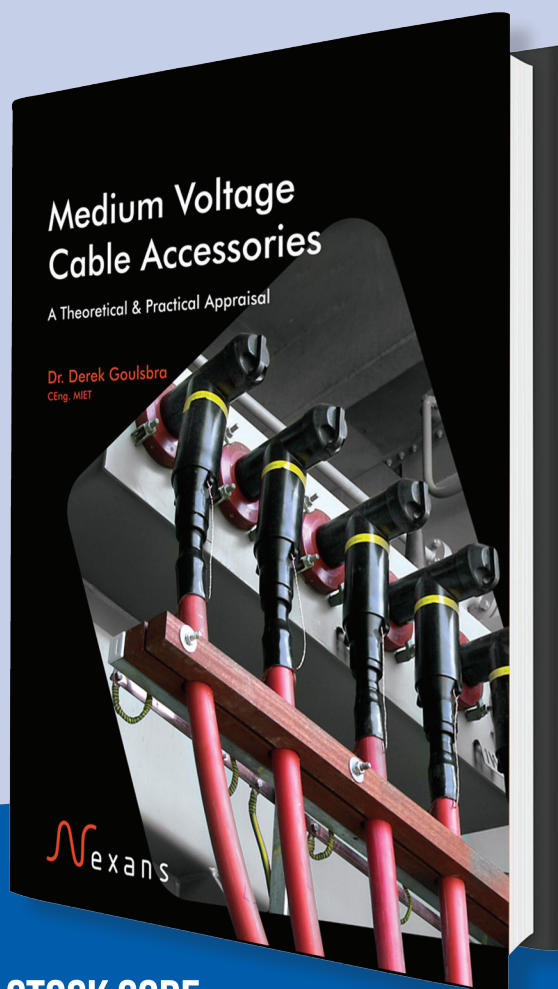
## METRIC

| NOMINAL<br>CROSS<br>SECTIONAL<br>AREA (MM <sup>2</sup> ) | NUMBER &<br>NOMINAL DIA.<br>OF WIRES<br>(MM) | NOMINAL<br>DIA. OF<br>CONDUCTOR<br>(MM) |
|----------------------------------------------------------|----------------------------------------------|-----------------------------------------|
|                                                          | 1/1.13                                       | 1.13                                    |
| 1.5                                                      | 1/1.38                                       | 1.38                                    |
| 2.5                                                      | 7/0.67                                       | 2.01                                    |
| 4                                                        | 7/0.85                                       | 2.55                                    |
| 6                                                        | 7/1.04                                       | 3.12                                    |
| 10                                                       | 7/1.35                                       | 4.05                                    |
| 16                                                       | 7/1.70                                       | 5.1                                     |
| 25                                                       | 7/2.14                                       | 6.75                                    |
| 35                                                       | 19/1.53                                      | 7.65                                    |
| 50                                                       | 19/1.78                                      | 8.9                                     |
| 70                                                       | 19/2.14                                      | 10.7                                    |
| 95                                                       | 19/2.52                                      | 12.6                                    |
| 120                                                      | 37/2.03                                      | 14.21                                   |
| 150                                                      | 37/2.25                                      | 15.75                                   |
| 185                                                      | 37/2.52                                      | 17.64                                   |
| 240                                                      | 61/2.25                                      | 20.25                                   |
| 300                                                      | 61/2.52                                      | 22.68                                   |
| 400                                                      | 61/2.85                                      | 25.65                                   |
| 500                                                      | 61/3.20                                      | 28.8                                    |
| 630                                                      | 127/2.52                                     | 32.76                                   |
| 800                                                      | 127/2.85                                     | 37.05                                   |
| 1000                                                     | 127/3.20                                     | 41.6                                    |

## IMPERIAL

| NOMINAL<br>CROSS<br>SECTIONAL<br>AREA (MM <sup>2</sup> ) | NUMBER &<br>NOMINAL DIA.<br>OF WIRES<br>(INCHES) | NUMBER &<br>NOMINAL DIA.<br>OF WIRES<br>(MM) | NOMINAL<br>CROSS SEC-<br>TIONAL AREA<br>(INCHES <sup>2</sup> ) | NOMINAL<br>DIA. OF<br>CONDUCTOR<br>(MM) |
|----------------------------------------------------------|--------------------------------------------------|----------------------------------------------|----------------------------------------------------------------|-----------------------------------------|
| 0.97                                                     | 1/.044                                           | 1/1.12                                       | 0.0015                                                         | 1.12                                    |
| 1.25                                                     | 3/.029                                           | 3/7.37                                       | 0.0019                                                         | 1.59                                    |
| 1.93                                                     | 3/.036                                           | 3/9.14                                       | 0.003                                                          | 1.97                                    |
| 2.93                                                     | 7/.029                                           | 7/7.37                                       | 0.0045                                                         | 2.2                                     |
| 4.52                                                     | 7/.036                                           | 7/9.14                                       | 0.007                                                          | 2.74                                    |
| 6.75                                                     | 7/.044                                           | 7/1.12                                       | 0.01                                                           | 3.35                                    |
| 9.43                                                     | 7/.052                                           | 7/1.32                                       | 0.0146                                                         | 3.96                                    |
| 14.28                                                    | 7/.064                                           | 7/1.63                                       | 0.0025                                                         | 4.88                                    |
| 18.29                                                    | 19/.044                                          | 19/1.12                                      | 0.03                                                           | 5.59                                    |
| 25.5                                                     | 19/.052                                          | 19/1.32                                      | 0.04                                                           | 6.6                                     |
| 38.7                                                     | 19/.064                                          | 19/1.63                                      | 0.06                                                           | 8.13                                    |
| 65.1                                                     | 19/.083                                          | 19/2.11                                      | 0.1                                                            | 10.5                                    |
| 75.3                                                     | 37/.064                                          | 37/1.63                                      | 0.12                                                           | 11.4                                    |
| 95.3                                                     | 37/.072                                          | 37/1.83                                      | 0.15                                                           | 12.8                                    |
| 126.7                                                    | 37/.083                                          | 37/2.11                                      | 0.2                                                            | 14.8                                    |
| 159.1                                                    | 37/.093                                          | 37/2.36                                      | 0.25                                                           | 16.5                                    |
| 195.1                                                    | 37/.103                                          | 37/2.62                                      | 0.3                                                            | 18.3                                    |
| 262.2                                                    | 61/.093                                          | 61/2.36                                      | 0.4                                                            | 21.3                                    |
| 321.6                                                    | 61/.103                                          | 61/2.62                                      | 0.5                                                            | 23.5                                    |
| 391.1                                                    | 91/.093                                          | 91/2.36                                      | 0.6                                                            | 26                                      |
| 479.7                                                    | 91/.103                                          | 91/2.62                                      | 0.75                                                           | 28.8                                    |
| 669.4                                                    | 127/.103                                         | 127/2.62                                     | 1                                                              | 34                                      |
| 800                                                      | 127/.112                                         | 127/2.84                                     | 1.24                                                           | 36.92                                   |
| 1000                                                     | 127/.125                                         | 127/3.18                                     | 1.5                                                            | 41.34                                   |

The above Metric to Imperial conversion table provides an approximate cross reference and may not be exact. Please check size requirements for your application. Should you require further assistance please contact your nearest All Round Supplies Branch or Representative on 1300 087 579.



**STOCK CODE:**  
**08484**

## MEDIUM VOLTAGE CABLE ACCESSORIES

DR DEREK GOULSBRA CENG MIET

This book is a detailed look at medium voltage cable accessories which will be of value to jointers and engineers alike.

In order to understand the workings and failure modes of the accessories, a section on electrical breakdown of air and solids and a combination of the two is presented.

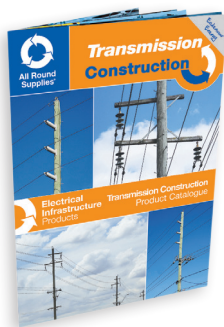
This is followed by a practical consideration of cable preparation using present day techniques and tools prior to installing the accessory.

Terminations, separable connectors, joints and associated components are examined in detail with explanations of the various technologies employed. Finally, examples of failures are presented with explanations of how these could have been avoided.

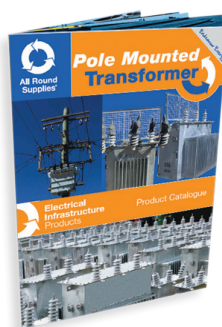
## ABOUT THE AUTHOR

Derek Goulsbra has over thirty years experience working in the field of cable accessories having been heavily involved in product development, failure analysis and engineer and jointer training.





**Transmission Construction**  
Endeavour Energy



**Pole Mounted Transformer**  
Endeavour Energy



**Pole Mounted Transformer**  
Essential Energy



**Bare Conductor Accessories**  
Overhead



**Insulated Conductor Accessories**  
Medium Voltage Overhead



**Safety Link**  
Product Catalogue



**Kiosk Substation**  
Ausgrid



**Numbers & Labels**  
Endeavour Energy & Ausgrid



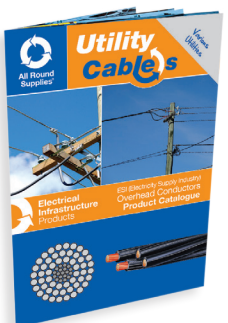
**Terminations, Joints & Elbows**  
Power & Water Corporation



**Padmount Substations**  
Essential Energy



**Street Lighting Equipment**  
Power and Water Corporation



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