

# Approved Signalling Items for the ARTC Network

ESA-00-01

## Applicability

ARTC Network Wide

SMS

## Publication Requirement

Internal / External

## Primary Source

Existing ARTC Type Approvals

## Document Status

| Version # | Date Reviewed | Prepared by | Reviewed by                   | Endorsed                      | Approved                                   |
|-----------|---------------|-------------|-------------------------------|-------------------------------|--|
| 1.9       | 19 Dec 24     | Standards   | Snr Signal Standards Engineer | Principal Signalling Engineer | Manager Engineering Services<br>20/12/2024 |

## Amendment Record

| Amendment Version # | Date Reviewed | Clause | Description of Amendment   |
|---------------------|---------------|--------|--|
| 1.0                 | 23 Mar 20     |        | First issue of catalogue that lists signalling items and communication items related to signalling systems approved for use on the ARTC network. |
| 1.1                 | 26 Jun 20     |        | New approved items added based on type approval and compliance to ARTC specification   |
| 1.2                 | 24 Nov 20     |        | New approved items added based on type approval and compliance to ARTC specification   |

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Page 1 of 152

## Table of Contents

|     |           |  |  |
|-----|-----------|--|--|
| 1.3 | 03 May 21 | 2.2, 2.7, 2.9,<br>2.11                                       | Included Victron solar products, Mors Smitt relays, ATMS antenna and router  |
| 1.4 | 05 Oct 21 | 2.2, 2.4, 2.5,<br>2.9, 2.11, 2.15                            | Included approval for TufDuct, Elsema, Westermo RT320 and other minor changes.   |
| 1.5 | 27 Jul 22 | 2.3, 2.4, 2.7,<br>2.8, 2.9, 2.10,<br>2.11                    | Included approval for TPWS, Micronome relay, various solar products, and other items since last update of this document.                                     |
| 1.6 | 24 Apr 23 | 2.1, 2.2, 2.3,<br>2.4, 2.5, 2.7,<br>2.9, 2.11,<br>2.12, 2.15 | Included the approval for IPITC, various solar products, and other items since the last update of this document.   |
| 1.7 | 04 Feb 24 | 2.1, 2.2, 2.8,<br>2.9, 2.10, 2.11                            | Included the approval for Aldridge signal modules, Schaefer Power supply, Kingfisher Telemetry, TMACS and other items since the last update of this document |
| 1.8 | July 24   | 2.2, 2.4, 2.5,<br>2.9, 2.12, 2.13                            | Included the approval of <b>4G Antenna</b> , Aldridge Axle Counter Reset Box, Weidmuller Terminals and other items since the last update of this document    |
| 1.9 | 19 Dec 24 | 2.1, 2.2, 2.3,<br>2.9, 2.10                                  | Updated TMACS approval for 4Track, UGL Signals and other items since the last update.  |

\*-See Type approval certificate on ARTC Extranet for more detail and conditions.

## Table of Contents

|  |          |
|--|----------|
| <b>Table of Contents .....</b>                             | <b>3</b> |
| <b>1 Introduction.....</b>                                 | <b>4</b> |
| 1.1 Purpose .....  | 4        |
| 1.2 Scope .....  | 4        |
| 1.3 Document Owner .....                                   | 4        |
| 1.4 Reference Documents .....                              | 4        |
| <b>2 Categories .....</b>                                  | <b>5</b> |
| 2.1 Signals.....   | 5        |
| 2.2 Communication items related to signalling system ..... | 18       |
| 2.3 Points .....   | 27       |
| 2.4 Train Detection .....                                  | 43       |
| 2.5 Level Crossing Equipment .....                         | 53       |
| 2.6 Interlocking .....                                     | 57       |
| 2.7 Relays .....   | 59       |
| 2.8 Surge Protection Equipment .....                       | 70       |
| 2.9 Power Supply Equipment.....                            | 79       |
| 2.10 Batteries .....                                       | 99       |
| 2.11 Train Authority Systems and Train Order Systems.....  | 111      |
| 2.12 Cables .....  | 115      |
| 2.13 Trackside Equipment .....                             | 117      |
| 2.14 Rail Connection .....                                 | 133      |
| 2.15 Cable Route .....                                     | 138      |
| 2.16 Enclosures.....                                       | 151      |

## **1 Introduction**

### **1.1 Purpose**

The purpose of this document is to provide a list of signalling items which are approved to be used on the ARTC network.

### **1.2 Scope**

This document provides a list of signalling and communication items related to signalling systems which can be used on the ARTC network.

The Business Unit / Corridor Signal Engineer / ARTC Project Signalling Representative shall agree prior to the use of any products from this list to ensure consistency across their corridor/network for maintenance, training and spares etc.

### **1.3 Document Owner**

The General Manager Technical Services and Assurance is the Document Owner. Queries relating to this document should be directed to [standards@artc.com.au](mailto:standards@artc.com.au) in the first instance.

### **1.4 Reference Documents**

ARTC Type Approval Certificates

ARTC Signalling Specifications

ARTC Signalling Standards

\*-See Type approval certificate on ARTC Extranet for more detail and conditions.

## 2 Categories

| Supplier   | Part No                             | Product/Description   | Condition/Remarks |
|--|-------------------------------------|---|-------------------|
| <b>2.1 Signals</b>   |                                     |   |                   |
| <b>'Westinghouse Signals Australia' RM4 range of LED signal light units *</b>  |                                     |   |                   |
| Siemens  | RCFB85                              | 200mm Red – L ED lamp unit - Extended Range Mainline            |                   |
| Siemens  | YCFB85                              | 200mm Yellow - LED lamp unit - Extended Range Mainline          |                   |
| Siemens  | GCFB85                              | 200mm Green - LED lamp unit - Extended Range Mainline           |                   |
| Siemens  | RCFB75                              | 200mm Red - LED lamp unit Long Range Mainline                   |                   |
| Siemens  | YCFB75                              | 200mm Yellow - LED lamp unit Long Range Mainline                |                   |
| Siemens  | GCFB75                              | 200mm Green - LED lamp unit Long Range Mainline                 |                   |
| Siemens  | WCFB75                              | 200mm White - LED lamp unit Long Range Mainline                 |                   |
| Siemens  | WCFB85                              | 200mm White - LED lamp unit Long Range Mainline                 |                   |
| Siemens  | RCFB25                              | 200mm Red- LED lamp unit Standard Range Mainline                |                   |
| Siemens  | YCFB43                              | 200mm Yellow - LED lamp unit Standard Range Mainline            |                   |
| Siemens  | GCFB25                              | 200mm Green - LED lamp unit Standard Range Mainline             |                   |
| Siemens  | WCFB25                              | 200mm White - LED lamp unit Standard Range Mainline             |                   |
| <b>Westinghouse Rail Systems Australia' LED Banner Repeater Signal Units *</b> |                                     |   |                   |
| Siemens  | 1200103201                          | LED Banner Repeater Signal Unit (3 aspect H, UQ, V, White band) |                   |
| <b>'Invensys Rail' RM4 Type 92 LED Signal *</b>                                |                                     |   |                   |
| Siemens  | TR3-YCFB-501B-92<br>*[5517/12YMR92] | LED module yellow 140 mm  |                   |

\*-See Type approval certificate on ARTC Extranet for more detail and conditions.

| Supplier                                 | Part No                                | Product/Description                               | Condition/Remarks |
|--|--|---|-------------------|
| Siemens                                  | RM4-GCFB-75B-92G<br>*[5518/12GIR92]    | LED module green 212 mm                           |                   |
| Siemens                                  | RM4-YCFB-85B-92G<br>*[5518/12YLR92]    | LED module yellow 212 mm                          |                   |
| Siemens                                  | RM4-RCFB-75B-92G<br>*[5518/12RIR92]    | LED module red 212 mm                             |                   |
| Siemens                                  | RM4-WCFB-75B-92G<br>*[ To be provided] | LED module white V and S stencilled 212 mm        |                   |
| Siemens                                  | RM4-GCFB-25B-92G<br>*[5518/12GMR92]    | LED module green 212 mm                           |                   |
| Siemens                                  | RM4-YCFB-43B-92G<br>*[5518/12YMR92]    | LED module yellow 212 mm                          |                   |
| Siemens                                  | RM4-RCFB-25B-92G<br>*[5518/12RMR92]    | LED module red 212 mm                             |                   |
| Siemens                                  | RM4-WCFB-25B-92G<br>*[5518/12WMR92]    | LED module white 212 mm                           |                   |
| Siemens                                  | 3210116501 DTF                         | LED module white '65'                             |                   |
| <b>'Aldridge' LED Signal Lamp Case *</b> |  |   |                   |
| Aldridge                                 | RL671-B                                | 1 Aspect 200mm Mainline sheet metal body assembly |                   |
| Aldridge                                 | RL672-B                                | 2 Aspect 200mm Mainline sheet metal body assembly |                   |
| Aldridge                                 | RL673-B                                | 3 Aspect 200mm Mainline sheet metal body assembly |                   |
| Aldridge                                 | RL674-B                                | 4 Aspect 200mm Mainline sheet metal body assembly |                   |

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@ - Based on the review and acceptance from OT or BU Engineering team.

# - Product compliant to ARTC specification

\$ - Included based on the existing use on the ARTC network

| Supplier | Part No  | Product/Description                                 | Condition/Remarks |
|----------|----------|---|-------------------|
| Aldridge | RL650-B  | 1 Aspect 125mm Subsidiary sheet metal body assembly |                   |
| Aldridge | RL551-B  | 2 Aspect Vertical SRI sheet metal body assembly     |                   |
| Aldridge | RL552-B  | 2 Aspect Horizontal SRI sheet metal body assembly   |                   |
| Aldridge | RL6413-B | 3 Aspect Vertical Shunt sheet metal body assembly   |                   |
| Aldridge | RL6414-B | 4 Aspect Vertical Shunt sheet metal body assembly   |                   |
| Aldridge | RL6643-B | 3 Aspect GPLS sheet metal body assembly             |                   |
| Aldridge | RL413-BW | 3 Aspect Vertical Shunt - gravity die cast casings  |                   |
| Aldridge | RL414-BW | 4 Aspect Vertical Shunt - gravity die cast casings  |                   |
| Aldridge | RL443-BW | 3 Aspect GPLS - gravity die cast casings            |                   |
| Aldridge | RL444-BW | 2 Aspect Repeater - gravity die cast casings        |                   |
| Aldridge | RL451-BW | 2 Aspect SRI Vertical - gravity die cast casings    |                   |
| Aldridge | RL452-BW | 2 Aspect SRI Horizontal - gravity die cast casings  |                   |
| Aldridge | RL466-BW | LH Running Turnout - gravity die cast casings       |                   |
| Aldridge | RL467-BW | RH Running Turnout - gravity die cast casings       |                   |
| Aldridge | RL468-BW | R + L H Running Turnout - gravity die cast casings  |                   |
| Aldridge | VN611R   | 1 Aspect Main                                       |                   |
| Aldridge | VN512    | 2 Aspect Main                                       |                   |
| Aldridge | VN513    | 3 Aspect Main                                       |                   |
| Aldridge | VN514    | 4 Aspect Main                                       |                   |
| Aldridge | VN510    | Shunt background                                    |                   |
| Aldridge | RV245    | Main Hood Standard 300mm                            |                   |

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| Supplier                                    | Part No      | Product/Description               | Condition/Remarks |
|---|--------------|-----------------------------------|-------------------|
| Aldridge                                    | RV283        | Main Hood 600 mm                  |                   |
| Aldridge                                    | RV248        | Shunt Hood 200 mm                 |                   |
| Aldridge                                    | RV248-300    | Shunt Hood 300 mm                 |                   |
| Aldridge                                    | RV247        | 2 Aspect Gantry Hood              |                   |
| Aldridge                                    | RV246        | 3 Aspect Gantry Hood              |                   |
| Aldridge                                    | RV249        | 4 Aspect Gantry Hood              |                   |
| Aldridge                                    | VK504        | Ground Mount                      |                   |
| Aldridge                                    | VK500        | Gantry Mount                      |                   |
| Aldridge                                    | VK501        | Main T.O.P.                       |                   |
| Aldridge                                    | VK503        | Shunt/Single Case Mount Bracket   |                   |
| Aldridge                                    | VK506        | SRI F.O.P.                        |                   |
| Aldridge                                    | VK509        | Shunt/Single Case F.O.P Extension |                   |
| Aldridge                                    | VK510        | Main F.O.P. Extension             |                   |
| <b>'Invensys' 5518/12XRR92 LED Signal *</b> |              |                                   |                   |
| Siemens                                     | 5518/12GLR92 | LED module green 200 mm           |                   |
| Siemens                                     | 5518/12YLR92 | LED module yellow 200 mm          |                   |
| Siemens                                     | 5518/12RLR92 | LED module red 200 mm             |                   |
| Siemens                                     | 5518/12WLR92 | LED module white 200 mm           |                   |
| Siemens                                     | 5518/12GMR92 | LED module green 200 mm           |                   |
| Siemens                                     | 5518/12YMR92 | LED module yellow 200 mm          |                   |
| Siemens                                     | 5518/12RMR92 | LED module red 200 mm             |                   |

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| Supplier                               | Part No      | Product/Description      | Condition/Remarks |
|--|--------------|--------------------------|-------------------|
| Siemens                                | 5518/12WMR92 | LED module white 200 mm  |                   |
| Siemens                                | 5518/12GIR92 | LED module green 200 mm  |                   |
| Siemens                                | 5518/12YIR92 | LED module yellow 200 mm |                   |
| Siemens                                | 5518/12RIR92 | LED module red 200 mm    |                   |
| Siemens                                | 5518/12WIR92 | LED module white 200mm   |                   |
| <b>Siemens' 140mm Subsidiary LED *</b> |              |                          |                   |
| Siemens                                | 4210215910   | Green - LED lamp unit    |                   |
| Siemens                                | 4210215916   | Yellow - LED lamp unit   |                   |
| Siemens                                | 4210215912   | Red - LED lamp unit      |                   |
| Siemens                                | 4210215914   | White - LED lamp unit    |                   |
| Siemens                                | 4210215901   | Green - LED lamp unit    |                   |
| <b>Siemens' 140mm Subsidiary LED *</b> |              |                          |                   |
| Siemens                                | 4210215907   | Yellow - LED lamp unit   |                   |
| Siemens                                | 4210215903   | Red - LED lamp unit      |                   |
| Siemens                                | 4210215905   | White - LED lamp unit    |                   |
| Siemens                                | 4210215911   | Green - LED lamp unit    |                   |
| Siemens                                | 4210215917   | Yellow - LED lamp unit   |                   |
| Siemens                                | 4210215913   | Red - LED lamp unit      |                   |
| Siemens                                | 4210215915   | White - LED Stencilled   |                   |
| Siemens                                | 4210215902   | Green - LED lamp unit    |                   |
| Siemens                                | 4210215908   | Yellow - LED lamp unit   |                   |

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| Supplier                                      | Part No  | Product/Description                          | Condition/Remarks |
|---|--|--|-------------------|
| Siemens                                       | 4210215904   | Red - LED lamp unit                          |                   |
| Siemens                                       | 4210215906   | White - LED Stencilled                       |                   |
| Siemens                                       | 3210215101   | Green - LED lamp unit                        |                   |
| Siemens                                       | 3210215103   | Yellow - LED lamp unit                       |                   |
| Siemens                                       | 3210215102   | Red - LED lamp unit                          |                   |
| Siemens                                       | 3210215104   | White - LED Stencilled                       |                   |
| UGL Limited' LED Signals (12V DC & 120V AC) * |  |  |                   |
| UGL   | 1000010076<br>(R999-X0919)   | MK2 127mm Red<br>120Vac LED Signal           |                   |
| UGL   | 1000010081<br>(R999-X0924)   | MK2 127mm Red<br>12Vdc LED Signal            |                   |
| UGL   | 1000010244<br>(containing 1000010081)<br>R999-X1192<br>(containing R999-X0924) | Red 12Vdc LED retrofit kit                   |                   |
| UGL Limited LED Signal Light Units *          |  |  |                   |
| UGL   | 1000010755   | LED MODULE (White) - AL8 12VDC 212MM *1      |                   |
| UGL   | 1000010756   | LED MODULE (Red) - AL8 12VDC 212MM *1        |                   |
| UGL   | 1000010162   | LED MODULE (Yellow) AL8 12VDC 212MM *1 & *2  |                   |
| UGL   | 1000010161   | LED MODULE (Green) - AL8 12VDC 212MM *1 & *2 |                   |
| UGL   | 1000010559   | SIGNAL TRI-COLOUR LED (MEDIUM) RYG FOP-PTC   |                   |
| UGL   | 1000009963   | SIGNAL TRI-COLOURED LED (MEDIUM) RYG MODULE  |                   |

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| Supplier | Part No     | Product/Description                          | Condition/Remarks |
|----------|-------------|--|-------------------|
| UGL      | 1000010073  | LED MODULE (Red) - MK2 120VAC 212MM          |                   |
| UGL      | 1000010074  | LED MODULE (Yellow) MK2 120VAC 212MM         |                   |
| UGL      | 1000010075  | LED MODULE (Green) MK2 120VAC 212MM          |                   |
| UGL      | 1000429704  | LED MODULE (Green) MK2 12VDC 212MM MICROLOK  |                   |
| UGL      | 1000429705  | LED MODULE (Yellow) MK2 12VDC 212MM MICROLOK |                   |
| UGL      | 1000429706  | LED MODULE (Red) MK2 12VDC 212MM MICROLOK    |                   |
| UGL      | 1000429703  | LED MODULE (White) MK2 12VDC 212MM MICROLOK  |                   |
| UGL      | 1000010847  | LED MODULE (White) MK2 12VDC 212MM MICROLOK  |                   |
| UGL      | 1000010174  | LED RETRO KIT (Green) 212MM 12VDC MLK UGL    |                   |
| UGL      | 1000010175  | LED RETROKIT (Yellow) 212MM 12VDC MLK UGL    |                   |
| UGL      | 1000010176  | LED RETROKIT (Red) - 212MM 12VDC MLK UGL     |                   |
| UGL      | 1000010076  | LED MODULE (Red) - MK2 120VAC 127MM          |                   |
| UGL      | 1000010077  | LED MODULE (Yellow) MK2 120VAC 127MM         |                   |
| UGL      | 1000010078  | LED MODULE (Green) MK2 120VAC 127MM          |                   |
| UGL      | 10000100931 | LED MODULE (L/White) - MK2 120VAC 127MM      |                   |

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| Supplier                                | Part No    | Product/Description                               | Condition/Remarks |
|---|------------|---|-------------------|
| UGL                                     | 1000010843 | LED MODULE (Green) MK2 12VDC 127MM MICROLOK       |                   |
| UGL                                     | 1000010844 | LED MODULE (Yellow) MK2 12VDC 127MM MICROLOK      |                   |
| UGL                                     | 1000010845 | LED MODULE(Red) MK2 12VDC 127MM MICROLOK          |                   |
| UGL                                     | 1000010846 | LED MODULE (White) MK2 12VDC 127MM MICROLOK       |                   |
| UGL                                     | 1000455875 | LED MODULE (Light Blue) MK2 12VDC 127MM MICKL     |                   |
| UGL                                     | 1000010242 | LED RETROKIT (Green) - 127MM 12VDC MLK UGL        |                   |
| UGL                                     | 1000010243 | LED RETROKIT (Yellow) - 127MM 12VDC MLK UGL       |                   |
| UGL                                     | 1000010244 | LED RETROKIT (Red) - 127MM 12VDC MLK UGL          |                   |
| UGL                                     | 1000010245 | LED RETROKIT (White) - 127MM 12VDC MLK UGL        |                   |
| UGL                                     | 1000010434 | LED RETRO KIT (Red) 127MM 12V ALDRIDG MICROLC     |                   |
| UGL                                     | 1000389911 | LED RETRO KIT (Yellow) 127MM 12V ALDRIDG.MICROLC  |                   |
| UGL                                     | 1000455954 | LED RETRO KIT (Light Blue) 127MM 12V MIC ALDR     |                   |
| UGL                                     | 1000475322 | LED RETRO KIT (White Arrow) 127MM 12VDC MICKL UGL |                   |
| <b>UGL Limited – FL-03 LED Signal *</b> |            |   |                   |
| UGL                                     | 1000451826 | FL-03 (RED) LED Signal (Low Current Version)      |                   |
| UGL                                     | 1000010307 | FL-03 (RED) LED Signal (High Current Version)     |                   |
| <b>Metwest Tilting Signal *</b>         |            |   |                   |
| Metwest Engineering Pty Ltd             | 2234       | Tilting Signal Mast - <3.5m height                |                   |

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| Supplier   | Part No  | Product/Description                                 | Condition/Remarks         |
|--|----------|---|---------------------------|
| Metwest Engineering Pty Ltd  | 2235     | Tilting Signal Mast - <4.5m height                  |                           |
| Metwest Engineering Pty Ltd  | 2236     | Tilting Signal Mast - <5.5m height                  |                           |
| Metwest Engineering Pty Ltd  | 2253     | Base suitable up to 3.5m height Tilting Signal Mast |                           |
| Metwest Engineering Pty Ltd  | 2254     | Base suitable up to 4.5m height Tilting Signal Mast |                           |
| Metwest Engineering Pty Ltd  | 2286     | Base suitable up to 5.5m height Tilting Signal Mast |                           |
| 'Aldridge' RL400A-x 125mm Subsidiary LED Short range (nominal 200m) -120v AC*      |          |   |                           |
| Aldridge Railway   | RL400A-1 | RED   |                           |
| Aldridge Railway   | RL400A-2 | YELLOW  |                           |
| Aldridge Railway   | RL400A-3 | GREEN   |                           |
| Aldridge Railway   | RL400A-4 | WHITE   |                           |
| Aldridge Railway   | RL400A-5 | BLUE  |                           |
| 'Aldridge' RL400S-x 125mm Subsidiary LED Short range (nominal 150m) – 120v AC*     |          |   |                           |
| Aldridge Railway   | RL400S-1 | RED   | Not suitable for Microlok |
| Aldridge Railway   | RL400S-2 | YELLOW  |                           |
| Aldridge Railway   | RL400S-3 | GREEN   |                           |
| Aldridge Railway   | RL400S-4 | WHITE   |                           |
| Aldridge Railway   | RL400S-5 | BLUE  |                           |
| Aldridge Railway   | RL400S-6 | BLUE/WHITE  |                           |
| 'Aldridge' RL570-X 200mm Medium Range Mainline Microlok LED (nominal 600m) 12V DC* |          |   |                           |
| Aldridge Railway   | RL570-1  | RED   | Suitable for Microlok     |
| Aldridge Railway   | RL570-2  | YELLOW  |                           |

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| Supplier   | Part No  | Product/Description              | Condition/Remarks     |
|--|----------|----------------------------------|-----------------------|
| Aldridge Railway   | RL570-3  | GREEN                            |                       |
| Aldridge Railway   | RL570-4  | WHITE                            |                       |
| <b>'Aldridge' RL570S-x 200mm Short range Microlok (nominal 150m) 12V DC*</b>                                 |          |                                  |                       |
| Aldridge Railway   | RL570S-1 | RED                              | Suitable for Microlok |
| Aldridge Railway   | RL570S-2 | YELLOW                           |                       |
| Aldridge Railway   | RL570S-3 | GREEN                            |                       |
| Aldridge Railway   | RL570S-4 | WHITE                            |                       |
| <b>'Aldridge' RL550-x 125mm Subsidiary LED (nominal 200m) 12V DC*</b>  |          |                                  |                       |
| Aldridge Railway   | RL550-1  | RED                              | Suitable for Microlok |
| Aldridge Railway   | RL550-2  | YELLOW                           |                       |
| Aldridge Railway   | RL550-3  | GREEN                            |                       |
| Aldridge Railway   | RL550-4  | WHITE                            |                       |
| <b>'Aldridge' RL55xV/Hx Stencil Route Indicator SRI 2 Aspect short range (nominal 50m) 120V AC*</b>          |          |                                  |                       |
| Aldridge Railway   | RL551Vx  | WHITE                            | Vertical              |
| Aldridge Railway   | RL552H   | WHITE                            | Horizontal            |
| <b>'Aldridge' RL55xMV/Hx Stencil Route Indicator SRI Microlok 2 Aspect short range (nominal 50m) 12V DC*</b> |          |                                  |                       |
| Aldridge Railway   | RL551MVx | WHITE                            | Vertical              |
| Aldridge Railway   | RL552MH  | WHITE                            | Horizontal            |
| <b>Aldridge' RL503-X 200mm LED *</b>   |          |                                  |                       |
| Aldridge Railway   | RL503-1  | 200mm Red Mainline LED module    |                       |
| Aldridge Railway   | RL503-2  | 200mm Yellow Mainline LED module |                       |

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|---|------------|---------------------------------|---------------------------|--|
| Aldridge Railway  | RL503-3    | 200mm Green Mainline LED module |                           |  |
| 'Aldridge' RL403-x 200mm Main Line LED Signal Medium range (nominal 500m) 12VAC/12VDC * |            |                                 |                           |  |
| Aldridge Railway  | RL403-1 V1 | RED                             | Not suitable for Microlok |  |
| Aldridge Railway  | RL403-2 V1 | YELLOW                          |                           |  |
| Aldridge Railway  | RL403-3 V1 | GREEN                           |                           |  |
| Aldridge Railway  | RL403-4 V1 | WHITE                           |                           |  |
| 'Aldridge' RL403L-x 200mm Mainline LED Long Range (nominal 1500m) 120v AC*              |            |                                 |                           |  |
| Aldridge Railway  | RL403L-1   | RED                             | Not suitable for Microlok |  |
| Aldridge Railway  | RL403L-2   | YELLOW                          |                           |  |
| Aldridge Railway  | RL403L-3   | GREEN                           |                           |  |
| Aldridge Railway  | RL403L-4   | WHITE                           |                           |  |
| 'Aldridge' RL495 Repeater Signal (4 White Lights) (nominal 600m) 120V AC*               |            |                                 |                           |  |
| Aldridge Railway  | RL495      | WHITE                           | Not suitable for Microlok |  |
| 'Aldridge' RL495M Repeater Signal (4 White Lights) Microlok (nominal 600m) 120V AC*     |            |                                 |                           |  |
| Aldridge Railway  | RL495M     | WHITE                           | Suitable for Microlok     |  |
| "Aldridge' RL400-X 125mm Subsidiary LED signal short range (nominal 200m) 12VAC/12VDC*  |            |                                 |                           |  |
| Aldridge Railway  | RL400-1 V1 | RED                             | Not suitable for Microlok |  |
| Aldridge Railway  | RL400-2 V1 | YELLOW                          |                           |  |
| Aldridge Railway  | RL400-3 V1 | GREEN                           |                           |  |
| Aldridge Railway  | RL400-4 V1 | WHITE                           |                           |  |
| Aldridge Railway  | RL400-5 V1 | BLUE                            |                           |  |

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|---|------------|--|---------------------------|
| Aldridge Railway  | RL400-6 V1 | BLUE/WHITE                                   |                           |
| Aldridge Railway  | PT-0610    | Transformer 120VAC/12VAC 30VA                |                           |
| 'Aldridge' RL500s-x125mm Subsidiary LED short range (nominal 150m) *                  |            |  |                           |
| Aldridge Railway  | RL500S-1   | RED  | Not suitable for Microlok |
| Aldridge Railway  | RL500S-2   | YELLOW                                       |                           |
| Aldridge Railway  | RL500S-3   | GREEN  |                           |
| Aldridge Railway  | RL500S-4   | WHITE  |                           |
| Aldridge Railway  | RL500S-4LA | WHITE (LEFT ARROW MASK) – Nominal range 20m  | Suitable for Microlok     |
| Aldridge Railway  | RL500S-4RA | WHITE (RIGHT ARROW MASK) – Nominal range 20m |                           |
| Aldridge Railway  | RL500S-5   | BLUE   | Not suitable for Microlok |
| Aldridge Railway  | RL500S-6   | BLUE/WHITE                                   |                           |
| 'Aldridge' RL500M-x 125mm Subsidiary LED Medium range (nominal 500m) 12VDC and 24VDC* |            |  |                           |
| Aldridge Railway  | RL500M-1   | RED  | Not suitable for Microlok |
| Aldridge Railway  | RL500M-2   | YELLOW                                       |                           |
| Aldridge Railway  | RL500M-3   | GREEN  |                           |
| Aldridge Railway  | RL500M-4   | WHITE  |                           |
| Aldridge Railway  | RL500M-5   | BLUE   |                           |
| Aldridge Railway  | RL500M-6   | BLUE/WHITE                                   |                           |
| 'Aldridge' RL503M-x 200mm Mainline LED MEDIUM range (nominal 500m) 12VDC and 24VDC*   |            |  |                           |
| Aldridge Railway  | RL503M-1   | RED  | Not suitable for Microlok |
| Aldridge Railway  | RL503M-2   | YELLOW                                       |                           |

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|--|-----------|---------------------|--|
| Aldridge Railway   | RL503M-3  | GREEN               |  |
| Aldridge Railway   | RL503M-4  | WHITE               |  |
| <b>'Aldridge' RL503I-x 200mm Mainline LED INTERMEDIATE range (nominal 1000m) 12VDC and 24VDC*</b>      |           |                     |  |
| Aldridge Railway   | RL503I-1  | RED                 | Suitable for Microlok                  |
| Aldridge Railway   | RL503I-2  | YELLOW              |  |
| Aldridge Railway   | RL503I-3  | GREEN               |  |
| Aldridge Railway   | RL503I-4  | WHITE               |  |
| <b>'Aldridge' RL503L-x 200mm Mainline LED LONG range (nominal 1500m) 12VDC and 24VDC*</b>              |           |                     |  |
| Aldridge Railway   | RL503L-1  | RED                 | Suitable for Microlok                  |
| Aldridge Railway   | RL503L-2  | YELLOW              |  |
| Aldridge Railway   | RL503L-3  | GREEN               |  |
| Aldridge Railway   | RL503L-4  | WHITE               |  |
| <b>'Aldridge' RL526M-xx Mini Multilight Route Indicator Microlok Short Range (nominal 50m) 12V DC*</b> |           |                     |  |
| Aldridge Railway   | RL526M-XX | WHITE               | xx' represents the required characters |
| <b>'Aldridge' RL526-xx Mini Multilight Route Indicator Short Range (nominal 50m) 120V AC*</b>          |           |                     |  |
| Aldridge Railway   | RL526-XX  | WHITE               | xx' represents the required characters |
| <b>'Aldridge' RL620-x Short Range Theatre Route Indicator (TRI) (nominal 250m) 120V AC*</b>            |           |                     |  |
| Aldridge Railway   | RL620-x   | WHITE               | 'x' represents the required characters |
| <b>'Aldridge' RL620M-x Short Range Theatre Route Indicator (TRI) Microlok (nominal 250m) 12V DC*</b>   |           |                     |  |
| Aldridge Railway   | RL620M-x  | WHITE               | 'x' represents the required characters |
| <b>'Aldridge' R999-X105x Medium Range Turnout Repeater TOR (nominal 600m) 120V AC*</b>                 |           |                     |  |

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|--|--------------------|---|-------------------------|
| Aldridge Railway   | R999-X1053         | WHITE – LH                                  |                         |
| Aldridge Railway   | R999-X1054         | WHITE – RH                                  |                         |
| Aldridge Railway   | R999-X1055         | WHITE – LH + RH                             |                         |
| 'Aldridge' R999-X105xM Medium Range Turnout Repeater TOR Microlok (nominal 600m) 12V DC* |                    |   |                         |
| Aldridge Railway   | R999-X1053M        | WHITE – LH                                  |                         |
| Aldridge Railway   | R999-X1054M        | WHITE – RH                                  |                         |
| Aldridge Railway   | R999-X1055M        | WHITE – LH + RH                             |                         |
| Aldridge Railway   | PS0180             | Power Supply LED – 12VAC/12VDC Input        | For 120V AC Signals     |
| Aldridge Railway   | PT0610             | Transformer 120VAC Input /12VAC Output 30VA |                         |
| 'ART' Lamp Proving Modules (LPM) *   |                    |   |                         |
| Australian Rail Technology   | 4212-1000          | 24v DC Lamp Proving Module                  |                         |
| Australian Rail Technology   | XP3510-1000        | 50v DC Lamp Proving Module                  |                         |
| 2.2      Communication items related to signalling system                                |                    |   |                         |
| Kingfisher Telemetry Equipment *   |                    |   |                         |
| Maximation Pty Ltd   | BA-4 / BA-4-PLUS   | 4 Slot backplane                            |                         |
| Maximation Pty Ltd   | BA-40 / BA-40-PLUS | 4 Slot backplane                            |                         |
| Maximation Pty Ltd   | BA-6 / BA-6-PLUS   | 6 Slot backplane                            |                         |
| Maximation Pty Ltd   | BA-12 / BA-12-PLUS | 12 Slot backplane                           |                         |
| Maximation Pty Ltd   | PS-12-0 / PS-12-C  | AC Power Supply Module                      | PS-12 supersedes PS-11. |

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| Supplier           | Part No           | Product/Description                           | Condition/Remarks  |
|--------------------|-------------------|---|--|
| Maximation Pty Ltd | PS-22-0 / PS-22-C | DC Power Supply Module                        | PS-22 supersedes PS-21.  |
| Maximation Pty Ltd | CP-12             | Processor                                     | CP-12 supersedes CP-11. CP-12 must use firmware v1.48d or later        |
| Maximation Pty Ltd | MC-12             | Communications Module                         | MC-12 supersedes MC-11. MC-12 must use firmware 113 or later           |
| Maximation Pty Ltd | PC-1              | Power & Processor Module                      | The PC-1 can only be installed on 4-slot backplane (BA-4 / BA-4-PLUS). |
| Maximation Pty Ltd | A4                | Ethernet SFP Fibre Optic Interface            | A4 supersedes A3   |
| Maximation Pty Ltd | D                 | Dial-up Modem (PSTN) V34 33.6 kbps            |  |
| Maximation Pty Ltd | F                 | Fiber Optic Interface                         |  |
| Maximation Pty Ltd | I                 | Isolated Serial                               |  |
| Maximation Pty Ltd | L                 | Private Line or Analogue Radio Interface      |  |
| Maximation Pty Ltd | T4                | Ethernet RJ45 Copper – 10/100 Mbps            |  |
| Maximation Pty Ltd | DI-5              | Digital DC Input Module, 16 Channel           |  |
| Maximation Pty Ltd | DI-10             | Digital AC or DC Input Module, 16 Channel     |  |
| Maximation Pty Ltd | DO-1              | Digital Relay Output Module, NO/NC, 8 Channel |  |
| Maximation Pty Ltd | DO-2              | Digital Relay Output, NO, 16 Channel          |  |
| Maximation Pty Ltd | DO-6              | Digital Relay Driver Output                   |  |
| Maximation Pty Ltd | TEL-REL-002       | Relay Output Board for DO-6                   |  |

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|---|---------------------------------|--|--|
| Maximation Pty Ltd                                    | Genisys Slave Driver            | CP-12 Firmware Driver  | Version 7                              |
| Maximation Pty Ltd                                    | Genisys Master Driver           | CP-12 Firmware Driver  | Version 2                              |
| Maximation Pty Ltd                                    | Toolbox32                       | Configuration software   | Version 2.4                            |
| Maximation Pty Ltd                                    | Kingfisher Plus Hardware Manual | Documentation  | V7.23 or later - Device Specifications |
| ‘Optical Systems Design’ OSD 1250 Fibre Optic Modem * |                                 |  |  |
| Optical systems Design Pty Ltd                        | OSD1250                         | 850nm multimode  |  |
|   | OSD1250L                        | 1310nm multimode or single mode  |  |
| RuggedCom RS400 Server – Ethernet Switch *            |                                 |  |  |
| Siemens   | Ruggedcom RS400                 | Server- Ethernet Switch  |  |
| 'Tranzeo' TR-902 Radio for Vital Signalling *         |                                 |  |  |
| Comnet Solutions Pty Ltd                              | TR-902-11w                      | 900 MHz radio modem DSSS with 11dB panel antenna                         |  |
| Comnet Solutions Pty Ltd                              | TR-902-Nw                       | 900MHZ radio modem DSSS with external N-female antenna connector         |  |
| Comnet Solutions Pty Ltd                              | TR-902-iw                       | 900 MHZ radio modem DSSS for internal use featuring a N-female connector |  |
| Comnet Solutions Pty Ltd                              | EDW-100                         | Serial to Ethernet converter   |  |
| Comnet Solutions Pty Ltd                              | TR-SUR-001                      | Power Over Ethernet adaptor  |  |

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|--|--------------------------|---|--|
| 'Westermo' TD36 (485) LV Modem *       |                          |   |  |
| Madison Technologies Pty Ltd           | 3618-0010                | Industrial Backup PSTN and Leased line modem  |  |
| 'RuggedCom' RX1500 Switch and Router * |                          |   |  |
| Siemens                                | RX1500                   | Ruggedcom Switch and Router   |  |
| IMAC Telemetry System *                |                          |   |  |
| AMP Control Pty Ltd                    | 120964                   | IMAC Controller   |  |
| AMP Control Pty Ltd                    | 171571                   | IMAC2 Controller  |  |
| AMP Control Pty Ltd                    | 121905                   | End of Line (EOL) Module  |  |
| AMP Control Pty Ltd                    | 101495                   | DI8 Input Module  |  |
| AMP Control Pty Ltd                    | 101498                   | RO4 Output Module   |  |
| RuggedCom RS900G – Ethernet Switch *   |                          |   |  |
| Siemens                                | 6GK6090-0GS21-0BA0-Z A05 | RS900G switch 24V DC Power supply, Din rail mount, Dual 1000LX Single mode SC 1310nm 10km |  |
| Siemens                                | 6GK6090-0GS21-0BA0-Z A06 | RS900G switch 24V DC Power supply, Din rail mount, Dual 1000LX Single mode SC 1310nm 25km |  |
| Siemens                                | Firmware 4.3.5           | Ruggedcom Operating software (ROS)  | Firmware Versions prior to ROS v4.3.5 are NOT to be used.              |
| Siemens                                | Bootware 4.0.0           | Bootware  | Bootware version compatible with Firmware version 4.3.5 shall be used. |

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|---|----------------------------|--|-------------------|
| <b>Westermo Industrial switch range *</b> |                            |  |                   |
| Westermo                                  | Lynx L210-F2G-12VDC        | Managed Ethernet Switch – 12v                                    |                   |
| Westermo                                  | Lynx L210-F2G              | Managed Ethernet Switch – 24v                                    |                   |
| Westermo                                  | Lynx L208-F2G-S2           | Managed Device Server Switch                                     |                   |
| Westermo                                  | RFI-219-F4G-T7G            | Industrial Routing Switch  |                   |
| Westermo                                  | RedFox-5528-E-F16G-T12G-LV | 19" Managed Ethernet Switch                                      |                   |
| Westermo                                  | RedFox-5528-E-F14G-T24G-LV | 19" Managed Ethernet Switch                                      |                   |
| Westermo                                  | RedFox-5528-E-T28G-LV      | 19" Managed Ethernet Switch                                      |                   |
| Westermo                                  | RedFox-5528-E-F16G-T12G-HV | 19" Managed Ethernet Switch                                      |                   |
| Westermo                                  | RedFox-5528-E-F4G-T24G-HV  | 19" Managed Ethernet Switch                                      |                   |
| Westermo                                  | 1100-0531                  | Transceiver MLC2-DDM – 100Mbps – Multi mode                      |                   |
| Westermo                                  | 1100-0532                  | Transceiver SLC20-DDM, 100Mbps - Single mode up to 20km          |                   |
| Westermo                                  | 1100-0534                  | Transceiver SLC80-DDM, 100Mbps - Single mode >20km, maximum 80km |                   |

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|---|---------------|---|-------------------|
| <b>'Telstra' Iterra IP Satellite Modem *</b>  |               |   |                   |
| Telstra   | IMO29603xx    | Agilis ASM1200 Series Outdoor Satellite Modem |                   |
| Telstra   | 1132 Series   | 1.2m Satellite Dish Antenna                   |                   |
| Telstra   | E0001100-0001 | Block Uplink Converter BUC – Ku band 3W       |                   |
| Telstra   | E0001110-0001 | Frequency Converter - PLL LNB – Ku band       |                   |
| Telstra   | APSVAC24-185  | AC-DC Outdoor Power Module-<br>90-264VAC 187W |                   |
| Telstra   | E0002036-0001 | DC-DC Outdoor Power Module 36-76VDC 65W       |                   |
| Telstra   | E0002035-0001 | DC-DC Outdoor Power Module 12-36VDC 65W       |                   |
| <b>Westermo MRD-455-AU Industrial Cellular Router and ODW-700 series Fibre Optic Cable*</b> |               |   |                   |
| Westermo  | ODW-720-F1    | Point to Point Fibre Converter RS-232         |                   |
| Westermo  | ODW-720-F2    | Ring/Multidrop Fibre Converter RS-232         |                   |
| Westermo  | ODW-730-F1    | Point to Point Fibre Converter RS-422/485     |                   |
| Westermo  | ODW-730-F2    | Ring/Multidrop Fibre Converter RS422/485      |                   |
| Westermo  | MRD-455-AU    | Industrial Cellular Router                    |                   |
| <b>Network Switches/Routers/Modems</b>  |               |   |                   |
| Westermo  | 3616-0010     | EDW-120                                       |                   |
| Westermo  | 3621-0110     | DDW-120                                       |                   |
| Westermo  | 3642-0240     | DDW-226                                       |                   |
| Madison Technologies  | C Model 2155X | Cybertec Modem 2155X                          | 3G Compatible     |

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|----------------------|-----------------------------|---------------------------------------|--|
| Madison Technologies | C Model 2255X               | Cybertec Modem 2255X                  | 3G compatible.   |
| Madison Technologies | C Model 2455X               | Cybertec Modem 2455X                  | 4G Compatible, Preferred                                   |
| RAD                  | ASMi52                      | ASMi52 SHDSL modem                    |  |
| RAD                  | ASMi54                      | ASMi54 SHDSL modem                    |  |
| MOXA                 | Nport 5150                  | Nport 5150                            |  |
| MOXA                 | Nport 5250                  | Nport 5250                            |  |
| MOXA                 | Nport 5650                  | Nport 5650                            |  |
| MOXA <sup>\$</sup>   | ioLogik E2200               | ioLogik E2200 Series                  |  |
| Westermo             | SDW-550                     | Unmanaged Ethernet Switch             | Only to be used on limited Non-vital telemetry             |
| Westermo #           | RedFox-5528-T28G-LV         | 19" Rackmount Managed Ethernet Switch |  |
| Westermo #           | RedFox-5528-T28G-MV         | 19" Rackmount Managed Ethernet Switch |  |
| Westermo #           | RedFox-5528-E-T28G-MVa      | 19" Rackmount Managed Ethernet Switch | Selective sales approval, contact Westermo before ordering |
| Westermo #           | RedFox-5528-F4G-T24G-LV     | 19" Rackmount Managed Ethernet Switch |  |
| Westermo #           | RedFox-5528-E-F4G-T24G-MVa  | RedFox-5528-E-F4G-T24G-MVa            | Selective sales approval, contact Westermo before ordering |
| Westermo #           | RedFox-5528-F16G-T12G-LV    | 19" Rackmount Managed Ethernet Switch |  |
| Westermo #           | RedFox-5528-E-F16G-T12G-MVa | 19" Rackmount Managed Ethernet Switch | Selective sales approval, contact Westermo before ordering |

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| Supplier  | Part No            | Product/Description                                | Condition/Remarks                     |
|---|--------------------|--|---------------------------------------|
| Westermo #  | RFI-219-T3G        | Industrial Routing Switch                          |                                       |
| Westermo #  | RFI-211-T3G        | Industrial Routing Switch                          |                                       |
| Westermo #  | RFI-215-F4G-T3G    | Industrial Routing Switch                          |                                       |
| Westermo #  | RFI-207-F4G-T3G    | Industrial Routing Switch                          |                                       |
| Westermo #  | RFI-119-F4G-T7G    | Managed Ethernet Switch                            |                                       |
| Westermo #  | RFI-211-F4G-T7G    | Industrial Routing Switch                          |                                       |
| Westermo #  | RFI-111-F4G-T7G    | Managed Ethernet Switch                            |                                       |
| Westermo #  | RFI-219-F4G-T7G-F8 | Industrial Routing Switch                          |                                       |
| Westermo #  | L108-F2G-S2        | Managed Device Server Switch                       |                                       |
| Westermo #  | L210-F2G           | Managed Ethernet Switch with Routing Functionality |                                       |
| <b>Netmodule Railway Router #</b>                             |                    |  |                                       |
| Avvero Solutions (Supplier - NSW)<br>Netmodule (Manufacturer) | NB3701-L-G         | Netmodule NB3701 railway router                    | Approved for 12 months trial for ATMS |
| Avvero Solutions (Supplier - NSW)<br>Netmodule (Manufacturer) | NB1601             | Netmodule NB1601 Industrial Router                 |                                       |
| <b>Westermo RT-320 *</b>                                      |                    |  |                                       |
| Westermo  | lbex-RT-320-LV     | Wireless LAN Node                                  | 24Vdc                                 |
| Westermo  | lbex-RT-320-HV     | Wireless LAN Node                                  | 72Vdc – 110Vdc                        |

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|---|-------------------|--|---|
| <b>'Peak Fibre' Wall Mount Fibre Enclosure*</b> |                   |  |   |
| Peak Fibre                                      | FB-1-2P           | Wall Mount Fibre Enclosure – 2 Panel   |   |
| Peak Fibre                                      | FB-2-4P           | Wall Mount Fibre Enclosure – 4 Panel   |   |
| <b>RFI Technology Solutions - 4G Antenna®</b>   |                   |  |   |
| RFI Technology Solution                         | CD8295            | 5G LTE 6.5dBi Collinear Antenna (698-3800 MHz)                                   | Standard Installation Normal Signal (RSRP > -110dB)   |
| RFI Technology Solution                         | COL8195           | 5G LTE 6.5dBi Collinear Antenna (698-3800 MHz)                                   | Standard Installation Normal Signal (RSRP > -110dB)   |
| RFI Technology Solution                         | LPDA7038-11-10SMA | 5G LTE 11dBi LPDA Directional Antenna (700-3800 MHz); 10m SMA(M)                 | Low Signal Area (RSRP <= -110dB) OR (RSRQ <= -15dB)   |
| RFI Technology Solution                         | CSM550-5M-SMA     | 5GRN3.6dBi Ultra Compact Antenna (617-5925 MHz); 5m LL100 SMA(M)                 | For specific site conditions such as:<br>-Restricted space<br>-Vandal resistance needed   |
| RFI Technology Solution                         | LTE-MLP-1.5M-SMA  | LTE MIMO Low Profile Antenna (698-2700 MHz); 2 X 1.5m SMA(M)                     | For specific site conditions such as:<br>-Restricted space<br>-Vandal resistance needed   |
| RFI Technology Solution                         | LTE-XPOL-002-5G   | 5G LTE 2x2 MIMO Directional Panel Antenna (698-3800 MHz); 10m Twin HFT195 SMA(M) | Solutions4Replacement of existing LTE-XPOL-002-5G antenna<br><br>An alternative antenna from this list may be selected based on the site conditions |

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|--|------------|--|--|
| <b>UHS Systems Pty Ltd #</b>                               |            |  |  |
| UHS System Pty Ltd   | UC-400     | Ultralink Communicators                            | Applicable only for Telstra Remote Telemetry use |
| UHS System Pty Ltd   | UC-440     | Ultralink Communicators                            |  |
| Supplier contact   | Part No    | Product/Description                                | Condition/Remarks                                |
| <b>2.3 Points</b>  |            |  |  |
| <b>Westinghouse Signals Australia Points Machine 84M *</b> |            |  |  |
| Siemens  | 1335101301 | 110/120v AC 84M Mk111                              |  |
| Siemens  | 1335101302 | 110v DC 84M Mk111                                  |  |
| Siemens  | 1335101401 | 110/120v AC D84M Mk111 Dual-Control                |  |
| Siemens  | 1335101402 | 110/120v AC D84M Mk111 Dual-Control                |  |
| Siemens  | 1335101408 | 110v DC D84M Mk111 Dual-Control                    |  |
| Siemens  | 1335101406 | 24v DC D84M Mk111 Dual-Control                     |  |
| Siemens  | 1335101407 | 24v DC D84M Mk111 Dual-Control                     |  |
| Siemens  | 1335101404 | 24v DC D84M Mk111 Dual-Control                     |  |
| Siemens  | 1335101409 | 24v DC D84M Mk111 Dual-Control, Shorting Detection |  |
| Siemens  | 1335101501 | 110/120v AC T84M Mk111 Trailable                   |  |
| Siemens  | 1335101601 | 110/120v AC TD84M Mk111 Trailable, Dual-Control    |  |
| Siemens  | 1335101603 | 24v DC TD84M Mk111 Trailable, I1291 Dual-Control   |  |
|  | 1335101602 | 24v DC TD84M Mk111 Trailable, Dual-Control         |  |

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|--|------------|---|-------------------|
| <b>'Westinghouse Signals Australia' Points Machine M3A *</b>             |            |   |                   |
| Siemens  | M31376     | 110v AC M3A No internal contactor.          |                   |
| Siemens  | M31377     | 110v AC M3A Single Detection.               |                   |
| Siemens  | M31504     | 110v AC M3A                                 |                   |
| Siemens  | M28866     | 110v DC M3A                                 |                   |
| Siemens  | M29373     | 110v DC M3A                                 |                   |
| Siemens  | M29374     | 110v DC M3A                                 |                   |
| Siemens  | M29375     | 110v DC M3A                                 |                   |
| Siemens  | M29376     | 110v DC M3A                                 |                   |
| Siemens  | M29377     | 110v DC M3A                                 |                   |
| Siemens  | M30830     | 120v AC M3A                                 |                   |
| Siemens  | M30830Ax   | 120v AC M3A                                 |                   |
| <b>'Westinghouse Rail Systems Australia' ClawLock Points Mechanism *</b> |            |   |                   |
| Siemens  | 4070S5     | ClawLock Housing                            |                   |
| Siemens  | 4330332402 | Housing Mounting Bolt (M20 x 80 thin head). |                   |
| Siemens  | 3330393901 | Locking Claw                                |                   |
| Siemens  | 3330204601 | Pin Assembly for locking claw               |                   |
| Siemens  | 801S5      | Mechanism Cover                             |                   |
| Siemens  | 2330333501 | Switchblade Bracket                         |                   |
| Siemens  | 4330332401 | Bracket Mounting Bolt (M20 x 90 thin head). |                   |
| Siemens  | 4330333601 | Adaptor for switchblade bracket             |                   |

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| Supplier | Part No    | Product/Description                         | Condition/Remarks |
|----------|------------|---|-------------------|
| Siemens  | 4330337001 | Packing Set                                 |                   |
| Siemens  | 1330204807 | Operating Bar (Complete assembly)           |                   |
| Siemens  | 684S5      | ClawLock Housing                            |                   |
| Siemens  | 4330332402 | Housing Mounting Bolt (M20 x 80 thin head). |                   |
| Siemens  | 3330393901 | Locking Claw                                |                   |
| Siemens  | 3330204601 | Pin Assembly for locking claw               |                   |
| Siemens  | 801S5      | Mechanism Cover                             |                   |
| Siemens  | 2330204706 | Switchblade Bracket                         |                   |
| Siemens  | 2330204702 |   |                   |
| Siemens  | 4330332401 | Bracket Mounting Bolt (M20 x 90 thin head). |                   |
| Siemens  | 3330322203 | Adaptor for switchblade bracket             |                   |
| Siemens  | 4330322501 | Packing Set                                 |                   |
| Siemens  | 1330204807 | Operating Bar (Complete assembly)           |                   |
| Siemens  | 1330204801 |   |                   |
| Siemens  | 684S5      | ClawLock Housing                            |                   |
| Siemens  | 4330332402 | Housing Mounting Bolt (M20 x 80 thin head). |                   |
| Siemens  | 3330393901 | Locking Claw                                |                   |
| Siemens  | 3330204601 | Pin Assembly for locking claw               |                   |
| Siemens  | 801S5      | Mechanism Cover                             |                   |
| Siemens  | 2330204702 | Switchblade Bracket                         |                   |
| Siemens  | 4330332401 | Bracket Mounting Bolt (M20 x 90 thin head). |                   |

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| Supplier | Part No                         | Product/Description                              | Condition/Remarks |
|----------|---------------------------------|--|-------------------|
| Siemens  | 3330322203                      | Adaptor for switchblade bracket                  |                   |
| Siemens  | 4330322501                      | Packing Set                                      |                   |
| Siemens  | 1330204802                      | Operating Bar (Complete assembly)                |                   |
| Siemens  | Zu60kg asymmetric rail switches |  |                   |
| Siemens  | 684S5                           | ClawLock Housing                                 |                   |
| Siemens  | 5278/20-80                      | Housing Mounting Screw (M20 x 80 c'sink socket). |                   |
| Siemens  | 5278/20-90                      | Housing Mounting Screw (M20 x 90 c'sink socket). |                   |
| Siemens  | 951S5-LH                        | Locking Claw                                     |                   |
| Siemens  | 951S5-RH                        |  |                   |
| Siemens  | 3330406201                      | Locking claw pin                                 |                   |
| Siemens  | 4330324501                      | Locking claw pin tab                             |                   |
| Siemens  | 801S5                           | Mechanism Cover                                  |                   |
| Siemens  | 2330328001                      | Switchblade Bracket                              |                   |
| Siemens  | 4330325101                      | Bracket Mounting Bolt                            |                   |
| Siemens  | 4330327901                      | Shim Set   |                   |
| Siemens  | 1330204801                      | Operating Bar (Complete assembly)                |                   |
| Siemens  | 1330204803                      | Operating Bar (Complete assembly)                |                   |
| Siemens  | 684S5                           | ClawLock Housing                                 |                   |
| Siemens  | 5278/20-80                      | Housing Mounting Screw (M20 x 80 c'sink socket). |                   |
| Siemens  | 951S5-LH                        | Locking Claw                                     |                   |
| Siemens  | 951S5-RH                        |  |                   |

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| Supplier  | Part No    | Product/Description                              | Condition/Remarks |
|---|------------|--|-------------------|
| Siemens   | 3330406201 | Locking claw pin                                 |                   |
| Siemens   | 4330324501 | Locking claw pin tab                             |                   |
| Siemens   | 801S5      | Mechanism Cover                                  |                   |
| Siemens   | 2330328001 | Switchblade Bracket                              |                   |
| Siemens   | 4330325101 | Bracket Mounting Bolt                            |                   |
| Siemens   | 4330327901 | Shim   |                   |
| Siemens   | 1330204802 | Operating Bar (Complete assembly)                |                   |
| Siemens   | 684S5      | ClawLock Housing                                 |                   |
| Siemens   | 5278/20-80 | Housing Mounting Screw (M20 x 80 c'sink socket). |                   |
| Siemens   | 951S5-LH   | Locking Claws left and right hand.               |                   |
| Siemens   | 951S5-RH   |  |                   |
| Siemens   | 3330406201 | Locking claw pin                                 |                   |
| Siemens   | 4330324501 | Locking claw pin tab                             |                   |
| Siemens   | 801S5      | Mechanism Cover                                  |                   |
| Siemens   | 2330324801 | Switchblade Bracket                              |                   |
| Siemens   | 4330325101 | Bracket Mounting Bolt                            |                   |
| Siemens   | 4330327901 | Shim   |                   |
| Siemens   | 1330204809 | Operating Bar (Complete assembly)                |                   |
| <b>'Fortress' Lever lock &amp; Release Switch *</b> |            |  |                   |
| Ansaldo STS   | CL A1      | Basic interlocks and Keys                        |                   |
| Ansaldo STS   | CL B2      | Solenoid Controlled Interlock Unit               |                   |

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| Supplier   | Part No          | Product/Description                                 | Condition/Remarks |
|--|------------------|---|-------------------|
| <b>Siemens Points Machine S700K *</b>              |                  |   |                   |
| Siemens  | C25106-A141-XX   | 110v DC 180mm throw, 110mm to 135mm blade movement. |                   |
| Siemens  | C25106- A141-XX  | 110v DC 150mm throw, 79mm to 90mm blade movement.   |                   |
| Siemens  | C25106-A202-XX # | 110v DC 180mm throw, 110mm to 135mm blade movement. |                   |
| Siemens  | C25106-A202-XX # | 24v DC 180mm throw, 110mm to 135mm blade movement.  |                   |
| <b>'Siemens' Point Blades Detector (ELP-319) *</b> |                  |   |                   |
| Siemens  | C25106-A202-A100 | End position Detector, 4 switches                   |                   |
| <b>Siemens' S700V In Bearer Point Machine *</b>    |                  |   |                   |
| Siemens  | A0-G1748-117     | Point RH T/O Size 1 in 15                           |                   |
| Siemens  | A0-G1748-199     | Point RH T/O Size 6100                              |                   |
| Siemens  | A0-G1748-217     | Point RH T/O Size R800                              |                   |
| Siemens  | A0-G1748-233     | Catchpoint RH T/O Size 6100                         |                   |
| Siemens  | A0-G1748-238     | Catchpoint RH T/O Size 6100                         |                   |
| Siemens  | A0-G1748-260     | SNX RH/LH T/O Size R800                             |                   |
| Siemens  | A0-G1748-299     | Point RH T/O Size R800                              |                   |
| Siemens  | A0-G1748-309     | Point LH T/O Size R800                              |                   |
| Siemens  | A0-G1748-336     | Point RH T/O Size 1 in 15                           |                   |
| Siemens  | A0-G1748-362     | Point RH T/O Size R1200                             |                   |
| Siemens  | A0-G1748-367     | Point LH T/O Size R1200                             |                   |

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| Supplier   | Part No  | Product/Description             | Condition/Remarks  |
|--|--|---------------------------------|--------------------|
| Siemens  | A0-G1748-368                                     | Point RH T/O Size 6100          |                    |
| Siemens  | A0-G1748-369                                     | Point LH T/O Size 6100          |                    |
| Siemens  | A0-G1748-376                                     | Point RH T/O Size R300          |                    |
| Siemens  | A0-G1748-377                                     | Point LH T/O Size R300          |                    |
| Siemens  | A0-G1748-392                                     | SNX RH/LH T/O Size R300         |                    |
| Siemens  | A0-G1748-394                                     | Point RH T/O Size R800          |                    |
| Siemens  | A0-G1748-435                                     | Point RH T/O Size R190          |                    |
| Siemens  | A0-G1748-438                                     | Point RH T/O Size R500          |                    |
| Siemens  | A0-G1748-448                                     | SNX RH/LH T/O Size R800         |                    |
| <b>Voestalpine SpheroLock Points Mechanism *</b> |  |                                 |                    |
| VAE  | Refer type approval certificate on ARTC extranet |                                 |                    |
| VAE  | Zu60kg asymmetric rail switches                  |                                 |                    |
| VAE  | J2800064   | Drive & Lock unit               |                    |
| VAE  |  | Central Unit 120/180 (J2800092) |                    |
| VAE  |  | Pressure head & bracket         |                    |
| VAE  |  | Switch blade bracket            |                    |
| VAE  |  | Stock rail attachment           |                    |
| VAE  | #  | WRSA M84 machine                |                    |
| VAE  |  | Operating Rod & Connector       | WRSA p/n 330431201 |

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| Supplier | Part No   | Product/Description                           | Condition/Remarks                |
|----------|---|---|----------------------------------|
| VAE      |   | 1 x 55mm shoulder rod,                        | WRSA p/n 4330423803              |
| VAE      |   | 2 x (Nyloc nut & washer) all M10              |                                  |
| VAE      |   | Drop Lug                                      | WRSA p/n 330422801               |
| VAE      |   | Spherical Washers M30 2 x convex, 2 x concave | WRSA p/n 4330371001 & 4330371002 |
| VAE      |   | & 4 x M30 hex nut (thin)                      |                                  |
| VAE      |   | Support Bracket                               | RH or LH WRSA p/n 2330215001     |
| VAE      | Zu60kg asymmetric rail switches                                       |   |                                  |
| VAE      | J2800066  | Drive & Lock unit                             |                                  |
| VAE      |   | Central Unit 65/110 (J2800094)                |                                  |
| VAE      |   | Pressure head & bracket                       |                                  |
| VAE      |   | Switch blade bracket                          |                                  |
| VAE      |   | Stock rail attachment                         |                                  |
| VAE      | #   | Drive rod assembly                            |                                  |
| VAE      |   | Operating Rod & Connector                     | WRSA p/n 330431201               |
| VAE      |   | 1 x 55mm shoulder rod,                        | WRSA p/n 4330423803              |
| VAE      |   | 2 x (Nyloc nut & washer) all M10              |                                  |
| VAE      |   | Drop Lug                                      |                                  |
| VAE      |   | Spherical Washers M30 2 x convex, 2 x concave | WRSA p/n 4330371001 & 4330371002 |
| VAE      |   | & 4 x M30 hex nut (thin)                      |                                  |
| VAE      |   | Support Bracket                               | RH or LH WRSA p/n 2330215001     |
| VAE      | Zu60kg wing rail, AS60 swing nose rail 1 in 12 to 1 in 18.5 crossing. |   |                                  |

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|---|--|---|---|
| VAE   | J2800067   | 180mm stroke, 110mm opening               |   |
| <b>Siemens Points Machine M23A *</b>  |  |   |   |
| Siemens   | Refer TA certificate for full list of approved items | <b>'Siemens' M23A MKIII Point Machine</b> | Refer TA Certificate NESA-S026 on ARTC extranet |
| <b>Siemens' Switchguard HLM MkII Point Lock and Detector Variants and HM MkII Point Detector Variants *</b> |  |   |   |
| Siemens   | 1570101408   | HLM2                                      |   |
| Siemens   | 1570101409   | HLM1                                      |   |
| Siemens   | 1570101410   | HLM                                       |   |
| Siemens   | 1570101303   | HLMX                                      |   |
| Siemens   | 1570101411   | HLM 2 Position Lock                       |   |
| Siemens   | 1570101310   | HLMX                                      |   |
| Siemens   | 1570101416   | HLM2                                      |   |
| Siemens   | 1570101417   | HLM1                                      |   |
| Siemens   | 1570101418   | HLM                                       |   |
| Siemens   | 1570100901   | HMX1                                      |   |
| Siemens   | 1570100902   | HMX2                                      |   |
| Siemens   | 1570100903   | HMX2 Special Detection Bars               |   |
| Siemens   | 1570100904   | HMX2                                      |   |
| Siemens   | 1570100905   | HMX2                                      |   |
| Siemens   | 1570100906   | HMX2                                      |   |

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|---|--|--|-------------------|
| Siemens   | 1570100907                             | HMX2   |                   |
| Siemens   | 1570100908                             | HMX2   |                   |
| Siemens   | 1570100909                             | HMX2   |                   |
| Siemens   | 1570100910                             | HMX  |                   |
| Siemens   | 1570100301                             | HM1  |                   |
| Siemens   | 1570100302                             | HM2  |                   |
| Siemens   | 1570100303                             | HM3  |                   |
| Siemens   | 1570100304                             | HM4  |                   |
| Siemens   | 1570100305                             | HM4 Special Detection Bar                    |                   |
| Siemens   | HLM MkII Retrofit Lock bar - Part list |  |                   |
| Siemens   | 3570203403                             | TWO POSITION LOCK                            |                   |
| Siemens   | 3570203402                             | SPECIAL DROP LUG - 28 mm Below Mounting face |                   |
| Siemens   | 3570203401                             | SPECIAL DROP LUG - 46 mm Below Mounting face |                   |
| <b>Vossloh Cogifer' Point Motor - MCEM91-27 *</b> |  |  |                   |
| Vossloh   | 878010208                              | MCEM91-27 EQUIPPED CASE                      |                   |
| Vossloh   | 878010022                              | MCEM91 CRANK GEARBOX                         |                   |
| Vossloh   | 878010014                              | MAGNETIC TORQUE LIMITER                      |                   |
| Vossloh   | 878010202                              | MCEM91-24 ELECTRICAL MOTOR 110V AC MONO      |                   |
| Vossloh   | 878010209                              | CHANGEOVER SWITCH MCEM91-27                  |                   |
| Vossloh   | 878010195                              | MCEM91-27 11 PINS CABLE WITH CONNECTOR       |                   |
| Vossloh   | 878010272                              | MCEM91-27 EQUIPPED HOOD RAL7046              |                   |

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|--|-----------|--|-------------------|
| Vossloh                                    | 878010205 | EQUIPPED DRIVING ARM MCEM91-27   |                   |
| Vossloh                                    | 878010174 | MCEM91-24 EQUIPPED FLANGE  |                   |
| Vossloh                                    | 392050034 | IDENTIFICATION PLATE MCEM91  |                   |
| Vossloh                                    | 878010191 | MCEM91 OPERATING COUNTER ASSEMBLY  |                   |
| Vossloh                                    | 455540002 | CRANK ASSEMBLY MCEM91-27   |                   |
| Vossloh                                    | 393060040 | MCME91-27 CHANGEOVER SWITCH COVER  |                   |
| <b>Siemens M23A MkIII points machine *</b> |           |  |                   |
| Siemens                                    | 101072    | M23A MK3 Point machine Brass Rotor Motor 110VAC 189:1 Double Cut wiring – Base machine without detection and lock bars |                   |
| Siemens                                    | 110416881 | M23A MK3 PM 110VAC 189:1 Complete with Detection and Lock Bars and Fortress Lock Mount                                 |                   |
| Siemens                                    | 113570090 | M23A MK3 PM 110VDC 189:1 Complete with Detection and Lock Bars and Fortress Lock Mount                                 |                   |
| Siemens                                    | 113570100 | M23A MK3 Point machine Permanent magnet 110V DC 189:1 double cut wiring – Base machine without detection and lock bars |                   |
| Siemens                                    | 102552    | M23A MK3 Split field motor 24v DC 360:1 Standard detection - Base machine without detection and lock bars              |                   |
| Siemens                                    | 113665997 | M23A MK3 SF 110VDC 189:1 Complete with Detection and Lock Bars and Fortress Lock Mount                                 |                   |
| Siemens                                    | 113665999 | M23A MK3 Point machine SF 110V DC 189:1 double cut wiring – Base machine without detection and lock bars               |                   |

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|-----------------------------|-----------|--|-------------------|
| Siemens                     | 101746    | M23A MK3 PM motor 24v DC 360:1 Standard detection - Base machine without detection and lock bars |                   |
| Lock Bar and Detection Rods |           |  |                   |
| Siemens                     | M29067    | Lock bar 76mm to 152mm (SWITCH)  |                   |
| Siemens                     | M31065    | Lock bar 25mm to 101mm (SNX)   |                   |
| Siemens                     | 100648    | Detection Rod 76mm to 152mm 3/4" BSW (SWITCH)  |                   |
| Siemens                     | 100858    | Detection Rod 76mm to 152mm SS M18 (SWITCH)  |                   |
| Siemens                     | 100652    | Detection Rod 25mm to 101mm 3/4" BSW (SNX)   |                   |
| Siemens                     | 100856    | Detection Rod 25mm to 101mm SS M18 (SNX)   |                   |
| Major Assembly              |           |  |                   |
| Siemens                     | 100495    | Circuit Controller Assembly Double Cut   |                   |
| Siemens                     | 335217501 | Motor Isolation Switch Assembly  |                   |
| Siemens                     | 520101202 | Motor Assembly 110Vac Brass Rotor  |                   |
| Siemens                     | 335217601 | Motor Clutch Assembly  |                   |
| Siemens                     | 335217002 | Transmission Gear Assembly 189:1   |                   |
| Siemens                     | 335217001 | Transmission Gear Assembly 360:1   |                   |
| Siemens                     | 102553    | Motor 24v DC Split Field   |                   |
| Siemens                     | 8090693   | Motor 110v DC Permanent Magnet   |                   |
| Siemens                     | 809696    | Motor 24v DC Permanent Motor   |                   |
| Siemens                     | 113666001 | Motor 110v DC Split Field  |                   |

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|--|------------|---------------------------------------|----------------------------------|
| <b>Unistar HR in-bearer points machine *</b>           |            |                                       |                                  |
| Voestalpine  | C-607287   | Locking unit compl.                   |                                  |
| Voestalpine  | C-607286   | Locking unit compl.                   |                                  |
| Voestalpine  | C-607349   | Locking unit cpl.*HR*NT*Frog*SH*ARTC  |                                  |
| Voestalpine  | C-607340   | Hydraulic unit*HR*ARTC                |                                  |
|  | C-610153   | Hydraulic unit*HR*120V DC*ARTC        |                                  |
| Voestalpine  | C-607338   | Wiring diagram 3. SE*ARTC             |                                  |
| Voestalpine  | C-607337   | Wiring diagram 2. SL*ARTC             |                                  |
| Voestalpine  | C-609903   | Wiring diagram 4. SE*ARTC 18.5        |                                  |
| Voestalpine  | C-609904   | Wiring diagram 2. SE*ARTC 10.5        |                                  |
| Voestalpine  | C-99646    | Hydraulic fluid*Plantolube*Polar 15 S |                                  |
| Voestalpine  | C-608983   | Hydraulic unit 24VDC                  |                                  |
| <b>Siemens' D150 Derailer &amp; C150 Crowder Mkl *</b> |            |                                       |                                  |
| Siemens  | 1330100201 | D150-Derailer                         | Right hand throw off             |
| Siemens  | 2330100301 | C150-Crowder                          |                                  |
| Siemens  | 1330100202 | D150-Derailer                         | Left hand throw off              |
| Siemens  | 1330100401 | C150-Crowder                          |                                  |
| Siemens  | 3330301211 | Coupling Rod Complete                 | For standard gauge               |
| Siemens  | 4330000201 | D150 - 16mm plate                     | For spike or screw fastened rail |
| Siemens  | 4330000202 | C150 - 16mm plate                     |                                  |
| Siemens  | 4330000204 | D150 - 20mm plate                     | For clip fastened rail           |

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|--|------------|--|----------------------------------|
| Siemens                                      | 4330000205 | C150 - 20mm plate  | For spike or screw fastened rail |
| Siemens                                      | 4330000207 | D150 - 32mm plate  |                                  |
| Siemens                                      | 4330000208 | C150 - 32mm plate  |                                  |
| Siemens                                      | 4330000210 | D150 - 36mm plate  | For clip fastened rail           |
| Siemens                                      | 4330000211 | C150 - 36mm plate  |                                  |
| Siemens' D150 Derailer & C150 Crowder MkII * |            |  |                                  |
| Siemens                                      | 1330100201 | Derail D150 RH includes derailer mechanism                 |                                  |
| Siemens                                      | 1330100202 | Derail D150 LH includes derailer mechanism                 |                                  |
| Siemens                                      | 2330100201 | Crowder C150 LH includes crowder mechanism                 |                                  |
| Siemens                                      | 2330100202 | Crowder C150 RH includes crowder mechanism                 |                                  |
| Siemens                                      | 3330100501 | D150 and C150 1600 Gauge RH Derail includes both mechanism |                                  |
| Siemens                                      | 3330100502 | D150 and C150 1600 Gauge LH Derail includes both mechanism |                                  |
| Siemens                                      | 3330100503 | D150 and C150 1435 Gauge RH Derail includes both mechanism |                                  |
| Siemens                                      | 3330100504 | D150 and C150 1435Gauge LH Derail includes both mechanism  |                                  |
| Siemens                                      | 3330100501 | D150 and C150 1600 Gauge RH Derail includes both mechanism |                                  |
| Siemens                                      | 3330100502 | D150 and C150 1600 Gauge LH Derail includes both mechanism |                                  |
| Siemens                                      | 3330100503 | D150 and C150 1435 Gauge RH Derail includes both mechanism |                                  |

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| Supplier  | Part No       | Product/Description                                       | Condition/Remarks |
|---|---------------|---|-------------------|
| Siemens   | 3330100504    | D150 and C150 1435Gauge LH Derail includes both mechanism |                   |
| Siemens   | 3330301211    | 1435mm gauge  |                   |
| Siemens   | 3330301210    | 1600mm gauge  |                   |
| Siemens   | 3330476406    | 1067mm gauge right side derailer                          |                   |
| Siemens   | 3330476405    | 1435mm gauge right side derailer                          |                   |
| Siemens   | 3330476404    | 1600mm gauge right side derailer                          |                   |
| Siemens   | 3330476403    | 1067mm gauge left side derailer                           |                   |
| Siemens   | 3330476402    | 1435mm gauge left side derailer                           |                   |
| Siemens   | 3330476401    | 1600mm gauge left side derailer                           |                   |
| <b>McLeod' FFD001 Fixed Train Derailer *</b>              |               |   |                   |
| McLeod Rail   | FFD001028-1RH | Derail RH Throw   |                   |
| McLeod Rail   | FFD001028-1LH | Derail LH Throw   |                   |
| McLeod Rail   | FFD001021     | Derailer Body   |                   |
| McLeod Rail   | FFD001008     | Derail Locking Bar  |                   |
| McLeod Rail   | FFD001019     | Flag Arm includes Warning Sign                            |                   |
| McLeod Rail   | FFD001028     | Derail Frame Body   |                   |
| <b>'W.C.Hayes' HBR-WCX &amp; HBL-WCX Derail/Crowder *</b> |               |   |                   |
| Bradken   | HB4R          | Right hand throw - Size 4                                 |                   |
| Bradken   | HB5R          | Right hand throw - Size 5                                 |                   |
| Bradken   | HB6R          | Right hand throw - Size 6                                 |                   |
| Bradken   | HB7R          | Right hand throw - Size 7                                 |                   |

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# - Product compliant to ARTC specification

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| Supplier  | Part No    | Product/Description                                      | Condition/Remarks |
|---|------------|--|-------------------|
| Bradken   | HB8R       | Right hand throw - Size 8                                |                   |
| Bradken   | HB4L       | Left hand throw - Size 4                                 |                   |
| Bradken   | HB5L       | Left hand throw - Size 5                                 |                   |
| Bradken   | HB6L       | Left hand throw - Size 6                                 |                   |
| Bradken   | HB7L       | Left hand throw - Size 7                                 |                   |
| Bradken   | HB8L       | Left hand throw - Size 8                                 |                   |
| Bradken   | HB4R-WCX4  | Right Hand Throw – Size 4 includes Isolating rodding     |                   |
| Bradken   | HB5R-WCX5  | Right Hand Throw – Size 5 includes Isolating rodding     |                   |
| Bradken   | HB6R-WCX6  | Right Hand Throw – Size 6 includes Isolating rodding     |                   |
| Bradken   | HB7R-WCX7  | Right Hand Throw – Size 7 includes Isolating rodding     |                   |
| Bradken   | HB8R-WCX8  | Right Hand Throw – Size 8 includes Isolating rodding     |                   |
| Bradken   | HRS-100    | Left hand throw or Right hand throw includes Rodding     |                   |
| <b>ALDON Hinged Derailer - Type 4014-01 and 4014-02 *</b> |            |  |                   |
| Specialised Force   | 4014-01-5D | Left Hand Throw – Size 5 includes Derail Sign and Lever  |                   |
| Specialised Force   | 4014-01-6D | Left Hand Throw – Size 6 includes Derail Sign and Lever  |                   |
| Specialised Force   | 4014-01-7D | Left Hand Throw – Size 7 includes Derail Sign and Lever  |                   |
| Specialised Force   | 4014-01-8D | Left Hand Throw – Size 8 includes Derail Sign and Lever  |                   |
| Specialised Force   | 4014-02-5D | Right Hand Throw – Size 5 includes Derail Sign and Lever |                   |
| Specialised Force   | 4014-02-6D | Right Hand Throw – Size 6 includes Derail Sign and Lever |                   |
| Specialised Force   | 4014-02-7D | Right Hand Throw – Size 7 includes Derail Sign and Lever |                   |
| Specialised Force   | 4014-02-8D | Right Hand Throw – Size 8 includes Derail Sign and Lever |                   |

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| Supplier  | Part No | Product/Description                      | Condition/Remarks |
|---|---------|--|-------------------|
| <b>2.4 Train Detection</b>  |         |  |                   |
| <b>Frauscher ACS2000 axle counter system * - Legacy Approval – Shall not be used for any new works on ARTC network. To be used only for like for like replacements.</b> |         |  |                   |
| Frauscher   | 10021   | Rail Claw SK140                          |                   |
| Frauscher   | 10023   | Clamping Bolt BBK11                      |                   |
| Frauscher   | 10024   | Clamping Bolt BBK17.5                    |                   |
| Frauscher   | 10025   | Clamping Bolt BBK22                      |                   |
| Frauscher   | 10034   | GAK Cable Box SKV20                      |                   |
| Frauscher   | 11749   | Wheel Sensor RSR180/S—250–5m tail cable  |                   |
| Frauscher   | 14620   | Wheel Sensor RSR180/S—250–10m tail cable |                   |
| Frauscher   | 18607   | Wheel Sensor RSR180/S—250–15m tail cable |                   |
| Frauscher   | 16254   | Wheel Sensor RSR180/S—250–25m tail cable |                   |
| Frauscher   | 12205   | Protection Tube 4.8 m                    |                   |
| Frauscher   | 14475   | Protection Tube 9.8 m                    |                   |
| Frauscher   | 17443   | Protection Tube 14.8 m                   |                   |
| Frauscher   | 16906   | Protection Tube 24.8 m                   |                   |
| Frauscher   | 13753   | Voltage protection BSI004                |                   |
| Frauscher   | 21512   | Testing / Simulation Plate – PB200       |                   |
| Frauscher   | 10108   | Board Rack BGT04 84TE                    |                   |
| Frauscher   | 10265   | Board Rack BGT05 42TE                    |                   |
| Frauscher   | 13516   | Backplane ABP002-2 21TE                  |                   |

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| Supplier  | Part No    | Product/Description                | Condition/Remarks  |
|---|------------|------------------------------------|--|
| Frauscher   | 13517      | Backplane ABP002-3 25TE            |  |
| Frauscher   | 13518      | Backplane ABP002-4 29TE            |  |
| Frauscher   | 13519      | Backplane ABP002-5 33TE            |  |
| Frauscher   | 13520      | Backplane ABP002-6 37TE            |  |
| Frauscher   | 13521      | Backplane ABP002-D2 28TE           |  |
| Frauscher   | 13522      | Backplane ABP002-D3 32TE           |  |
| Frauscher   | 13523      | Backplane ABP002-D4 36TE           |  |
| Frauscher   | 13524      | Backplane ABP002-D5 40TE           |  |
| Frauscher   | 13525      | Backplane ABP002-D6 44TE           |  |
| Frauscher   | 13482      | Axle Counting Board ACB010         |  |
| Frauscher   | 10114      | Fuse Board SIB006                  |  |
| Frauscher   | 13641      | Fuse Board SIC006                  |  |
| Frauscher   | 12756      | Evaluation Board AMC001            | Must not to be used for new works                              |
| Frauscher   | 13881      | Evaluation Board IMC006            |  |
| Frauscher   | 16213      | Evaluation Board IMC006            |  |
| Frauscher   | 14735      | Digital Input/Output Board DIOB104 |  |
| Frauscher   | 20792      | Diagnostic System FDS              |  |
| Frauscher   | 15521      | Bus Transfer Entity BTE001         |  |
| <b>'Bombardier' ML TI21 Digital Transmitter *</b> |            |                                    |  |
| Bombardier  | L520014330 | Frequency A 1699 Hz                | For use with TI21 track circuits<br>Standard frequency for use |

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| Supplier  | Part No    | Product/Description | Condition/Remarks   |
|---|------------|---------------------|---|
| Bombardier  | L520014331 | Frequency B 2296 Hz | For use with TI21 track circuits<br>Standard frequency for use                      |
| Bombardier  | L520014332 | Frequency C 1996 Hz | For use with TI21 track circuits<br>Standard frequency for use                      |
| Bombardier  | L520014333 | Frequency D 2593 Hz | For use with TI21 track circuits<br>Standard frequency for use                      |
| Bombardier  | L520014334 | Frequency E 1549 Hz | For use with TI21 track circuits<br>Optional frequency for use when design requires |
| Bombardier  | L520014335 | Frequency F 2146 Hz | For use with TI21 track circuits<br>Optional frequency for use when design requires |
| Bombardier  | L520014336 | Frequency G 1848 Hz | For use with TI21 track circuits<br>Optional frequency for use when design requires |
| Bombardier  | L520014337 | Frequency H 2445 Hz | For use with TI21 track circuits<br>Optional frequency for use when design requires |
| <b>'Invensys' PSO 4000 AF Overlay Track Circuit *</b> |            |                     |   |
| Siemens   | 7000-7A471 | Transmitter         |   |
| Siemens   | 7000-7A473 | Receiver            |   |

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| Supplier                                       | Part No                      | Product/Description                                      | Condition/Remarks                |
|--|------------------------------|--|----------------------------------|
| Siemens  | 7000-7A475                   | Transceiver  |                                  |
| Siemens  | 7000-7A474                   | Crossing Assembly  |                                  |
| Siemens  | 7000-8A065A                  | Battery Choke  |                                  |
| Siemens  | 7000-7A418                   | Power Line Filter  |                                  |
| Siemens  | 7000-7A403                   | Line Overlay Coupler                                     |                                  |
| Siemens  | 7000-7A345                   | Line Terminator  |                                  |
| Siemens  | 7000-7A388                   | Line to Receiver Coupler                                 |                                  |
| Siemens  | 7000-7A355A-f                | Tuned Receiver Coupler                                   |                                  |
| Siemens  | 7000-7A366-f                 |  |                                  |
| Siemens  | 7000-7A377-1-f               | Rx end Line/ Rail Coupler                                |                                  |
| Siemens  | 7000-7A399-f                 | Tx end Line/ Rail Coupler                                |                                  |
| Siemens  | 7000-7A422-f                 | IRJ Bypass coupler                                       |                                  |
| <b>'Bombardier' ML T121 Digital Receiver *</b> |                              |  |                                  |
| Bombardier                                     | L520002390 (50V Relay Drive) | TI21 Digital Receiver Unit Mod strike 1                  | For use with TI21 track circuits |
| Bombardier                                     | L520002500                   | Set up key   |                                  |
| Bombardier                                     | L520002329                   | Standard Mounting Plate for TI21 Digital Receiver        |                                  |
| Bombardier                                     | L520008862                   | Rear Connection Mounting Plate for TI21 Digital Receiver |                                  |
| Bombardier                                     | L520002422                   | Frequency A Key  |                                  |
| Bombardier                                     | L520002423                   | Frequency B Key  |                                  |

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| Supplier   | Part No    | Product/Description                        | Condition/Remarks |
|--|------------|--|-------------------|
| Bombardier   | L520002424 | Frequency C Key                            |                   |
| Bombardier   | L520002425 | Frequency D Key                            |                   |
| Bombardier   | L520002426 | Frequency E Key                            |                   |
| Bombardier   | L520002427 | Frequency F Key                            |                   |
| Bombardier   | L520002428 | Frequency G Key                            |                   |
| Bombardier   | L520002429 | Frequency H Key                            |                   |
| Bombardier   | 520001222  | Female Straight                            |                   |
| Bombardier   | 520001224  | Female right-angle                         |                   |
| Frauscher FADC Axle Counter System R1 * - Legacy Approval – Shall not be used for any new works on ARTC network. To be used only for like for like replacements. |            |  |                   |
| Frauscher  | 10021      | Rail Claw SK140                            |                   |
| Frauscher  | 10025      | Clamping Bolt BBK22                        |                   |
| Frauscher  | 10023      | Clamping Bolt BBK11                        |                   |
| Frauscher  | 10034      | GAK – Cable Termination Box SKV20          |                   |
| Frauscher  | 11749      | Wheel Sensor RSR180/S-250 – 5M tail cable  |                   |
| Frauscher  | 14620      | Wheel Sensor RSR180/S-250 – 10M tail cable |                   |
| Frauscher  | 18607      | Wheel Sensor RSR180/S-250 – 15M tail cable |                   |
| Frauscher  | 16254      | Wheel Sensor RSR180/S-250 – 25M tail cable |                   |
| Frauscher  | 12205      | Protection Tube 4.8m                       |                   |
| Frauscher  | 14475      | Protection Tube 9.8m                       |                   |
| Frauscher  | 17443      | Protection Tube 14.8m                      |                   |
| Frauscher  | 16906      | Protection Tube 24.8m                      |                   |

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| Supplier  | Part No | Product/Description                         | Condition/Remarks |
|-----------|---------|---|-------------------|
| Frauscher | 13753   | Voltage protection BSI004                   |                   |
| Frauscher | 17390   | Board Rack BGT07 84TE                       |                   |
| Frauscher | 16878   | Evaluation Board AEB001-1                   |                   |
| Frauscher | 17028   | Backplane BP-EXB001-1 10TE                  |                   |
| Frauscher | 17061   | Backplane BP-EXB001-2 16TE                  |                   |
| Frauscher | 17516   | Backplane BP-PWR001-0 8TE                   |                   |
| Frauscher | 17520   | Backplane BP-PWR001-4 24TE                  |                   |
| Frauscher | 17524   | Backplane BP-PWR001-8 40TE                  |                   |
| Frauscher | 17535   | Backplane BP-PWR001-19 84TE                 |                   |
| Frauscher | 17437   | Supply Board PSC001                         |                   |
| Frauscher | 17438   | Communication Board COM-AdC001              |                   |
| Frauscher | 20247   | Communication Board COM-AdC001              |                   |
| Frauscher | 17439   | In/Output Board IO-EXB001                   |                   |
| Frauscher | 18159   | Backplane Connector BP-EXB - Solder Version |                   |
| Frauscher | 20042   | Diag. System – FDS001 for FAdC              |                   |
| Frauscher | 18012   | Service Display Cable ASD001                |                   |
| Frauscher | 20064   | Service Display Cable ASD001                |                   |
| Frauscher | 18058   | Patch cable S/FTP cat.6: 0.5m               |                   |
| Frauscher | 17825   | Testing/Simulation Plate – PB200            |                   |

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| Supplier                                 | Part No     | Product/Description  | Condition/Remarks |
|--|-------------|--|-------------------|
| <b>Sagem Cautor Mechanical Treadle *</b> |             |  |                   |
| Unipart Rail                             | 0086/046300 | Treadle, Cautor, single arm, non-directional, fitted with 2 C/O contacts and terminals |                   |
| Unipart Rail                             | 0039/029397 | Setting Gauge, Complete With 2 Plumb Weights   |                   |
| Unipart Rail                             | 0086/046316 | Mounting Bracket (Treadle Rail Mounting Base, FB Rail, Complete With Fixing Bolts)     |                   |
| Unipart Rail                             | 0027/025112 | Treadle Oil (HVI 13 Hydraulic Oil)   |                   |
| <b>Frauscher FAdC R2 Axle Counter *</b>  |             |  |                   |
| Frauscher                                | 19952       | Backplane BP-PWR101-0 8 TE GS01  |                   |
| Frauscher                                | 19953       | Backplane BP-PWR101-4 24 TE GS01   |                   |
| Frauscher                                | 19954       | Backplane BP-PWR101-8 40 TE GS01   |                   |
| Frauscher                                | 19956       | Backplane BP-PWR101-1 10 TE GS01   |                   |
| Frauscher                                | 19957       | Backplane BP-PWR101-2 16 TE GS01   |                   |
| Frauscher                                | 19958       | Backplane BP-PWR101-4 28 TE GS01   |                   |
| Frauscher                                | 19959       | Backplane BP-PWR101-8 52 TE GS01   |                   |
| Frauscher                                | 21441       | Backplane connection BP-EXB (Crimp)  |                   |
| Frauscher                                | 18159       | Backplane connection BP-EXB (Solder)   |                   |
| Frauscher                                | 17390       | Board Rack BGT07 84TE  |                   |
| Frauscher                                | 17391       | Board Rack BGT08 42TE  |                   |
| Frauscher                                | 24050       | Evaluation Board AEB101 GS04   |                   |
| Frauscher                                | 24051       | Evaluation Board AEB101 GS05   |                   |

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| Supplier  | Part No | Product/Description                                      | Condition/Remarks |
|-----------|---------|--|-------------------|
| Frauscher | 26534   | Evaluation Board AEB101 GS07                             |                   |
| Frauscher | 19949   | Supply Board PSC101 GS01                                 |                   |
| Frauscher | 19950   | Communication Board COM-AdC101 GS01                      |                   |
| Frauscher | 23152   | Communication Board COM-AdC101 GS02                      |                   |
| Frauscher | 22867   | Communication Board COM-FSE101 GS02                      |                   |
| Frauscher | 23904   | Communication Board COM-FSE101 GS03                      |                   |
| Frauscher | 22503   | Communication Board COM-WNC101 GS01                      |                   |
| Frauscher | 22443   | Communication Board COM-FSFB101 GS02                     |                   |
| Frauscher | 25861   | Communication Board COM-FSFB101 GS03                     |                   |
| Frauscher | 21626   | Communication Board COM-RP101 GS01                       |                   |
| Frauscher | 24436   | Communication Board COM-RP101 GS02                       |                   |
| Frauscher | 20864   | In/Output board IO-EXB101 GS01                           |                   |
| Frauscher | 21117   | Diagnostic System FDS 101 GS01 for FAdC                  |                   |
| Frauscher | 21058   | Patch cable S/STP Cat. 6 Crossover 0.5m grey for hotlink |                   |
| Frauscher | 21059   | Patch Cable S/STP Cat.6 Crossover 1.0m grey for hotlink  |                   |
| Frauscher | 21060   | Patch Cable S/STP Cat.6 Crossover 2.0m grey for hotlink  |                   |
| Frauscher | 18058   | Patch cable S/FTP cat.6 0.5m green                       |                   |
| Frauscher | 18059   | Patch cable S/FTP cat.6 1.0m green                       |                   |
| Frauscher | 18060   | Patch Cable S/FTP Cat.6 2.0m green                       |                   |
| Frauscher | 20865   | Advanced Service Display ASD101 GS01 (R2)                |                   |
| Frauscher | 17707   | Tool Set for mounting and maintenance                    |                   |

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| Supplier   | Part No | Product/Description                                | Condition/Remarks |
|--|---------|--|-------------------|
| Frauscher  | 21512   | Testing plate (Dummy wheel) PB200 GS03             |                   |
| Frauscher  | 10021   | Rail Claw SK140                                    |                   |
| Frauscher  | 10022   | Clamping Bolt BBK5                                 |                   |
| Frauscher  | 10023   | Clamping Bolt BBK11                                |                   |
| Frauscher  | 10024   | Clamping Bolt BBK17.5                              |                   |
| Frauscher  | 10025   | Clamping Bolt BBK22                                |                   |
| Frauscher  | 10034   | GAK Cable Box SKV20                                |                   |
| Frauscher  | 25186   | TCB001 - Trackside Connection Box - 1 Wheel Sensor |                   |
| Frauscher  | 26403   | TCB001 - Trackside Connection Box - 2 Wheel Sensor |                   |
| Frauscher  | 25187   | TCB001 - Trackside Connection Box - 3 Wheel Sensor |                   |
| Frauscher  | 23320   | Wheel Sensor RSR180-001 GS05 (5M Tail Cable)       |                   |
| Frauscher  | 23529   | Wheel Sensor RSR180-001 GS05 (10M Tail Cable)      |                   |
| Frauscher  | 23531   | Wheel Sensor RSR180-001 GS05 (15M Tail Cable)      |                   |
| Frauscher  | 26786   | Wheel Sensor RSR180-001 GS05 (25M Tail Cable)      |                   |
| Frauscher  | 12205   | Protection Tube 4.8 m                              |                   |
| Frauscher  | 14475   | Protection Tube 9.8 m                              |                   |
| Frauscher  | 17443   | Protection Tube 14.8 m                             |                   |
| Frauscher  | 16906   | Protection Tube 24.8 m                             |                   |
| Frauscher  | 13753   | Voltage protection BSI004                          |                   |
| Frauscher  | 26547   | Protection Tube 29.6m                              |                   |
| <b>'Frauscher' Wheel Sensor RSR123 with associated Rail Claw* - Approved to be used between Mile End and Salisbury, South Australia Only</b> |         |  |                   |

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| Supplier                                     | Part No        | Product/Description   | Condition/Remarks |
|--|----------------|---|-------------------|
| Frauscher                                    | 22276          | Wheel Sensor RSR123 003 GS05                                      |                   |
| Frauscher                                    | 13655          | Connection cable pluggable 5 m with protection tube (For RSR123)  |                   |
| Frauscher                                    | 14397          | Connection cable pluggable 10 m with protection tube (For RSR123) |                   |
| Frauscher                                    | 14398          | Connection cable pluggable 25 m with protection tube (For RSR123) |                   |
| Frauscher                                    | 22288          | Rail Claw SK150 GS04  |                   |
| Frauscher                                    | 16946          | Rail Claw SK150-002 GS02  |                   |
| <b>'MW Engineers' Axle Counter Reset Box</b> |                |   |                   |
| MW Engineers                                 | CA10B-AU001817 | Reset Switch Kraus and Naimer                                     |                   |
| MW Engineers                                 | 431-7548       | Door Solenoid SAIA – Burgress                                     |                   |
| MW Engineers                                 | 515-785        | Door Lock Microswitch Honeywell V15H22                            |                   |
| MW Engineers                                 | 331-7569       | Escutcheon Panel Door Sensor ASSEMtech PTA230/30                  |                   |
| MW Engineers                                 | Z0232          | Green LED Chrome Bexel Altronics                                  |                   |
| MW Engineers                                 | Z0230          | Red LED Chrome Bexel Altronics                                    |                   |
| MW Engineers                                 | 159-461        | 330 ohm resistor  |                   |
| MW Engineers                                 | 159-449        | 150 ohm resistor  |                   |
| <b>'Aldridge' Axle Counter Reset Box</b>     |                |   |                   |
| Aldridge Railway Signals Pty Ltd             | PF1356         | Enclosure 400x400x200 S/S   |                   |
| Aldridge Railway Signals Pty Ltd             | PP0107         | Lock Cover Bush Brass   |                   |

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| Supplier  | Part No  | Product/Description                                  | Condition/Remarks  |
|---|--|--|--|
| Aldridge Railway Signals Pty Ltd                                    | PL0542   | Lock Operator Key OP3 with cam                       |  |
| Aldridge Railway Signals Pty Ltd                                    | R2300  | Solenoid Cover                                       |  |
| <b>2.5 Level Crossing Equipment</b>                                 |  |  |  |
| <b>Fastron P971211 Current Sensor *</b>                             |  |  |  |
| Fastron Technologies Pty. Ltd                                       | DC Current Transducer P971211                              | DC Current Transducer P971211                        | For use with Cerberus and Citect/Broderson Level crossing Monitors in accordance with Design Guidelines. |
| <b>APCS Current Transducer@</b>                                     |  |  |  |
| APCS  | DC Current Transducer                                      | DC Current Transducer DCT247                         |  |
| <b>Safetran Electronic Highway Crossing Bell *</b>                  |  |  |  |
| Siemens   | NO. 80301-0002 (Loud) - Preferred<br>No. 80301-0004 (Soft) | Electronic Highway Crossing Bell                     |  |
| <b>SAFETRAN' updated GCP4000 development system software (DT) *</b> |  |  |  |
| Siemens   | Refer TA certificate for full list of approved items       | Safetran updated GCP4000 development system software | Refer TA Certificate 08-08-10-091 on ARTC extranet   |
| <b>'Siemens' Grade Crossing Predictor (GCP) 4000 *</b>              |  |  |  |
| Siemens   | Refer TA certificate for full list of approved items       | <b>'Siemens' Grade Crossing Predictor (GCP) 4000</b> | Refer TA Certificate NESA-S099 on ARTC extranet  |

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| Supplier  | Part No  | Product/Description                              | Condition/Remarks                                   |
|---|--|--|---|
| Western Cullen Hayes 3590-131-MI and 3593-131-MI Level Crossing Equipment * |  |  |   |
| Bradken   | Refer TA certificate for full list of approved items | Western Cullen Hayes 3590-131-MI and 3593-131-MI | Refer TA Certificate S-02-1214-163 on ARTC extranet |
| Potter & Brumfield – KUMP Series Panel Plug-In Relay *                      |  |  |   |
| Aldridge  | KUMP-11D18-12  | 12VDC (CO) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-7D18-12   | 12VDC (NO) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-7D18-24   | 24VDC (NO) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-7D18-48   | 48VDC (NO) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-8D18-12   | 12VDC (NC) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-8D18-24   | 24VDC (NC) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-8D18-48   | 48VDC (NC) Relay with 15A Contactors             |   |
| Aldridge  | KUMP-7A18-120  | 120VAC (NO) Relay with 15A Contactors            |   |
| Aldridge  | KUMP-8A18-120  | 120VAC (NC) Relay with 15A Contactors            |   |
| Aldridge  | 2.70E+122  | Base   |   |
| Australian Rail Technology (ART) – Battery Voltage Monitor (BVM) *          |  |  |   |
| Australian Rail Technology  | XP3508-1000  | Battery Voltage Monitor                          |   |
| Australian Rail Technology  | XP3508-1015  | Battery Voltage Monitor                          |   |
| Aldridge RK503FL-1 Level Crossing LED *                                     |  |  |   |
| Aldridge  | RK503FL-1  | 200mm Red Level Crossing LED                     |   |

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| Supplier  | Part No  | Product/Description  | Condition/Remarks                                     |
|---|--|--|---|
| Aldridge  | RL503FL  | Complete housing with hood and background etc. Includes RK503FL-1 module   |   |
| <b>Securitron SAMB Shear Aligning Magnalock &amp; Surface Mount Strike Housing SMSS *</b> |  |  |   |
| Magnetic Automation   | MRGE 1A-101  | Magnetically latched gate assembly for emergency exit pedestrian crossing - Left hand opening                      |   |
|   | MRGE 1B-101  | Magnetically latched gate assembly for emergency exit pedestrian crossing - Right hand opening                     |   |
| <b>'ElectroLogIXS XP4 Level Crossing Predictor Upgrade *</b>                              |  |  |   |
| Alstom  | Refer TA certificate for full list of approved items | Eletrologixs XP4 level crossing predictor  | Refer TA Certificate S-01-1802-AL227 on ARTC extranet |
| <b>Siemens' LX Flashing Warning Light LED Housing – HC200 *</b>                           |  |  |   |
| Siemens   | 250101401  | HC200 level crossing warning light complete assembly (Includes medium range 12v Red Led module (5519/12RMR))       |   |
| Siemens   | 250101403  | HC200 level crossing warning light complete assembly (Includes intermediate range 12v Red Led module (5519/12RIR)) |   |
| Siemens   | 5519/12RMR   | LED Module 12V Red - Medium  |   |
| Siemens   | 5519/12RIR   | LED Module 12V Red - Intermediate  |   |
| Siemens   | 250305901  | Hood HC200 Flashing Light  |   |
| Siemens   | 250305801  | Background HC200 Flashing Light  |   |
| Siemens   | 3650118202   | Side Light White LED   |   |
| Siemens   | 250306001  | Lens Side Light HC200 Flashing Light   |   |
| Siemens   | M20864   | Hood HC101L Flashing Light/HC100 Hood (Hood 260 LG)  |   |
| Siemens   | M20863   | Background HC101L Flashing Light/HC100 Background 0508   |   |

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| Supplier   | Part No                              | Product/Description                                | Condition/Remarks   |
|--|--------------------------------------|--|---|
| Elf Electronics' Cerberus Level Crossing Monitor – V4 *        |                                      |  |   |
| -  | Cerberus Level Crossing Monitor – V4 |  | Limited approval. Only approved for 26 sites on the Portland Line, Victoria               |
| Elsema' Remote Activation of Level Crossing by Radio Control * |                                      |  |   |
| Pure Electronics Pty Ltd                                       | MCT91502                             | Transmitter – Handheld Remote                      | Only approved to be used in Telarah to Acacia Ridge (Interstate Network)                  |
| Pure Electronics Pty Ltd                                       | MCR91501P(T)                         | 2 Channel, 915 MHz Receiver with Frequency Hopping |   |
| 'Brodersen RTU32N and RTU32M – Limited(Trial Only) *           |                                      |  |   |
| Brodersen  | --                                   | Brodersen RTU32N                                   | Part numbers can be configured as per project requirements in consultation with Brodersen |
| Brodersen  | MP32A                                | CPU – Controller Module                            | Modules for RTU32M  |
| Brodersen  | SP04A                                | 4 Serial Ports (3x232, 1x 232/485)                 |   |
| Brodersen  | SP04B                                | RS232/RS485 Serial Communications Module           |   |
| Brodersen  | PS24A                                | Power Supply (10-30V)                              |   |
| Brodersen  | PS48A                                | Power Supply (30-60V)                              |   |
| Brodersen  | AI08A                                | 8ch Analog Inputs                                  |   |
| Brodersen  | AO02A                                | 2ch Analog Outputs (Current and Voltage)           |   |
| Brodersen  | AO02B                                | 2ch Analog Output Module (Current)                 |   |
| Brodersen  | DI20A, DI20B                         | 20ch Digital Inputs (12-24V, 30-60V)               |   |
| Brodersen  | DI20C                                | 20ch Digital/Counter Inputs (24V)                  |   |
| Brodersen  | DI12H                                | 12ch Digital Inputs (90-140V)                      |   |
| Brodersen  | DI12B)                               | 12ch Digital Inputs (30-60V)                       |   |

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| Supplier  | Part No  | Product/Description                                | Condition/Remarks                                    |
|---|--|--|--|
| Brodersen   | DO08R  | 8ch Relay Outputs (NC/C/NO)                        |  |
| Brodersen   | DO12R  | 12ch Relay Outputs (NO)                            |  |
| Brodersen   | DO20A  | 20ch Digital Outputs                               |  |
| Brodersen   | DM20A  | Comb. 10ch DI + 10ch DO                            |  |
| Brodersen   | DM20C  | Comb. 8ch DI + 2ch Ctr + 10ch DO                   |  |
| Brodersen   | I/O14A / I/O14B                                      | Comb. 3 AI + 1 AO + 8 DI + 2 DO                    |  |
| <b>2.6 Interlocking</b>                                 |  |  |  |
| <b>‘Hitachi Rail Microlok II Interlocking System’ *</b> |  |  |  |
| Hitachi Rail STS  | Refer TA certificate for full list of approved items | ‘Hitachi Rail’ Microlok II Interlocking System     | Refer TA Certificate NESA-S048 on ARTC extranet      |
|   |  |  |  |
| <b>Westrace MkII Computer Based Interlocking’ *</b>     |  |  |  |
| Siemens   | Refer TA certificate for full list of approved items | Westrace MKII - Computer Based Interlocking System | Refer TA Certificate S-01-1204-130B on ARTC extranet |
| <b>Westlock Computer Based Interlocking’ *</b>          |  |  |  |
| Siemens   | Refer TA certificate for full list of approved items | Westlock Computer Based Interlocking               | Refer TA Certificate S-01-1405-165 on ARTC extranet  |
| <b>Microlock Dual Seamless Changeover’ *</b>            |  |  |  |
| Hitachi Rail STS  | Refer TA certificate for full list of approved items | Microlock Dual Seamless Changeover                 | Refer TA Certificate S-01-1511-198A on ARTC extranet |

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|--|--|--|---|
| <b>Alstom VPI II Interlocking System *</b>               |  |  |   |
| Alstom   | Refer TA certificate for full list of approved items | Alstom VP II Interlocking System                                       | Refer TA Certificate 08-08-10-035 on ARTC extranet  |
| <b>SIEMENS' SIMATIC (SICAS S7) Interlocking System *</b> |  |  |   |
| Siemens  | Refer TA certificate for full list of approved items | Siemens SIMATIC (SICAS S7) Interlocking System                         | Refer TA Certificate 08-08-10-059 on ARTC extranet  |
| <b>'SAFETRAN' Geographic Signalling System (GEO) *</b>   |  |  |   |
| Siemens  | Refer TA certificate for full list of approved items | 'SAFETRAN' Geographic Signalling System (GEO)                          | Refer TA Certificate 08-08-010-058 on ARTC extranet |
| <b>Westrace- Computer Based Interlocking System *</b>    |  |  |   |
| Siemens  | Refer TA certificate for full list of approved items | Westrace-Computer Based Interlocking System                            | Refer TA Certificate S-01-10-096 on ARTC extranet   |
| <b>Westrace Protocol Converter *</b>                     |  |  |   |
| Siemens  | CNA1000  | Communication Network Adaptor - Westrace to Genisys Protocol Converter | Firmware version 2.02                               |
| <b>Protocol Converter CNA2000 *</b>                      |  |  |   |
| Siemens  | CAN2000  | Communication Network Adaptor - Protocol Converter                     | Firmware version CNA1505v1.0.1                      |
| <b>Siemens' Control System Gateway *</b>                 |  |  |   |
| Siemens  | Refer TA certificate for full list of approved items | Siemens Control System Gateway   | Refer TA Certificate S-03-1422-158 on ARTC extranet |

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| Supplier  | Part No  | Product/Description                  | Condition/Remarks                                   |
|---|--|--------------------------------------|---|
| <b>GETS EC5 Computer Based Interlocking *</b>                 |  |                                      |   |
| Alstom  | Refer TA certificate for full list of approved items | GETS EC5 Computer Based Interlocking | Refer TA Certificate S-01-0912-100 on ARTC extranet |
| <b>HIMA' HIMatrix Computer Based Interlocking *</b>           |  |                                      |   |
| HIMA Australia Pty Ltd  | Refer TA certificate for full list of approved items | HIMA Computer Based Interlocking     | Refer TA Certificate NESA-S053 on ARTC extranet     |
| <b>2.7 Relays</b>   |  |                                      |   |
| <b>'Crompton Greaves' Miniature Plug-in Relays (Q Type) *</b> |  |                                      |   |
| Selectrix   | QBA1-4842137   | QBA1 – 12F/4B (50v DC)               |   |
| Selectrix   | QBA1-4842149   | QBA1 – 8F/8B (50v DC)                |   |
| Selectrix   | QBA1-4842137   | QBA1 – 8F/4B (50v DC)                | (Use 12F/4B for new works).                         |
| Selectrix   | QBA1-4842149   | QBA1 – 6F/6B (50v DC)                | Use 8F/8B for new works).                           |
| Selectrix   | QBA1-4842149   | QBA1 – 4F/4B (50v DC)                | (Use 8F/8B for new works).                          |
| Selectrix   | QBBA1-4842164  | QBBA1 – 2x6F/2B (50v DC)             |   |
| Selectrix   | QBBA1-4842176  | QBBA1 - 2x4F/4B (50v DC)             |   |
| Selectrix   | QBCA1-4842033  | QBCA1 – 2HF/4B (50v DC)              |   |
| Selectrix   | QBCA1-4842045  | QBCA1 – 2HF/4F/4B (50v DC)           |   |
| Selectrix   | QL1- 4841735   | QL1 – 11F/4B (50v DC)                |   |
| Selectrix   | QL1- 4841747   | QL1 – 8F/6B (50v DC)                 |   |
| Selectrix   | QN1- 4841153   | QN1 – 12F/4B (50v DC)                |   |
| Selectrix   | QN1- 4841165   | QN1 – 8F/8B (50v DC)                 |   |

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| Supplier  | Part No        | Product/Description          | Condition/Remarks                               |
|-----------|----------------|------------------------------|---|
| Selectrix | QNA1-4841233   | QNA1 – 12F/4B (50v DC)       |   |
| Selectrix | QNA1-4841245   | QNA1 – 8F/8B (50v DC)        |   |
| Selectrix | QNA1-4841233   | QNA1 – 8F/4B (50v DC)        | (Use 12F/4B for new works).                     |
| Selectrix | QNHX1-4842363  | QNHX1 – 8F/4B (110v AC)      | Not immune to DC current.                       |
| Selectrix | QNHXC1-4842387 | QNHXC1 – 2HF/4F/4B (110v AC) | Not immune to DC current.                       |
| Selectrix | QNN1-4842547   | QNN1 – 2x6F/2B (50v DC)      |   |
| Selectrix | QNN1-4842535   | QNN1 - 2x4F/4B (50v DC)      |   |
| Selectrix | QNN1-4842523   | QNN1 – 2x6F/2B (24v DC)      |   |
| Selectrix | QNN1-4842511   | QNN1 - 2x4F/4B (24v DC)      |   |
| Selectrix | QNNA1-4842574  | QNNA1 – 2x6F/2B (50v DC)     |   |
| Selectrix | QNNA1-4842598  | QNNA1 – 2x4F/4B (50v DC)     |   |
| Selectrix | QSPA1-4841429  | QSPA1 – 8F/4B (50v DC)       |   |
| Selectrix | QSRA1-4841468  | QSRA1 – 8F/4B (50v DC)       |   |
| Selectrix | QT2- 4841349   | QT2 – 8F/8B (250Ω)           | For use with CSEE track circuit equipment only. |
| Selectrix | QTA2-4841524   | QTA2 -2F (9Ω)                | (Use 2F/2B for new works).                      |
| Selectrix | QTA2-4841512   | QTA2 -2F/1B (9Ω)             | (Use 2F/2B for new works).                      |
| Selectrix | QTA2-4841536   | QTA2 -2F/2B (9Ω)             |   |
| Selectrix | QUCX1-4842324  | QUCX1 – 2F/2B (1.4A)         |   |
| Selectrix | QN1-4841141    | QN1 – 12F/4B 12v DC (100 Ω)  | BR Spec 930A                                    |
| Selectrix | QN1-4841138    | QN1 – 8F/8B 12v DC (100 Ω)   | BR Spec 930A                                    |

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| Supplier   | Part No       | Product/Description            | Condition/Remarks  |
|--|---------------|--------------------------------|--------------------|
| Selectrix  | QNN1-4842603  | QNN1 – 2x6F/2B 12v DC          | BR Spec 960        |
| Selectrix  | QNN1- 4842559 | QNN1 – 2x4F/4B 12v DC          | BR Spec 960        |
| Selectrix  | QBA1- 4842249 | QN1 – 12F/4B 12v DC            | BR Spec 932A       |
| Selectrix  | QS2- 4841667  | QS2 – 6F/6B 12v DC             | BR Spec 930A       |
| <b>'Idec-Izumi' Non-vital Plug-in 'octal' Relays *</b> |               |                                |                    |
| IDEC Australia   | RR2P-U        | DC48V 2 pole c/o 8 pin plug.   |                    |
| IDEC Australia   | RR3P-U        | DC12V 3 pole c/o 11 pin plug.  |                    |
| IDEC Australia   | RR3P-U        | DC24V 3 pole c/o 11 pin plug.  |                    |
| IDEC Australia   | RR3P-U        | DC48V 3 pole c/o 11 pin plug.  |                    |
| IDEC Australia   | RR3P-U        | DC110V 3 pole c/o 11 pin plug. |                    |
| IDEC Australia   | RR3P-U        | AC24V 3 pole c/o 11 pin plug.  |                    |
| IDEC Australia   | RR3P-U        | AC48V 3 pole c/o 11 pin plug.  |                    |
| IDEC Australia   | RR3P-U        | AC120V 3 pole c/o 11 pin plug. |                    |
| IDEC Australia   | RR3P-U        | AC240V 3 pole c/o 11 pin plug. |                    |
| IDEC Australia   | SR2P-05C      | 8 pin base.                    | DIN rail mounting. |
| IDEC Australia   | SR3P-05C      | 11 pin base.                   |                    |
| IDEC Australia   | SR2P-51       | 8 pin base.                    | Panel mounting.    |
| IDEC Australia   | SR3P-51       | 11 pin base.                   |                    |
| IDEC Australia   | SR2B-02F1     | Retaining clip.                | For SR2P-05C base. |

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| Supplier   | Part No       | Product/Description                     | Condition/Remarks            |
|--|---------------|---|------------------------------|
| IDEC Australia                                   | SR3B-01F1     | Retaining clip.                         | For SR2P-51 or SR3P-51 base. |
| IDEC Australia                                   | SR3B-02F1     | Retaining clip.                         | For SR3P-05C base.           |
| <b>Omron' Non-vital Plug-in 'octal' Relays *</b> |               |   |                              |
| Omron Electronics Pty. Ltd                       | MK2P-I        | DC48V 2 pole c/o 8 pin plug.            |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | DC12V 3 pole c/o 1 pin plug.            |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | DC24V 3 pole c/o 11 pin plug.           |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | DC48V 3 pole c/o 11 pin plug.           |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | DC110V 3 pole c/o 11 pin plug.          |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | AC24V 3 pole c/o 11 pin plug.           |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | AC120V 3 pole c/o 11 pin plug.          |                              |
| Omron Electronics Pty. Ltd                       | MK3P-I        | AC240V 3 pole c/o 11 pin plug.          |                              |
| Omron Electronics Pty. Ltd                       | Bases & Clips |   |                              |
| Omron Electronics Pty. Ltd                       | PF083A-E      | 8 pin base.                             | DIN rail or panel mounting.  |
| Omron Electronics Pty. Ltd                       | PF113A-E      | 11 pin base.                            |                              |
| Omron Electronics Pty. Ltd                       | PFC-A1        | Retaining clip.                         |                              |
| <b>Fuji' Non-vital Plug-in 'octal' Relays *</b>  |               |   |                              |
| K.D.Fisher & Co.                                 | RC2CPWT-DF    | HH22PW-T DC48V 2 pole c/o 8 pin plug.   |                              |
| K.D.Fisher & Co.                                 | RC3CPWT-DE    | HH23PW-T DC24V 3 pole c/o 11 pin plug.  |                              |
| K.D.Fisher & Co.                                 | RC3CPWT-DF    | HH23PW-T DC48V 3 pole c/o 11 pin plug.  |                              |
| K.D.Fisher & Co.                                 | RC3CPWT-DH    | HH23PW-T DC110V 3 pole c/o 11 pin plug. |                              |
| K.D.Fisher & Co.                                 | RC3CPWT-AE    | HH23PW-T AC24V 3 pole c/o 11 pin plug.  |                              |

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| Supplier   | Part No         | Product/Description                    | Condition/Remarks  |
|--|-----------------|--|--|
| K.D.Fisher & Co.   | RC3CPWT-AF      | HH23PW-T AC48V 3 pole c/o 11 pin plug. |  |
| K.D.Fisher & Co.   | RX38X0          | TP38X 8 pin base.                      | DIN rail mounting.   |
| K.D.Fisher & Co.   | RX31X0          | TP311X 11 pin base.                    |  |
| K.D.Fisher & Co.   | RX38S0          | TP38S 8 pin base.                      | Panel mounting.  |
| K.D.Fisher & Co.   | RX31S0          | TP311S 11 pin base.                    |  |
| K.D.Fisher & Co.   | RZ1B            | FX1B Hold-down Spring                  |  |
| <b>‘Crompton Greaves’ QBCA1 12v Miniature Plug-In Relays *</b> |                 |  |  |
| Selectrix  | QBCA1 - 4842072 | QBCA1 - 2HF/4F/4B 12v DC               |  |
| <b>‘Invensys Rail’ Lamp Proving Relay QECX20 *</b>             |                 |  |  |
| Siemens  | B18513/27       | Lamp proving relay QECX20              | For use with RM4 LED signals                                       |
|  | M31538          | Plugboard For QECX20                   |  |
| <b>‘Siemens’ (Q Type) Vital Relays *</b>                       |                 |  |  |
| Siemens  | B18548/2        | QBCA1 – 2HF/4B (24V DC)                |  |
| Siemens  | B18548/9        | QBCA1 – 2HF/2F/4B (24V DC)             |  |
| Siemens  | M25049          | QEC1 – 4F/2B (12v DC)                  | 16W LEDs = 100ms (slow to drop)<br>24W LEDs = 200ms (slow to drop) |
| Siemens  | M25455          | QEC1                                   |  |
| Siemens  | M25051          | QBA1 – 12F/4B (50v DC)                 |  |
| Siemens  | M25052          | QBA1 – 8F/8B (50v DC)                  |  |
| Siemens  | M25032          | QBT1 – 2F/2B (4W)                      |  |
| Siemens  | M25101          | QBBA1 – 2x6F/2B (50v DC)               |  |

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|----------|---------|------------------------------|--------------------------|
| Siemens  | M25102  | QBBA1 – 2x4F/4B (50v DC)     |                          |
| Siemens  | M25132  | QBBA1 – 2x4F/4B (12v DC)     |                          |
| Siemens  | M25066  | QBCA1 – 2HF/4B (50v DC)      |                          |
| Siemens  | M25068  | QBCA1 – 2HF/4F/4B (50v DC)   |                          |
| Siemens  | M25070  | QBCA1 – 2HF/4F/4B (12v DC)   |                          |
| Siemens  | M25170  | QCJ1 – 1F/3B 10s (50v DC)    |                          |
| Siemens  | M25178  | QCJ1 – 1F/3B 14s (50v DC)    |                          |
| Siemens  | M30852  | QECX1 – 4F/2B (180mA)        |                          |
| Siemens  | M25021  | QL1 – 11F/4B (50v DC)        |                          |
| Siemens  | M25023  | QL1 – 8F/6B (50v DC)         |                          |
| Siemens  | M25024  | QL1 – 11F/4B (12v DC)        |                          |
| Siemens  | M25001  | QN1 – 12F/4B (50v DC)        |                          |
| Siemens  | M25002  | QN1 – 8F/8B (50v DC)         |                          |
| Siemens  | M25012  | QN1 – 8F/8B (12v DC)         |                          |
| Siemens  | M25039  | QN1 – 8F/8B (24v DC)         |                          |
| Siemens  | M25007  | QN1 – 8F/8B (24v DC)         |                          |
| Siemens  | M25071  | QNA1 – 12F/4B (50v DC)       |                          |
| Siemens  | M25072  | QNA1 – 8F/8B (50v DC)        |                          |
| Siemens  | M25029  | QNHX1 – 8F/4B (110v AC)      | Not immune to DC current |
| Siemens  | M30861  | QNHXC1 – 2HF/4F/4B (110v AC) | Not immune to DC current |
| Siemens  | M25107  | QNN1 – 2x6F/2B (50v DC)      |                          |

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|----------------|--------------|-----------------------------|-----------------------------------|
| Siemens        | M25108       | QNN1 – 2x4F/4B (50v DC)     |                                   |
| Siemens        | M25110       | QNN1 – 2x6F2B (24v DC)      |                                   |
| Siemens        | M25113       | QNN1 – 2x6F/2B (50v DC)     |                                   |
| Siemens        | M25188       | QR5 – 4/7s slug             | Use with 50v DC BR930 relay (QN1) |
| Siemens        | M25189       | QR5 – Capacitor Unit        | Use in flashing circuit           |
| Siemens        | M25192       | QR9 – Diode Unit            |                                   |
| Siemens        | M25028       | QS2 – 6F/6B (12v DC)        |                                   |
| Siemens        | M25081       | QSPA1 – 8F/4B (50v DC)      |                                   |
| Siemens        | M25041       | QSR3 – 4F/2B (105mA)        |                                   |
| Siemens        | M25086       | QSRA1 – 8F/4B (50v DC)      |                                   |
| Siemens        | M25031       | QT2 – 2F/2B (4W)            |                                   |
| Siemens        | M25092       | QTA2 – 2F/2B (9W)           |                                   |
| Siemens        | M25159       | QTD4 – 3 to 300s (0.5A)     |                                   |
| Siemens        | M25161       | QTD5 – 5F/2B (50v DC)       |                                   |
| Siemens        | M25162       | QTD5 – 4F/3B (50v DC)       |                                   |
| Siemens        | M25165       | QTD5 – 5F/2B (12v DC)       |                                   |
| Siemens        | M25385       | QTM1 – 4F/2MB (4W)          |                                   |
| Siemens        | M25199       | QXR1 – T/J (110v AC/50v DC) |                                   |
| <b>Siemens</b> | <b>Bases</b> |                             |                                   |
| Siemens        | M19051       | QBA1                        |                                   |
| Siemens        | M19170       | QBA1                        |                                   |

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|----------|---------|---------------------|-------------------|
| Siemens  | M25471  | QBT1                |                   |
| Siemens  | M23650  | QBBA1               |                   |
| Siemens  | M23451  | QBBA1               |                   |
| Siemens  | M25484  | QBBA1               |                   |
| Siemens  | M23430  | QBCA1               |                   |
| Siemens  | M25451  | QBCA1               |                   |
| Siemens  | M25479  | QBCA1               |                   |
| Siemens  | M24875  | QCJ1                |                   |
| Siemens  | M25499  | QCJ1                |                   |
| Siemens  | M31000  | QECX1               |                   |
| Siemens  | M19295  | QL1                 |                   |
| Siemens  | M20518  | QL1                 |                   |
| Siemens  | M25474  | QL1                 |                   |
| Siemens  | M19294  | QN1                 |                   |
| Siemens  | M20202  | QN1                 |                   |
| Siemens  | M23107  | QN1                 |                   |
| Siemens  | M20038  | QN1                 |                   |
| Siemens  | M23280  | QN1                 |                   |
| Siemens  | M23080  | QNA1                |                   |
| Siemens  | M23976  | QNA1                |                   |
| Siemens  | M25490  | QNHX1               |                   |

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| Supplier | Part No | Product/Description | Condition/Remarks                 |
|----------|---------|---------------------|-----------------------------------|
| Siemens  | M31189  | QNHXC1              |                                   |
| Siemens  | M23646  | QNN1                |                                   |
| Siemens  | M23647  | QNN1                |                                   |
| Siemens  | M24169  | QNNA1               |                                   |
| Siemens  | M24044  | QR5                 | Use for 4/7s slug.                |
| Siemens  | M24233  | QR5                 | Use for flashing circuit.         |
| Siemens  | M24089  | QR9                 |                                   |
| Siemens  | M23059  | QS2                 |                                   |
| Siemens  | M20265  | QSPA1               |                                   |
| Siemens  | M19039  | QSR3                | May be used for AC lamp circuits. |
| Siemens  | M25470  | QSR3                |                                   |
| Siemens  | M18993  | QSRA1               |                                   |
| Siemens  | M20989  | QT2                 |                                   |
| Siemens  | M23444  | QTA2                |                                   |
| Siemens  | M22312  | QTD4                |                                   |
| Siemens  | M23398  | QTD5                |                                   |
| Siemens  | M23465  | QTD5                |                                   |
| Siemens  | M23438  | QTD5                |                                   |
| Siemens  | M25493  | QTM1                |                                   |
| Siemens  | M23820  | QXR1                |                                   |

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|---|-------------|----------------------------|--|
| <b>Mors Smitt - SEC1 (QEC1) Vital Relay *</b> |             |                            |  |
| Wabtec Control Systems Pty Ltd                | TY133/GRP02 | SEC1 (QEC1)                | 16W LEDs = 100ms (slow to drop)<br>24W LEDs = 200ms (slow to drop) |
| <b>Mors Smitt – BR930 Spec 'Q' Relays *</b>   |             |                            |  |
| Wabtec Control Systems Pty Ltd                | TY084/GRP06 | QBA1 - 12F/4B (50v DC)     |  |
| Wabtec Control Systems Pty Ltd                | TY084/GRP08 | QBA1 - 8F/8B (50v DC)      |  |
| Wabtec Control Systems Pty Ltd                | TY084/GRP02 | QBA1 - 8F/4B (24v DC)      |  |
| Wabtec Control Systems Pty Ltd                | TY157/GRP01 | QBBA1 - 2x6F/2B (50v DC)   |  |
| Wabtec Control Systems Pty Ltd                | TY157/GRP02 | QBBA1 - 2x4F/4B (50v DC)   |  |
| Wabtec Control Systems Pty Ltd                | TY157/GRP09 | QBBA1 - 2x4F/4B (12v DC)   |  |
| Wabtec Control Systems Pty Ltd                | TY154/GRP03 | QBCA1 - 2HF/4B (50v DC)    |  |
| Wabtec Control Systems Pty Ltd                | TY154/GRP06 | QBCA1 - 2HF/4F/4B (50v DC) |  |
| Wabtec Control Systems Pty Ltd                | TY154/GRP09 | QBCA1 - 2HF/4F/4B (12v DC) |  |
| Wabtec Control Systems Pty Ltd                | TY133/GRP02 | QEC1 4F/2B (12v DC)        | 16W LEDs = 100ms (slow to drop)<br>24W LEDs = 200ms (slow to drop) |
| Wabtec Control Systems Pty Ltd                | TY132/GRP16 | QECX1 4F/2B (180mA)        |  |
| Wabtec Control Systems Pty Ltd                | TY087/GRP02 | QL1 - 11F/4B (50v DC)      |  |
| Wabtec Control Systems Pty Ltd                | TY087/GRP04 | QL1 - 8F/6B (50v DC)       |  |
| Wabtec Control Systems Pty Ltd                | TY082/GRP11 | QN1 - 12F/4B (50v DC)      |  |
| Wabtec Control Systems Pty Ltd                | TY082/GRP15 | QN1 - 8F/8B (50v DC)       |  |
| Wabtec Control Systems Pty Ltd                | TY082/GRP30 | QN1 - 8F/8B (12v DC)       |  |
| Wabtec Control Systems Pty Ltd                | TY182/GRP26 | QN1 - 12F/4B (12v DC)      |  |

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|--------------------------------|-------------|-----------------------------|--------------------------|
| Wabtec Control Systems Pty Ltd | TY083/GRP06 | QNA1 - 12F/4B (50v DC)      |                          |
| Wabtec Control Systems Pty Ltd | TY083/GRP08 | QNA1 - 8F/8B (50v DC)       |                          |
| Wabtec Control Systems Pty Ltd | TY192/GRP01 | QNHX1 - 8F/4B (110v AC)     | Not immune to DC current |
| Wabtec Control Systems Pty Ltd | TY156/GRP01 | QNN1 - 2*6F/2B (50v DC)     |                          |
| Wabtec Control Systems Pty Ltd | TY156/GRP02 | QNN1 - 2*4F/4B (50v DC)     |                          |
| Wabtec Control Systems Pty Ltd | TY156/GRP04 | QNN1 - 6F/2B (24v DC)       |                          |
| Wabtec Control Systems Pty Ltd | TY156/GRP05 | QNN1 - 4F/4B (24v DC)       |                          |
| Wabtec Control Systems Pty Ltd | TY156/GRP15 | QNN1 - 6F/2B (12v DC)       |                          |
| Wabtec Control Systems Pty Ltd | TY160/GRP01 | QNNA1 - 2*6F/2B (50v DC)    |                          |
| Wabtec Control Systems Pty Ltd | TY160/GRP02 | QNNA1 - 4F/4B (50v DC)      |                          |
| Wabtec Control Systems Pty Ltd | TY370/GRP21 | QR5 - Capacitor Unit        | Use in flashing circuit  |
| Wabtec Control Systems Pty Ltd | TY085/GRP02 | QSPA1 - 8F/4B (50v DC)      |                          |
| Wabtec Control Systems Pty Ltd | TY086/GRP02 | QSRA1 - 8F/4B (24v DC)      |                          |
| Wabtec Control Systems Pty Ltd | TY086/GRP02 | QSRA1 - 8F/4B (50v DC)      |                          |
| Wabtec Control Systems Pty Ltd | TY153/GRP05 | QTA2 - 2F/2B (9 ohm)        |                          |
| Wabtec Control Systems Pty Ltd | TY303/GRP01 | QXR1 - T/J (110v AC/50v DC) |                          |
| Wabtec Control Systems Pty Ltd | TY155/GRP01 | QCJ1 – 1F/3B – 24v DC       |                          |
| Wabtec Control Systems Pty Ltd | TY155/GRP02 | QCJ1 – 1F/3B – 50v DC       |                          |
| Wabtec Control Systems Pty Ltd | TY163/GRP01 | QRJ1 – 1F 1B – 22-30v DC    | 3 sec time delay         |
| Wabtec Control Systems Pty Ltd | TY163/GRP02 | QRJ1 – 1F 1B – 22-30v DC    | 5 sec time delay         |
| Wabtec Control Systems Pty Ltd | TY163/GRP03 | QRJ1 – 1F 1B – 22-30v DC    | 6 sec time delay         |

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|---|-----------------|---|--|
| Wabtec Control Systems Pty Ltd                              | TY163/GRP04     | QRJ1 – 1F 1B – 22-30v DC  | 7.5 sec time delay   |
| Wabtec Control Systems Pty Ltd                              | TY163/GRP05     | QRJ1 – 1F 1B – 22-30v DC  | 10 sec time delay  |
| Wabtec Control Systems Pty Ltd                              | TY163/GRP06     | QRJ1 – 3F 1B – 50v DC   | 10 sec time delay  |
| Wabtec Control Systems Pty Ltd                              | TY081-S-xxxxx-C |   | XXXXX is the relay pin code. For example, TY 081-S-004-C is the plugboard for the TY 082/GRP15 relay (QN1 – 8F/8B 50v DC). |
| <b>Alstom Micronome Slow to Operate Timer Relays</b>        |                 |   |  |
| Alstom  | L520008826      | Micronome ET-R3 High Integrity Programmable Electronic Timer – 24V DC slow to operate 3-381 seconds with Q relay pin code 190 |  |
| Alstom  | 085/001461      | MICRONOME ET-R1 High Integrity Programmable Electronic Timer – 50V DC slow to operate 2-254 seconds with Q relay pin code 189 |  |
| <b>2.8 Surge Protection Equipment</b>                       |                 |   |  |
| <b>'Weidmüller' DKU 48Vuc Overvoltage Protection Unit *</b> |                 |   |  |
| Weidmuller Pty. Ltd.  | 8019280000      | DKU 32 48VUC 0.3A   |  |
| Weidmuller Pty. Ltd.  | 8019290000      | DKU 35 48VUC 0.3A   |  |
| <b>'U.S.&amp;S.' Lightning Arresters (E-Zvue) *</b>         |                 |   |  |
| Hitachi Rail STS  | N451552-0101    | Low Voltage   |  |
| Hitachi Rail STS  | N451552-0201    | High Voltage  |  |
| Hitachi Rail STS  | N451552-0401    | AC Line   |  |

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| Supplier   | Part No | Product/Description   | Condition/Remarks |
|--|---------|---|-------------------|
| <b>'Elsafe' Transient Protection Equipment *</b> |         |   |                   |
| Elsafe Australia Pty Ltd                         | 216630  | DC line/tail input circuit ripple filter and over-voltage clamp |                   |
| Elsafe Australia Pty Ltd                         | 216640  | DC line/tail input circuit ripple filter and over-voltage clamp |                   |
| Elsafe Australia Pty Ltd                         | 216655  | DC line/tail output circuit surge diverter                      |                   |
| Elsafe Australia Pty Ltd                         | 216660  | AC line/tail output circuit surge diverter                      |                   |
| Elsafe Australia Pty Ltd                         | 216680  | AC line/tail circuit surge diverter                             |                   |
| Elsafe Australia Pty Ltd                         | 555720  | DC line/tail circuit over-voltage clamp                         |                   |
| Elsafe Australia Pty Ltd                         | 216670  | VF data line Modem/Fax over-voltage arrestor                    |                   |
| Elsafe Australia Pty Ltd                         | 555715  | Spark gap/MOV track arrestor                                    |                   |
| Elsafe Australia Pty Ltd                         | 555128  | Balanced power supply over-voltage arrestor                     |                   |
| Elsafe Australia Pty Ltd                         | 555670  | Line to Line or Line to Earth surge arrestor/diverter           |                   |
| Elsafe Australia Pty Ltd                         | 555680  |   |                   |
| Elsafe Australia Pty Ltd                         | 555690  |   |                   |
| Elsafe Australia Pty Ltd                         | 216620  | Dual Through Link cassette                                      |                   |
| Elsafe Australia Pty Ltd                         | 216600  | Termination Module  |                   |
| Elsafe Australia Pty Ltd                         | 216605  |   |                   |
| Elsafe Australia Pty Ltd                         | 216610  |   |                   |
| Elsafe Australia Pty Ltd                         | 216710  | Identification Flag (Red)                                       |                   |
| Elsafe Australia Pty Ltd                         | 218790  | Earthing Comb (10 modules @ 24mm centres)                       |                   |

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|--|--------------------|---------------------|-------------------|
| <b>'Exelectronics' Surge Protection Panel (ISGP) *</b> |                    |                     |                   |
| Exelectronics Pty Ltd                                  | E14001 (50A 120V)  |                     |                   |
| Exelectronics Pty Ltd                                  | E14002 (100A 120V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14003 (150A 120V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14004 (200A 120V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14250 (250A 120V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14350 (350A 120V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14005 (50A 240V)  |                     |                   |
| Exelectronics Pty Ltd                                  | E14084 (100A 240V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14273 (150A 240V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14236 (200A 240V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14274 (250A 240V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14351 (350A 240V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14007 (50A 415V)  |                     |                   |
| Exelectronics Pty Ltd                                  | E14008 (100A 415V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14273 (150A 415V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14010 (200A 415V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14011 (250A 415V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14352 (350A 415V) |                     |                   |
| Exelectronics Pty Ltd                                  | E14006 (50A 440V)  |                     |                   |
| Exelectronics Pty Ltd                                  | E14275 (100A 440V) |                     |                   |

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|---|---------------|-----------------------------|-------------------|
| <b>DEHN' SDS 1 Voltage Limiting Device *</b>                    |               |                             |                   |
| DEHN + SÖHNE GmbH+Co.KG   | 923 110       | Voltage Limiting Device     |                   |
|   | 723 199       | Mast Adapter for SDS-1      |                   |
| <b>'Safetrack Australasia' Transient Protection Equipment *</b> |               |                             |                   |
| Safetrack Australasia   | STC-18S/S4    | 18V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-32S/S4    | 32V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-60S/S4    | 60V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-18S/S4    | 18V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-32S/S4    | 32V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-60S/S4    | 60V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-90S/S4    | 90V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-150S/S4   | 150V peak - maximum voltage |                   |
| Safetrack Australasia   | STC-18S/NEQ   | 18V peak - maximum voltage  |                   |
| Safetrack Australasia   | STC-10A 24    | 30V rms - maximum voltage   |                   |
| Safetrack Australasia   | STC-10A 120   | 150V rms - maximum voltage  |                   |
| Safetrack Australasia   | STC-10A 240   | 275V rms - maximum voltage  |                   |
| Safetrack Australasia   | STC-120/80    | 150V rms - maximum voltage  |                   |
| Safetrack Australasia   | STC-240/80    | 275V rms - maximum voltage  |                   |
| Safetrack Australasia   | STC-440/80    | 476V rms - maximum voltage  |                   |
| Safetrack Australasia   | STC-150/820WE | 200V rms - maximum voltage  |                   |
| Safetrack Australasia   | STC-150/80ST  | 150V rms - maximum voltage  |                   |

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|--|----------------|---|-------------------|
| <b>Critec' Rail Transient Current Barrier Products *</b> |                |   |                   |
| Erico Products Australia                                 | UTB-9          | Transient Barrier 9v Clamp                        |                   |
| Erico Products Australia                                 | UTB-18         | Transient Barrier 18v Clamp                       |                   |
| Erico Products Australia                                 | UTB-S          | Transient Barrier for telephone circuits          |                   |
| Erico Products Australia                                 | SLP10-K3F      | Subscriber Line Protector.                        |                   |
| Erico Products Australia                                 | UTB-36-R2      | Transient Barrier 36-R2, 36v Clamp                |                   |
| Erico Products Australia                                 | RTB-12-S2      | Transient Barrier 12v DC, 20kA                    |                   |
| Erico Products Australia                                 | RTB-30-S3      | Transient Barrier 30v DC, 20kA                    |                   |
| Erico Products Australia                                 | RTB-50-S2      | Transient Barrier 50v DC, 20kA                    |                   |
| Erico Products Australia                                 | RTB-30-S3M     | Replaceable protection modules for RTB-30-S3      |                   |
| Erico Products Australia                                 | RTB-50-S2M     | Replaceable protection modules for RTB-50-S2      |                   |
| Erico Products Australia                                 | TSG1130-2S-NE  | Triggered Spark-gap, 130kA, N/E                   |                   |
| Erico Products Australia                                 | DSF-6A-150v    | 1ph, 150v AC, 6A, 16+16+16kA, 3 mode Surge Filter |                   |
| Erico Products Australia                                 | DSF-6A-30v     | 1ph, 30v AC/DC, 6A, 4+4+4kA, 3 mode, Surge Filter |                   |
| Erico Products Australia                                 | DSD1160-8S     | 240v Line-Neutral Surge Diverter                  |                   |
| Erico Products Australia                                 | TDS-MT-277     | 240v Line-Neutral Surge Diverter                  |                   |
| Erico Products Australia                                 | PRF-50A-120 V2 | Primary Rail Filter, 50A, 120v                    |                   |
| Erico Products Australia                                 | PRF-100A-120   | Primary Rail Filter, 50A, 120v                    |                   |
| Erico Products Australia                                 | TDS50-120      | TDS 50v 40kA Surge Suppressor                     |                   |

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|---|-------------------|---|-------------------|
| Erico Products Australia  | TDS140-2S-120     | TDS 120v 40kA Surge Suppressor              |                   |
| Erico Products Australia  | RDP-120V          | Rail Diverter Panel, 120v                   |                   |
| Erico Products Australia  | TSG1130-2S-120    | Triggered Spark Gap 130kA, 120v             |                   |
| Erico Products Australia  | DSD140-1S-150     | 120v Line-Line Surge diverter               |                   |
| Erico Products Australia  | DSD140-2B-R24/48  | 24VDC Surge Diverter                        |                   |
| Erico Products Australia  | TEC-100C          | Transient Earth Clamp                       |                   |
| Erico Products Australia  | DEP RS232/25/9    | RS232 DB25, 9 wire protector, 15v working   |                   |
| Erico Products Australia  | DEP RS232/25/25   | RS232 DB25, 25 wire protector, 15v working  |                   |
| Erico Products Australia  | DEP RS232/9/9     | RS232 DB9, 9 wire protector, 15v working    |                   |
| Erico Products Australia  | DEP RS422/9/9     | RS422/485 DB9, 9 wire protector, 9v working |                   |
| <b>Novaris SL68/Surge Arrestor *</b>                                |                   |   |                   |
| Control Logic   | SL68/G            | Novaris SL Signal Line Surge Protection     |                   |
| <b>'GE' Motion Detector Surge Arrestor</b>                          |                   |   |                   |
| GE Transportation   | MDSA-1            | HXP-3                                       |                   |
| GE Transportation   | MDSA-2            | HXP-3                                       |                   |
| GE Transportation   | MDSA-1XS          | XP4   |                   |
| GE Transportation   | MDSA-2XS          | XP4   |                   |
| <b>Pivot Electronics – Dual Redundancy Surge Reduction Filter *</b> |                   |   |                   |
| Pivot Electronics Pty Ltd   | 1451 SRF 018 5050 |   |                   |
| Pivot Electronics Pty Ltd   | 1451 SRF 019 5050 |   |                   |

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|---------------------------|-------------------|--|-------------------|
| Pivot Electronics Pty Ltd | 1451 SRF 020 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 021 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 001 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 002 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 003 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 004 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 005 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 006 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 007 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 009 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 009 9550 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 010 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 010 9550 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 008 5050 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 014 9595 |  |                   |
| Pivot Electronics Pty Ltd | 1451 SRF 009 9550 |  |                   |
| Pivot Electronics Pty Ltd | 1451.SRF.013      | SRF Cassette Red 3-Phase 415V 160KA    |                   |
| Pivot Electronics Pty Ltd | 1451.SRF.012      | SRF Cassette Black 1-Phase 240V 160KA  |                   |
| Pivot Electronics Pty Ltd | 1451.SRF.025      | SRF Cassette Yellow 1-Phase 120V 160KA |                   |
| Pivot Electronics Pty Ltd | 1451.SRF.014      | SRF Cassette Blue 1-Phase 415V 160KA   |                   |

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|---|------------|----------------------------------|-------------------|
| <b>Pivot Electronics 'RTU Barrier Unit' *</b> |            |                                  |                   |
| Pivot Electronics Pty Ltd                     | 10100      | RTU Barrier unit                 |                   |
| Pivot Electronics Pty Ltd                     | MOV20D820K | Replacement Varistor 20mm, 82V   |                   |
| <b>DEHN' Surge Protection Equipment *</b>     |            |                                  |                   |
| IPD Industrial Products                       | 961145     |                                  |                   |
| IPD Industrial Products                       | 951115     | DEHNbloc DBM 1 440 FM            |                   |
| IPD Industrial Products                       | 951119     | DEHNventil DV M TT 2P 255 FM     |                   |
| IPD Industrial Products                       | 951100     | DEHNventil DV M 2W 135 FM        |                   |
| IPD Industrial Products                       | 951002     | Replacement Module DV MOD 255    |                   |
| IPD Industrial Products                       | 951050     | Replacement Module DV MOD 135    |                   |
| IPD Industrial Products                       | 952071     | Replacement Module DV MOD NPE 50 |                   |
| IPD Industrial Products                       | 952091     | DEHNguard DG S 75                |                   |
| IPD Industrial Products                       | 952011     | Replacement Module DG MOD 75     |                   |
| IPD Industrial Products                       | 920 326    | DEHN BLITZDUCTOR BXT ML4 BE 60   |                   |
| IPD Industrial Products                       | 926 304    | DEHN BLITZDUCTOR BSP BAS 4 BASE  |                   |
| IPD Industrial Products                       | 910508     | PA BXT Test Adapter              |                   |
| IPD Industrial Products                       | 910511     | PM 20                            |                   |
| IPD Industrial Products                       | 910653     | DRC LC M3+                       |                   |
| IPD Industrial Products                       | 910655     | DRC LC M1+                       |                   |
| IPD Industrial Products                       | 920309     | BXT M4 T                         |                   |
| IPD Industrial Products                       | 910652     | LCS DRC BXT                      |                   |

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|--|---------|---|-------------------|
| <b>Elsafe 555716 Transient Protection Cassette *</b> |         |   |                   |
| Elsafe Australia Pty Ltd                             | 216630  | DC line/tail input circuit ripple filter and over-voltage clamp |                   |
| Elsafe Australia Pty Ltd                             | 216640  | DC line/tail input circuit ripple filter and over-voltage clamp |                   |
| Elsafe Australia Pty Ltd                             | 216655  | DC line/tail output circuit surge diverter                      |                   |
| Elsafe Australia Pty Ltd                             | 216660  | AC line/tail output circuit surge diverter                      |                   |
| Elsafe Australia Pty Ltd                             | 216680  | AC line/tail circuit surge diverter                             |                   |
| Elsafe Australia Pty Ltd                             | 555720  | DC line/tail circuit over-voltage clamp                         |                   |
| Elsafe Australia Pty Ltd                             | 216670  | VF data line Modem/Fax over-voltage arrestor                    |                   |
| Elsafe Australia Pty Ltd                             | 555715  | Spark gap/MOV track arrestor                                    |                   |
| Elsafe Australia Pty Ltd                             | 555716  | Spark gap/MOV track arrestor                                    |                   |
| Elsafe Australia Pty Ltd                             | 555128  | Balanced power supply over-voltage arrestor                     |                   |
| Elsafe Australia Pty Ltd                             | 555670  | Line to Line or Line to Earth surge arrestor/diverter           |                   |
| Elsafe Australia Pty Ltd                             | 555680  | Line to Line or Line to Earth surge arrestor/diverter           |                   |
| Elsafe Australia Pty Ltd                             | 555690  | Line to Line or Line to Earth surge arrestor/diverter           |                   |
| Elsafe Australia Pty Ltd                             | 216621  | Safety Isolation Cassette                                       |                   |
| Elsafe Australia Pty Ltd                             | 216620  | Dual Through Link cassette                                      |                   |
| Elsafe Australia Pty Ltd                             | 216600  | Termination Module  |                   |
| Elsafe Australia Pty Ltd                             | 216600A | (Obsolete)  |                   |
| Elsafe Australia Pty Ltd                             | 216605A | Termination Module  |                   |

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| Supplier   | Part No   | Product/Description                          | Condition/Remarks |
|--|---|--|-------------------|
| Elsafe Australia Pty Ltd   | 216610  | (CAGE CLAMP Technology)                      |                   |
| <b>Erico - Digital Surge Counter DSCL2 *</b>                       |   |  |                   |
| Erico Products Australia   | DSCL2   | Digital Surge Counter                        |                   |
| <b>Transient Controls Australia' TC-RC Surge Arrestor *</b>        |   |  |                   |
| Transient Controls Australia                                       | TC-RC   | Surge Arrestor                               |                   |
| <b>2.9 Power Supply Equipment</b>                                  |   |  |                   |
| <b>Exelectronics' Emergency Changeover Contactor Panel (ECO) *</b> |   |  |                   |
| Exelectronics Pty Ltd  | ECO 50A High Speed,<br>ECO 100A High Speed,<br>ECO 150A High Speed,<br>ECO 200A High Speed,<br>ECO 250A High Speed,<br>ECO 500A High Speed<br>ECO 1000A High Speed. | Emergency Changeover Contactor Panels 120V.  |                   |
| <b>'Exmode' - DC Track Circuit battery charger. *</b>              |   |  |                   |
| Exelectronics Pty Ltd  | Part no. 3V10A (Store 170)  | 'Exmode' - DC Track Circuit battery charger. |                   |

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|---|-----------|---|-------------------------|
| <b>CCI Battery Charger *</b>                |           |   |                         |
| CCI Pty Ltd                                 | SLX-678   | CCI Battery Charger                     |                         |
| <b>Exelectronics Store 170 track feed *</b> |           |   |                         |
| Exelectronics Pty Ltd                       | Store 170 | Exelectronics Store 170 track feed      |                         |
| <b>ADC5000 DC Power Supply *</b>            |           |   |                         |
| M-Power                                     | ADC5021   | PSU-12V 10A                             | Derated power = 90W     |
| M-Power                                     | ADC5081   | BATTERY CHARGER - 12V 10A, NO DIODE     | Derated power = 102.75W |
| M-Power                                     | ADC5083   | BATTERY CHARGER/PSU - 12V 10A           | Derated power = 102.75W |
| M-Power                                     | ADC5121   | PSU - 24V 5A PSU                        | Derated power = 90W     |
| M-Power                                     | ADC5183   | BATTERY CHARGER/PSU - 24V 5A            | Derated power = 102.75W |
| M-Power                                     | ADC5283   | BATTERY CHARGER/PSU - 48V 2.5A          | Derated power = 102.75W |
| M-Power                                     | ADC5381   | BATTERY CHARGER/PSU - 12V 18A, NO DIODE | Derated power = 137W    |
| M-Power                                     | ADC5383   | BATTERY CHARGER/PSU - 12V 18A           | Derated power = 137W    |
| M-Power                                     | ADC5323   | PSU - 12V 18A PSU                       | Derated power = 120W    |
| M-Power                                     | ADC5483   | BATTERY CHARGER/PSU - 24V 10A           | Derated power = 205.5W  |
| M-Power                                     | ADC5521   | PSU - 48V 5A PSU                        | Derated power = 180W    |
| M-Power                                     | ADC5583   | BATTERY CHARGER/PSU - 48V 5A            | Derated power = 205.5W  |

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| Supplier                                   | Part No   | Product/Description            | Condition/Remarks  |
|--|---|--------------------------------|--|
| M-Power                                    | ADC5621   | PSU - 12V 5A PSU               | Derated power = 45W  |
| M-Power                                    | ADC5683   | BATTERY CHARGER/PSU - 12V 4.4A | Derated power = 45W  |
| M-Power                                    | ADC5783   | BATTERY CHARGER/PSU - 24V 2.2A | Derated power = 45W  |
| M-Power                                    | ADC5823   | PSU - 48V 1.25A PSU            | Derated power = 45W  |
| M-Power                                    | ADC5883   | BATTERY CHARGER/PSU - 48V 1.1A | Derated power = 45W  |
| M-Power                                    | ADC5983   | BATTERY CHARGER/PSU - 36V 1.5A | Derated power = 45W  |
| <b>Eaton UPS 9SX Series *</b>              |   |                                |  |
| Eaton Industries Pty Ltd                   | 9SX Series UPS  | 'Eaton' UPS 9SX Series         | Full type approval has been given for the use of Eaton's 9SX UPS under the assumption that they would be used in locations defined in SPS 02 as type A1 and A2. Thus, they shall be based at a location that is air-conditioned. |
| <b>PRO M Switch-Mode DC Power Supply *</b> |   |                                |  |
| Weidmüller                                 | 8951330010 (metal clip) -<br>Product name - CP M SNT<br>70W 24V 3A  | PSU (Switch mode) - 24V 3A     | Non-vital application  |
| Weidmüller                                 | 8951340010 (metal clip) -<br>Product name - CP M SNT<br>120W 24V 5A | PSU (Switch mode) - 24V 5A     |  |

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|--|---|---------------------------------------|---|
| Weidmüller   | 8951350010 (metal clip) -<br>Product name - CP M SNT<br>180W 24V 7.5A | PSU (Switch mode) - 24V 7.5A          |   |
| Weidmüller   | 8951360010 9metal clip) -<br>Product name - CP M SNT<br>250W 24V 10A  | PSU (Switch mode) - 24V 10A           |   |
| Weidmüller   | 8951370010 9metal clip) -<br>Product name - CP M SNT<br>500W 24V 20A  | PSU (Switch mode) - 24V 20A           |   |
| Weidmüller   | 8951380010 9metal clip) -<br>Product name - CP M SNT<br>1000W 24V 40A | PSU (Switch mode) - 24V 40A           |   |
| Weidmüller   | 1222210010 - Product<br>name - CP M DM20                              | Diode module rated 20A                | To be used with Weidmuller Pro M PSUs                         |
| Weidmüller   | 1222220010 - Product<br>name - CP M DM40                              | Diode module rated 40A                |   |
| Weidmüller   | 1222230000 - Product<br>name - CP M RM24                              | Relay module - PSU failure indication |   |
| Enatel RW300-RW700 series wall mount Rectifier Power supply and Battery charger * - Legacy Approval – Shall not be used for any new works on ARTC network. To be used only for like for like replacements. |   |                                       |   |
| Exelectronics  | RW312U-20   | 12V, 20A                              | Maximum voltage 15V   |
| Exelectronics  | RW348-U-20  | 50V, 6A                               | Maximum voltage 60V   |
| Exelectronics  | RW512-U-20  | 12V, 35A                              | Maximum voltage 15V   |
| Exelectronics  | RW624U-20   | 24V, 22A                              | Maximum voltage 30V (1.5v per cell, 20 cell<br>NiCad battery) |

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| Supplier                        | Part No  | Product/Description               | Condition/Remarks   |
|---------------------------------|----------|-----------------------------------|---|
| Exelectronics                   | SM11     | Supervisory monitor panel         | An individual panel may only monitor rectifiers feeding a single battery for a busbar |
| Exelectronics                   | ACA-TC2U | Temperature Compensation cable 2m |   |
| Exelectronics                   | ACA-TC7U | Temperature Compensation cable 7m |   |
| Exelectronics                   | ACS-S150 | Current sensor shunt assembly     |   |
| <b>Exmode DC/DC Converter *</b> |          |                                   |   |
| Exelectronics                   | E05001   | 30W model                         | 22.5W de-rating   |
| Exelectronics                   | E05046   | 30W model                         |   |
| Exelectronics                   | E05047   | 30W model                         |   |
| Exelectronics                   | E05048   | 30W model                         |   |
| Exelectronics                   | E05049   | 30W model                         |   |
| Exelectronics                   | E05050   | 30W model                         |   |
| Exelectronics                   | E05051   | 30W model                         |   |
| Exelectronics                   | E05052   | 30W model                         |   |
| Exelectronics                   | E05053   | 30W model                         |   |
| Exelectronics                   | E05054   | 30W model                         |   |
| Exelectronics                   | E05055   | 30W model                         |   |
| Exelectronics                   | E05056   | 30W model                         |   |
| Exelectronics                   | E05002   | 60W model                         | 45W de-rating   |
| Exelectronics                   | E05057   | 60W model                         |   |

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| Supplier      | Part No | Product/Description | Condition/Remarks |
|---------------|---------|---------------------|-------------------|
| Exelectronics | E05058  | 60W model           |                   |
| Exelectronics | E05059  | 60W model           |                   |
| Exelectronics | E05060  | 60W model           |                   |
| Exelectronics | E05061  | 60W model           |                   |
| Exelectronics | E05061  | 60W model           |                   |
| Exelectronics | E05062  | 60W model           |                   |
| Exelectronics | E05063  | 60W model           |                   |
| Exelectronics | E05064  | 60W model           |                   |
| Exelectronics | E05065  | 60W model           |                   |
| Exelectronics | E05066  | 60W model           |                   |
| Exelectronics | E05067  | 60W model           |                   |
| Exelectronics | E05003  | 120W model          | 90W de-rating     |
| Exelectronics | E05068  | 120W model          |                   |
| Exelectronics | E05069  | 120W model          |                   |
| Exelectronics | E05070  | 120W model          |                   |
| Exelectronics | E05071  | 120W model          |                   |
| Exelectronics | E05072  | 120W model          |                   |
| Exelectronics | E05073  | 120W model          |                   |
| Exelectronics | E05074  | 120W model          |                   |
| Exelectronics | E05075  | 120W model          |                   |
| Exelectronics | E05076  | 120W model          |                   |

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| Supplier      | Part No | Product/Description | Condition/Remarks |
|---------------|---------|---------------------|-------------------|
| Exelectronics | E05077  | 120W model          |                   |
| Exelectronics | E05078  | 120W model          |                   |
| Exelectronics | E05079  | 120W model          |                   |
| Exelectronics | E05080  | 120W model          |                   |
| Exelectronics | E05081  | 120W model          |                   |
| Exelectronics | E05082  | 120W model          |                   |
| Exelectronics | E05083  | 120W model          |                   |
| Exelectronics | E05084  | 100W model          | 75W de-rating     |
| Exelectronics | E05085  | 100W model          |                   |
| Exelectronics | E05004  | 180W model          | 135W de-rating    |
| Exelectronics | E05086  | 180W model          |                   |
| Exelectronics | E05087  | 180W model          |                   |
| Exelectronics | E05088  | 180W model          |                   |
| Exelectronics | E05089  | 180W model          |                   |
| Exelectronics | E05090  | 180W model          |                   |
| Exelectronics | E05091  | 180W model          |                   |
| Exelectronics | E05092  | 180W model          |                   |
| Exelectronics | E05093  | 180W model          |                   |
| Exelectronics | E05094  | 180W model          |                   |
| Exelectronics | E05095  | 180W model          |                   |
| Exelectronics | E05096  | 180W model          |                   |

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| Supplier                                 | Part No   | Product/Description       | Condition/Remarks |
|--|-----------|---------------------------|-------------------|
| Exelectronics                            | E05097    | 180W model                |                   |
| Exelectronics                            | E05098    | 180W model                |                   |
| Exelectronics                            | E05109    | 180W model                |                   |
| Exelectronics                            | E05100    | 180W model                |                   |
| Exelectronics                            | E05101    | 150W model                | 112.5W de-rating  |
| Exelectronics                            | E05102    | 150W model                |                   |
| Exelectronics                            | E05005    | 300W model                | 225W de-rating    |
| Exelectronics                            | E05103    | 300W model                |                   |
| Exelectronics                            | E05104    | 300W model                |                   |
| Exelectronics                            | E05105    | 300W model                |                   |
| Exelectronics                            | E05106    | 300W model                |                   |
| Exelectronics                            | E05107    | 300W model                |                   |
| Exelectronics                            | E05108    | 300W model                |                   |
| Exelectronics                            | E05109    | 300W model                |                   |
| Exelectronics                            | E05110    | 300W model                |                   |
| Exelectronics                            | E05111    | 300W model                |                   |
| Exelectronics                            | E05112    | 300W model                |                   |
| Exelectronics                            | E05113    | 300W model                | 225W de-rating    |
| Exelectronics                            | E05114    | 300W model                |                   |
| TeSys D Contactors (110V AC & 240V AC) * |           |                           |                   |
| Schneider Electric                       | LC1D258F7 | TeSYs D Contactor 110V AC |                   |

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| Supplier   | Part No     | Product/Description  | Condition/Remarks   |
|--|-------------|--|---|
| Schneider Electric                               | LC1D258U7   | TeSYs D Contactor 240V AC  | For application requiring less than 40A(<60c) at <440VAC                  |
| <b>Eltek – UPS with Rectifier* 6 month trial</b> |             |  |   |
| Eltek  | A112396.000 | SysUPS, 3kVA Eltek 600W*600D*2100H 120VIN/OUT with SP2 Controller  | UPS system for use in equipment housing classified in range A1 to B1 only |
| Eltek  |             | SysUPS, 6kVA Eltek 600W*600D*2100H 120VIN/OUT with SP2 Controller  |   |
| Eltek  | A112458.000 | SysUPS, 9kVA Eltek 600W*600D*2100H 120VIN/OUT with SP2 Controller  |   |
| Eltek  |             | SysUPS, 12kVA Eltek 600W*600D*2100H 120VIN/OUT with SP2 Controller |   |
| Eltek  | A112459.000 | SysUPS, 3kVA Eltek 600W*600D*2100H 240VIN/OUT with SP2 Controller  |   |
| Eltek  |             | SysUPS, 6kVA Eltek 600W*600D*2100H 240VIN/OUT with SP2 Controller  |   |
| Eltek  |             | SysUPS, 9kVA Eltek 600W*600D*2100H 240VIN/OUT with SP2 Controller  |   |
| Eltek  |             | SysUPS, 12kVA Eltek 600W*600D*2100H 240VIN/OUT with SP2 Controller |   |
| Eltek  | 241123.100  | Rectifier 230/1500<br>48/1200                                      | For use with NiCad or Lead Acid Batteries only                            |
| Eltek  | 242100.500  | SmartPack2 (SP2) Master  | For use in equipment housing classified in range A1 to B1 only.           |
| Eltek  | 242100.601  | SmartPack2 (SP2) Industrial Basic                                  |   |
| Eltek  | 242100.510  | SmartPack2 TTouch  |   |

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| Supplier  | Part No   | Product/Description                                  | Condition/Remarks        |
|---|---|--|--------------------------|
| <b>CE&amp;T Power Flexa Modular AC UPS SYstem *</b> |   |  |                          |
| CE+T Power  | S72A33E0104SC100J001  | Flexa UPS 48V-120VAC -2.75kVA Single Phase 1 Module  |                          |
| CE+T Power  | S72A33E0204SC100J001  | Flexa UPS 48V-120VAC -5.5kVA Single Phase 2 Modules  |                          |
| CE+T Power  | S72A33E0304SC100J001  | Flexa UPS 48V-120VAC -8.25kVA Single Phase 3 Modules |                          |
| CE+T Power  | S72A33E0404SC100J001  | Flexa UPS 48V-120VAC -11kVA Single Phase 4 Modules   |                          |
| CE+T Power  | S72A73E0104S100J001   | Flexa UPS 48V-240VAC -3kVA Single Phase 1 Module     |                          |
| CE+T Power  | S72A73E0204S100J001   | Flexa UPS 48V-240VAC -6kVA Single Phase 2 Modules    |                          |
| CE+T Power  | S72A73E0304S100J001   | Flexa UPS 48V-240VAC -9kVA Single Phase 3 Modules    |                          |
| CE+T Power  | S72A73E0404S100J001   | Flexa UPS 48V-240VAC -12kVA Single Phase 4 Modules   |                          |
| CE+T Power  | T721730211  | Flexa module 25 – 230-230                            |                          |
| CE+T Power  | T302004100  | Inview S   |                          |
| CE+T Power  | T602004110  | Inview S Slot  |                          |
| CE+T Power  | T602004100+T602006000   | Inview S + MBB                                       |                          |
| CE+T Power  | T602004110+T602006000   | Inview S Slot + MBB                                  |                          |
| CE+T Power  | T60206000   | Measure Box Battery                                  |                          |
| <b>Railway Equipment Co – Cragg Railcharger *</b>   |   |  |                          |
| Aldridge Railway                                    | BC000 - Aldridge ordering number<br>10DTC-R-12V - Model number<br>520915A - Model Part number | Cragg Rail Charger                                   | Preferred DTC-G Charger. |

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| Supplier         | Part No  | Product/Description | Condition/Remarks |
|------------------|--|---------------------|-------------------|
| Aldridge Railway | BC001 - Aldridge ordering number<br>20DTC-R-12V - Model number<br>520925A - Model Part number    |                     |                   |
| Aldridge Railway | BC002 - Aldridge ordering number<br>40DTC-R-12V - Model number<br>520945A - Model Part number    |                     |                   |
| Aldridge Railway | BC003 - Aldridge ordering number<br>60DTC-R-12V - Model number<br>520965A - Model Part number    |                     |                   |
| Aldridge Railway | BC004 - Aldridge ordering number<br>30DTC-R-24V - Model number<br>520935A - Model Part number    |                     |                   |
| Aldridge Railway | BM001 - Aldridge ordering number<br>ICM-CP-LV - Model number<br>9807-0001-2V - Model Part number |                     |                   |

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|--|-------------------|---|-------------------|
| <b>Alpha Power Systems - CFRTU61XX UPS *</b> |                   |   |                   |
| Alpha Power Systems                          | CFRTU6101-R48-110 | CFRTUS6101, 1KVA full online RM48VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6102-R48-110 | CFRTUS6102, 2KVA full online RM48VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6103-R48-110 | CFRTUS6103, 3KVA full online RM48VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6105-R48-110 | CFRTUS6105, 5KVA full online RM48VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6101-R96-110 | CFRTUS6101, 1KVA full online RM96VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6102-R96-110 | CFRTUS6102, 2KVA full online RM96VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6103-R96-110 | CFRTUS6103, 3KVA full online RM96VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6105-R96-110 | CFRTUS6105, 5KVA full online RM96VDC 110VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6101-R48-120 | CFRTUS6101, 1KVA full online RM48VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6102-R48-120 | CFRTUS6102, 2KVA full online RM48VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems                          | CFRTU6103-R48-120 | CFRTUS6103, 3KVA full online RM48VDC 120VAC with isolation transformer + SNMP |                   |

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|--|-------------------|---|-------------------|
| Alpha Power Systems  | CFRTU6105-R48-120 | CFRTUS6105, 5KVA full online RM48VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems  | CFRTU6101-R96-120 | CFRTUS6101, 1KVA full online RM96VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems  | CFRTU6102-R96-120 | CFRTUS6102, 2KVA full online RM96VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems  | CFRTU6103-R96-120 | CFRTUS6103, 3KVA full online RM96VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems  | CFRTU6105-R96-120 | CFRTUS6105, 5KVA full online RM96VDC 120VAC with isolation transformer + SNMP |                   |
| Alpha Power Systems  | HTU 1K            | 1kva full offline UPS   |                   |
| Alpha Power Systems  | HTU 1.5K          | 1.5kva full offline UPS   |                   |
| Alpha Power Systems  | HTU 2K            | 2kva full offline UPS   |                   |
| Alpha Power Systems  | HTU 3K            | 3kva full offline UPS   |                   |
| Alpha Power Systems  | HTU 4K            | 4kva full offline UPS   |                   |
| Alpha Power Systems  | HTU 5K            | 5kva full offline UPS   |                   |
| Alpha Power Systems  | HTU 6K            | 6kva full offline UPS   |                   |
| <b>Alpha Power Systems - Manual/Automatic Transfer Switch MATS002R *</b> |                   |   |                   |
| Alpha Power Systems  | MATS002R          | Manual/Auto transfer switch - Rack Mount 110/230VAC, 65A                      |                   |
| <b>Powerbox PBIH DC/DC Converters *</b>                                  |                   |   |                   |
| Powerbox Australia Pty. Ltd.   | PBIH-1205G        |   |                   |
| Powerbox Australia Pty. Ltd.   | PBIH-1205J        |   |                   |

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|------------------------------|------------|---------------------|-------------------|
| Powerbox Australia Pty. Ltd. | PBIH-1205M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1205R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1212J |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1212M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1212R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1215J |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1215M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1215R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1224J |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1224M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1224R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1248M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-1248R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2412J |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2412M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2412R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2415J |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2415M |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2415R |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2424J |                     |                   |
| Powerbox Australia Pty. Ltd. | PBIH-2424M |                     |                   |

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|--|-------------------------------------|---------------------|---|
| Powerbox Australia Pty. Ltd.   | PBIH-2424R                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-2448M                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-2448R                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4812J                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4812M                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4812R                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4815J                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4815M                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4815R                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4824J                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4824M                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4824R                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4848M                          |                     |   |
| Powerbox Australia Pty. Ltd.   | PBIH-4848R                          |                     |   |
| 'Phoenix Contact' Quint 4 - Power Supplies (AC Input to DC Output) * |                                     |                     |   |
| Phoenix Contact  | 2904605 - Quint4-PS/1AC/12DC/2.5/PT |                     | PT = Push Terminal<br>SC - Screw Terminal |
| Phoenix Contact  | 2904607 - Quint4-PS/1AC/12DC/7.5/PT |                     |   |
| Phoenix Contact  | 2904608 - Quint4-PS/1AC/12DC/15     |                     |   |

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|-----------------|---|---------------------|-------------------|
| Phoenix Contact | 2909575 - Quint4-PS/1AC/24DC/1.3/PT OR<br>2904597 - Quint4-PS/1AC/24DC/1.3/SC |                     |                   |
| Phoenix Contact | 2909576 - Quint4-PS/1AC/24DC/2.5/PT OR<br>2904598 - Quint4-PS/1AC/24DC/2.5/SC |                     |                   |
| Phoenix Contact | 2909577 - Quint4-PS/1AC/24DC/3.8/PT OR<br>2904599 - Quint4-PS/1AC/24DC/3.8/SC |                     |                   |
| Phoenix Contact | 2904600 - Quint4-PS/1AC/24DC/5  |                     |                   |
| Phoenix Contact | 2904601 - Quint4-PS/1AC/24DC/10   |                     |                   |
| Phoenix Contact | 2904602 - Quint4-PS/1AC/24DC/20   |                     |                   |
| Phoenix Contact | 2904610 - Quint4-PS/1AC/48DC/5  |                     |                   |
| Phoenix Contact | 2904611 - Quint4-PS/1AC/48DC/10   |                     |                   |
| Phoenix Contact | 2904612 – QUINT4-PS/1AC/48DC/20   |                     |                   |
| Phoenix Contact | 2909681 - TWN4 MIFARE   |                     |                   |

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|--|----------------------------------|---|-------------------|
| 'Phoenix Contact' Quint UPS / 1AC / 1AC / 500VA with Lithium Ion Batteries * |                                  |   |                   |
| Phoenix Contact  | 2320270                          | Quint-UPS/1AC/1AC/500VA                                   |                   |
| Phoenix Contact  | 2320351                          | UPS-BAT LI-ION/24DC/120WH<br>Battery Type - NEC ALM 12V7s |                   |
| Phoenix Contact  | 2320490                          | IFS-RS232-Datatable                                       |                   |
| Phoenix Contact  | 2320500                          | IFS-USB-Datatable   |                   |
| Phoenix Contact  | 2901103                          | IFS-Confistick-L  |                   |
| Phoenix Contact  | 2313452                          | FL Comserver Uni 232/422/485                              |                   |
| 'Off-Grid Energy Australia' Solar Power System *                             |                                  |   |                   |
| Off-Grid Energy Australia  | Victron Multiplus 48/3000        |   |                   |
| Off-Grid Energy Australia  | Victron Smart Solar MPPT 150/35  |   |                   |
| Off-Grid Energy Australia  | Victron Colour Control           |   |                   |
| Off-Grid Energy Australia  | BAE PVV350                       |   |                   |
| Off-Grid Energy Australia  | REC 295W solar modules           |   |                   |
| 'Aldridge' Cragg DTC-G Rail charger *  |                                  |   |                   |
| Aldridge Railway   | BC006 - Aldridge ordering number | 10DTC-G-12V - Model Part number - 520918A                 |                   |
| Aldridge Railway   | BC007 - Aldridge ordering number | 20DTC-G-12V - Model Part number - 520928A                 |                   |

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|---|----------------------------------|--|-------------------|
| Aldridge Railway                                  | BC008 - Aldridge ordering number | 30DTC-G-24V - Model Part number - 520938A      |                   |
| Aldridge Railway                                  | BC005 - Aldridge ordering number | 40DTC-G-12V - Model Part number - 520948A      |                   |
| Aldridge Railway                                  | BC009 - Aldridge ordering number | 60DTC-G-12V - Model Part number - 520968A      |                   |
| FG Wilson 7.5KVA Generator *                      |                                  |  |                   |
| Genpower Australia                                | FGW 7.5 KVA                      | Standby Open 1 phase 240V                      |                   |
| Genpower Australia                                | CTI63 ATS                        | 63A 1PH transfer switch                        |                   |
| Deep Sea Generator Controller #                   |                                  |  |                   |
| Deep Sea  | DSE7420/DSE7420 MKII             | Deep Sea Generator Controller                  |                   |
| 'Phoenix Contact' Low Voltage DC Power Supplies * |                                  |  |                   |
| Phoenix Contact                                   | 2938811                          | QUINT-PS-100-240AC/12DC/10 (model no. 2938811) |                   |
| Phoenix Contact                                   | 2938581                          | QUINT-PS-100-240AC/24DC/5 (model no. 2938581)  |                   |
| Phoenix Contact                                   | 2938604                          | QUINT-PS-100-240AC/24DC/10 (model no. 2938604) |                   |
| Phoenix Contact                                   | 2938248                          | QUINT-PS-100-240AC/48DC/5 (model no. 2938248)  |                   |
| Phoenix Contact                                   | 2866776                          | QUINT (PS)/1AC/24DC/20 (model no. 2866776)     |                   |
| Phoenix Contact                                   | 2866763                          | QUINT (PS)/1AC/24DC/10 (model no. 2866763)     |                   |
| Phoenix Contact                                   | 2866750                          | QUINT (PS)/1AC/24DC/5 (model no. 2866750)      |                   |
| Phoenix Contact                                   | 2938963                          | QUINT DIODE/40 (model no. 2938963)             |                   |

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|--|---------------|--|---|
| <b>'Phoenix Contact' Trio 24v DC UPS *</b>                     |               |  |   |
| Phoenix Contact  | 2907161       | Trio UPS 2G/1AC/24DC/10                                      |   |
| <b>Atlas Modular Switch Mode Battery Charger/Power supply#</b> |               |  |   |
| Pivot Electronic Pty Ltd                                       | 10180         | Backplane prewired with Volt and Ammeter (no charger fitted) |   |
| Pivot Electronic Pty Ltd                                       | 10165         | Battery charger Atlas, 2 x 12V, 20A modules.                 |   |
| <b>'Victron Energy SmartSolar Charge Controller*</b>           |               |  |   |
| Victron Energy   | 150/100VE.Can | Victron Energy SmartSolar Charge Controller 150/100VE.Can    |   |
| Victron Energy   | 150/45        | Victron Energy SmartSolar Charge Controller 150/45           |   |
| Victron Energy   | 150/60        | Victron Energy SmartSolar Charge Controller 150/60           |   |
| Victron Energy   | 150/70        | Victron Energy SmartSolar Charge Controller 150/70           |   |
| Victron Energy   | 150/85        | Victron Energy SmartSolar Charge Controller 150/85           |   |
| Victron Energy   | 150/100       | Victron Energy SmartSolar Charge Controller 150/100          |   |
| Victron Energy   | IP 22         | Victron Blue Smart IP22 Charger                              |   |
| <b>'Schaefer CI Series 1606 DC/AC Inverter*</b>                |               |  |   |
| Schaefer   | CI1606.7-61   | Schaefer CI series 1606 DC/AC Inverter                       | Inclusive of required components to compliment unit such as control card, rack. |
| Schaefer   | C3700D Series | DC-DC Converter  |   |
| Schaefer   | C3600D Series | DC-DC Converter  |   |
| Schaefer   | C3800D Series | DC-DC Converter  |   |

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|---------------------------------------|-------------------|--|-------------------|
| Schaefer                              | C1500A Series     | AC-DC Power Supply                             |                   |
| Schaefer                              | C2500A Series     | AC-DC Power Supply                             |                   |
| Schaefer                              | C2600A Series     | AC-DC Power Supply                             |                   |
| Schaefer                              | C3500A Series     | AC-DC Power Supply                             |                   |
| Schaefer                              | B1500 Series      | Battery Charger                                |                   |
| Schaefer                              | B2500 Series      | Battery Charger                                |                   |
| Schaefer                              | B2600 Series      | Battery Charger                                |                   |
| Schaefer                              | B3500 Series      | Battery Charger                                |                   |
| LG Neon 2 Solar Panel                 |                   |  |                   |
| Effective Electrical                  | 350/355/360N1C-N5 | LG Neon 2 Solar Panel 350/355/360N1C-N5        |                   |
| 'SunPower' Solar Panels*              |                   |  |                   |
| SunPower                              | -                 | Performance 3 COM range                        |                   |
| SunPower                              | -                 | Performance 3 UPP range                        |                   |
| SunPower                              | -                 | Performance 6 range                            |                   |
| SunPower                              | -                 | Maxeon 3 range                                 |                   |
| 'Eltek' Solar Power Supply Equipment* |                   |  |                   |
| Eltek                                 | 241115.65         | Eltek FP2 HE 1500W 48V Solar Regulator         |                   |
| Eltek                                 | 241119.650        | Flatpack2 48/3200 HE Solar Charger Module      |                   |
| Eltek                                 | 241115.600        | Flatpack2 DC/DC Converter 1350W 18-75VDC/24VDC |                   |
| Eltek                                 | CTOS0201.001      | FlatpackS 1U Integrated DC Power supply system |                   |

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|---|--------------------|---|-------------------------------------|
| Eltek   | 241115.105         | Flatpack2 48V/2000W HE Rectifiers   |                                     |
| Eltek   | 241119.105         | Flatpack2 48V/3000W HE Rectifiers   |                                     |
| Eltek   | 241123.100         | Rectiverter 230/1500 48/1200  |                                     |
| Eltek   | 241123.130         | Rectiverter 110v-1200W  |                                     |
| Eltek   | 242100.300         | Battery Monitor   |                                     |
| Eltek   | 242100.306         | Eltek I/O Monitor Type 3  |                                     |
| Eltek   | 242100.510         | Smartpack2 Touch  |                                     |
| Eltek   | 242100.603         | CAN Nodes – Controller + I/O  |                                     |
| Eltek   | 242100.604         | CAN Nodes – Relay x4 Extn Board   |                                     |
| Eltek   | 242100.605         | CAN Nodes – Relay x8 Extn Board   |                                     |
| Eltek   | CTO20405.1230      | Flatpack2 5U Integrated DC Power supply system                                  |                                     |
| Eltek   | CTO20407S.4019     | FP2 8KW+6KW Powercore w/SPD complete w/4PV Solar slots shelf PN 3790E305815 SPD |                                     |
| Eltek   | CTO21207.4048      | Flatpack2 7U Integrated DC Power supply system                                  |                                     |
| <b>2.10 Batteries</b>   |                    |   |                                     |
| <b>CEGASA Air depolarised Alkanline primary cells for block *</b> |                    |   |                                     |
| Mechtric Pty Ltd  | AS8 and ALR 40/200 | Air depolarised Alkaline primary cells for block                                |                                     |
| <b>‘SAFT’ 7.5-1660 Ni-Cad SBLE Battery range *</b>                |                    |   |                                     |
| SAFT  | SBLE 7.5           |   | Not to be used with solar charging. |

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|----------|----------|---------------------|--|
| SAFT     | SBLE 15  |                     |  |
| SAFT     | SBLE 22  |                     |  |
| SAFT     | SBLE 30  |                     |  |
| SAFT     | SBLE 30  |                     |  |
| SAFT     | SBLE 40  |                     |  |
| SAFT     | SBLE 47  |                     |  |
| SAFT     | SBLE 62  |                     |  |
| SAFT     | SBLE 75  |                     |  |
| SAFT     | SBLE 95  |                     |  |
| SAFT     | SBLE 110 |                     |  |
| SAFT     | SBLE 140 |                     |  |
| SAFT     | SBLE 185 |                     |  |
| SAFT     | SBLE 230 |                     |  |
| SAFT     | SBLE 275 |                     | Preferred battery for level crossing installation.<br>Not to be used with solar charging |
| SAFT     | SBLE 325 |                     | Not to be used with solar charging.  |
| SAFT     | SBLE 375 |                     | Not to be used with solar charging   |
| SAFT     | SBLE 415 |                     |  |
| SAFT     | SBLE 460 |                     |  |
| SAFT     | SBLE 510 |                     |  |

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|--|-----------|---|--------------------------------------|
| SAFT   | SBLE 550  |   |                                      |
| SAFT   | SBLE 600  |   |                                      |
| SAFT   | SBLE 650  |   |                                      |
| SAFT   | SBLE 700  |   |                                      |
| SAFT   | SBLE 750  |   |                                      |
| SAFT   | SBLE 830  |   |                                      |
| SAFT   | SBLE 925  |   |                                      |
| SAFT   | SBLE 1020 |   |                                      |
| SAFT   | SBLE 1100 |   |                                      |
| SAFT   | SBLE 1200 |   |                                      |
| SAFT   | SBLE 1300 |   |                                      |
| SAFT   | SBLE 1400 |   |                                      |
| SAFT   | SBLE 1500 |   |                                      |
| SAFT   | SBLE 1600 |   |                                      |
| SAFT   | SBLE 1660 |   |                                      |
| SAFT 45AH-1110AH NI-CAD Sunica Battery Range * |           |   |                                      |
| SAFT   | SUN+ 45   | Sunica. Plus NI-CAD Battery Range 45AH-1110AH | Only to be used with solar charging. |
| SAFT   | SUN+ 90   |   |                                      |
| SAFT   | SUN+ 105  |   |                                      |
| SAFT   | SUN+ 140  |   |                                      |

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|-------------------------------|-----------------|---------------------|-------------------------------------|
| SAFT                          | SUN+ 185        |                     |                                     |
| SAFT                          | SUN+ 230        |                     |                                     |
| SAFT                          | SUN+ 275        |                     |                                     |
| SAFT                          | SUN+ 320        |                     |                                     |
| SAFT                          | SUN+ 370        |                     |                                     |
| SAFT                          | SUN+ 415        |                     |                                     |
| SAFT                          | SUN+ 460        |                     |                                     |
| SAFT                          | SUN+ 505        |                     |                                     |
| SAFT                          | SUN+ 555        |                     |                                     |
| SAFT                          | SUN+ 645        |                     |                                     |
| SAFT                          | SUN+ 735        |                     |                                     |
| SAFT                          | SUN+ 830        |                     |                                     |
| SAFT                          | SUN+ 920        |                     |                                     |
| SAFT                          | SUN+ 1110       |                     |                                     |
| Sonnenschien A400 Batteries * |                 |                     |                                     |
| Battery Specialist Aust       | NGA41205D5HSORA | A412/5.5SR          | Not to be used with solar charging. |
| Battery Specialist Aust       | NGA41208D5HSORA | A412/8.5SR          |                                     |
| Battery Specialist Aust       | NGA4120012HSORA | A412/12SR           |                                     |
| Battery Specialist Aust       | NGA4120020HSOBA | A412/20 G5          |                                     |
| Battery Specialist Aust       | NGA4120032HSOBA | A412/32 G6          |                                     |

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| Supplier  | Part No         | Product/Description | Condition/Remarks               |
|---|-----------------|---------------------|---------------------------------|
| Battery Specialist Aust   | NGA4120032HSOFA | A412/32F10          |                                 |
| Battery Specialist Aust   | NGA4120050HSOCA | A412/50A            |                                 |
| Battery Specialist Aust   | NGA4120050HSOFA | A412/50 F10         |                                 |
| Battery Specialist Aust   | NGA4120050HSOBA | A412/50 G6          |                                 |
| Battery Specialist Aust   | NGA4120065HSOFA | A412/65 F10         |                                 |
| Battery Specialist Aust   | NGA4120065HSOBA | A412/65 G6          |                                 |
| Battery Specialist Aust   | NGA4120085HSOFB | A412/85 F10         |                                 |
| Battery Specialist Aust   | NGA4120090HSOCA | A412/90A            |                                 |
| Battery Specialist Aust   | NGA4120090HSOFA | A412/90 F10         |                                 |
| Battery Specialist Aust   | NGA4120100HSOCA | A412/100A           |                                 |
| Battery Specialist Aust   | NGA4120100HSOFA | A412/100 F10        |                                 |
| Battery Specialist Aust   | NGA4120120HSOCA | A412/120A           |                                 |
| Battery Specialist Aust   | NGA4120120HSOFA | A412/120 F10        |                                 |
| Battery Specialist Aust   | NGA4120180HSOCA | A412/180A           |                                 |
| Battery Specialist Aust   | NGA4120180HSOFA | A412//180 F10       |                                 |
| Battery Energy – SunGEL, EnerGEL and PowerLYTE range of batteries * |                 |                     |                                 |
| Battery Energy Power Solution Pty Ltd                               | 6EG100          | EnerGEL Range       | Not for use with Solar chargers |
| Battery Energy Power Solution Pty Ltd                               | 6EG130          |                     |                                 |
| Battery Energy Power Solution Pty Ltd                               | 6EG160          |                     |                                 |

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|---------------------------------------|---------|---------------------|---------------------------------|
| Battery Energy Power Solution Pty Ltd | 2EG200  |                     | Not for use with Solar chargers |
| Battery Energy Power Solution Pty Ltd | 2EG225  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG290  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG300  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG350  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG360  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG400  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG495  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG500  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG550  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG700  |                     |                                 |
| Battery Energy Power Solution Pty Ltd | 2EG800  |                     |                                 |

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|---------------------------------------|------------|---------------------|-------------------------------------|
| Battery Energy Power Solution Pty Ltd | 2EG900     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2EG1100    |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2EG1300    |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2EG1600    |                     | Not for use with Solar chargers     |
| Battery Energy Power Solution Pty Ltd | 12EG105FTG |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 12EG160FTG |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 6SG200     | SunGEL Range        | For Solar Charge applications only. |
| Battery Energy Power Solution Pty Ltd | 2SG250/N   |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG450     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG470     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG595     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG650     |                     |                                     |

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|---------------------------------------|------------|---------------------|-------------------------------------|
| Battery Energy Power Solution Pty Ltd | 2SG710     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG820     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG875     |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG1000    |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 2SG1200    |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 12SG133FTG |                     |                                     |
| Battery Energy Power Solution Pty Ltd | 12SG200FTG |                     | For Solar Charge applications only. |
| Battery Energy Power Solution Pty Ltd | PXL2V200   | PowerLYTE Range     | Not for use with Solar Chargers.    |
| Battery Energy Power Solution Pty Ltd | PXL2V300   |                     |                                     |
| Battery Energy Power Solution Pty Ltd | PXL2V400   |                     |                                     |
| Battery Energy Power Solution Pty Ltd | PXL2V500   |                     |                                     |
| Battery Energy Power Solution Pty Ltd | PXL2V600   |                     |                                     |

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| Supplier                              | Part No     | Product/Description | Condition/Remarks |
|---------------------------------------|-------------|---------------------|-------------------|
| Battery Energy Power Solution Pty Ltd | PXL2V800    |                     |                   |
| Battery Energy Power Solution Pty Ltd | PXL2V1000   |                     |                   |
| Battery Energy Power Solution Pty Ltd | PXL2V2000   |                     |                   |
| Battery Energy Power Solution Pty Ltd | PXL2V3000   |                     |                   |
| Battery Energy Power Solution Pty Ltd | PL2V850T    |                     |                   |
| Battery Energy Power Solution Pty Ltd | PL2V1000T   |                     |                   |
| Battery Energy Power Solution Pty Ltd | PLFT12-55   |                     |                   |
| Battery Energy Power Solution Pty Ltd | PLFT12-80   |                     |                   |
| Battery Energy Power Solution Pty Ltd | PLFT12-100  |                     |                   |
| Battery Energy Power Solution Pty Ltd | PLFT12-110T |                     |                   |
| Battery Energy Power Solution Pty Ltd | PLFT12-125  |                     |                   |
| Battery Energy Power Solution Pty Ltd | PLFT12-160  |                     |                   |

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|---|-------------|---------------------------------|---|
| Battery Energy Power Solution Pty Ltd                               | PLFT12-175  |                                 |   |
| Battery Energy Power Solution Pty Ltd                               | PLFT12-200C |                                 |   |
| Battery Energy Power Solution Pty Ltd                               | PL12-16     |                                 |   |
| Battery Energy Power Solution Pty Ltd                               | PL12-40     |                                 |   |
| Battery Energy Power Solution Pty Ltd                               | PL12-60     |                                 |   |
| Battery Energy Power Solution Pty Ltd                               | PL12-230    |                                 |   |
| Battery Energy Power Solution Pty Ltd                               | PL12-240    |                                 |   |
| 'Energys' – SuperSafe SBS EON, Genesis and Odyssey Battery Ranges * |             |                                 |   |
| Energys Australia Pty Ltd   | SBS B14     | PowerSafe SBS EON battery range | Adapter kit required to covert to Front terminal batteries. |
| Energys Australia Pty Ltd   | SBS B14F    |                                 |   |
| Energys Australia Pty Ltd   | SBS C11     |                                 |   |
| Energys Australia Pty Ltd   | SBS C11F    |                                 |   |
| Energys Australia Pty Ltd   | SBS 100     |                                 | Front terminal batteries.                                   |
| Energys Australia Pty Ltd   | SBS 100F    |                                 |   |
| Energys Australia Pty Ltd   | SBS 170F    |                                 |   |
| Energys Australia Pty Ltd   | SBS 190F    |                                 |   |

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| Supplier                  | Part No  | Product/Description | Condition/Remarks  |
|---------------------------|----------|---------------------|--|
| Energys Australia Pty Ltd | SBS 410  |                     | Top terminal batteries.  |
| Energys Australia Pty Ltd | SBS 320  |                     |  |
| Energys Australia Pty Ltd | SBS 400  |                     |  |
| Energys Australia Pty Ltd | SBS 480  |                     |  |
| Energys Australia Pty Ltd | SBS 580  |                     |  |
| Energys Australia Pty Ltd | SBS 680  |                     |  |
| Energys Australia Pty Ltd | SBS 780  |                     |  |
| Energys Australia Pty Ltd | SBS 900  |                     |  |
| Energys Australia Pty Ltd | G16EP    | Genesis EP Range    | Top terminal batteries.<br>Solar application or Microlok backup. |
| Energys Australia Pty Ltd | G26EP    |                     |  |
| Energys Australia Pty Ltd | G42EP    |                     |  |
| Energys Australia Pty Ltd | G70EP    |                     |  |
| Energys Australia Pty Ltd | NP7-12   | Genesis NP Range    | Top terminal batteries.<br>Solar application or Microlok backup. |
| Energys Australia Pty Ltd | NP12-12  |                     |  |
| Energys Australia Pty Ltd | NP24-12  |                     |  |
| Energys Australia Pty Ltd | NP65-12  |                     |  |
| Energys Australia Pty Ltd | NP75-12  |                     |  |
| Energys Australia Pty Ltd | NO100-12 |                     |  |
| Energys Australia Pty Ltd | NP120-12 |                     |  |
| Energys Australia Pty Ltd | NP150-12 |                     |  |
| Energys Australia Pty Ltd | NP200-12 |                     |  |

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|------------------------------------|--------------------|--------------------------------------|---|
| Enersys Australia Pty Ltd          | PC1200MJT          | Odyssey TPPL Range                   | Top terminal batteries.<br>For use with generators. |
| Enersys Australia Pty Ltd          | PC2150MJ           |                                      |   |
| Enersys Australia Pty Ltd          | PC2250             |                                      |   |
| Enersys Australia Pty Ltd          | PC1300             |                                      |   |
| Enersys Australia Pty Ltd          | PC1500             |                                      |   |
| Eaton 12V 540W battery *           |                    |                                      |   |
| Eaton Electric Systems             | PWHR12540W4FR      | Eaton 12V 540W battery               |   |
| Lifeline Batteries *               |                    |                                      |   |
| Federal Batteries                  | GPL-31T            | Lifeline Batteries                   |   |
| A600 Sonnenschein Battery range *  |                    |                                      |   |
| Mpower                             | A602/225           | A600 Sonnenschein Battery range      |   |
| Mpower                             | A602/280           |                                      |   |
| Mpower                             | A602/625           |                                      |   |
| 'GenZ' Lithium Ion Battery System* |                    |                                      |   |
| GenZ Energy                        | GC48V-040LFP-2RU-M | Lithium Ferro Phosphate (LFP) – 40Ah |   |
| GenZ Energy                        | GC48V-060LFP-2RU-M | Lithium Ferro Phosphate (LFP) – 60Ah |   |
| Sonnenschien A400 Batteries \$     |                    |                                      |   |
| Aeson Power                        | NGSB060200HS0CA    | SB6/200A Solarblock                  |   |

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| Supplier  | Part No | Product/Description   | Condition/Remarks |
|---|---------|---|-------------------|
| <b>2.11 Train Authority Systems and Train Order Systems</b> |         |   |                   |
| <b>Ansaldo STS - Phoenix Train Order System *</b>           |         |   |                   |
| Hitachi Rail STS  | -       | System Release SYS_REL_1_0_5                                    |                   |
| Hitachi Rail STS  | -       | TCS Subsystem Release TCS_REL_1_0_9                             |                   |
| Hitachi Rail STS  | -       | TOM Subsystem Release TOM_REL_1_1_6                             |                   |
| Hitachi Rail STS  | -       | FD Subsystem Release FD_REL_1_0_3                               |                   |
| Hitachi Rail STS  | -       | XSD XSD_REL_1_0_0   |                   |
| Hitachi Rail STS  | -       | TOM Database Release TOM_DB_REL_BMD_1_0_0                       |                   |
| Hitachi Rail STS  | -       | TCS Application Data TCS_DATA_BMD_REL_0_13_0                    |                   |
| Hitachi Rail STS  | -       | Mile End Application Data 0.2                                   |                   |
| Hitachi Rail STS  | -       | TOM App Data (Broadmeadow)<br>TOM_APP_ROUTEPARTS_BMD_REL_0_13_0 |                   |
| Hitachi Rail STS  | -       | FD Data Release FD_DATA_REL_1_0_2                               |                   |
| Hitachi Rail STS  | -       | MS.NET Framework 3.5  |                   |
| Hitachi Rail STS  | -       | MS SQL Server 2005 SP2 64 bit standard                          |                   |
| Hitachi Rail STS  | -       | IIS 7   |                   |
| Hitachi Rail STS  | -       | Visual C Runtime Libraries 9.0.30729.17                         |                   |
| Hitachi Rail STS  | -       | MS SQL 2005 SP2 64 bit standard                                 |                   |
| Hitachi Rail STS  | -       | Nunit Version 2.5.2.9222  |                   |
| Hitachi Rail STS  | -       | Reshaper Version 4.5  |                   |

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| Supplier   | Part No    | Product/Description  | Condition/Remarks                                   |
|--|------------|--|---|
| <b>'KABA' Questor Electronic Safe Lock for Master Key Release *</b>              |            |  |   |
| Supplier Smartlock Digital Pty Ltd   | 14/08/2146 | KABA Questor Electronic Safe Lock                                      | Fitted to Eagle fireproof safe inside location case |
| Supplier Smartlock Digital Pty Ltd   | AS270      | Activation Software Windows based                                      | Configures Questor Lock into ICS Mode               |
| Supplier Smartlock Digital Pty Ltd   | AS271      | Programming Software Windows based                                     | Configures basic settings for the lock              |
| Supplier Smartlock Digital Pty Ltd   | AS273      | Management Software Windows based                                      | Configures NCCS to manage system                    |
| Supplier Smartlock Digital Pty Ltd   | Dongle     | Security Device  | Required for programming and managing the system    |
| <b>ATMS – IS1.1 * - Please refer type approval certificate for full details.</b> |            |  |   |
| <b>Hitachi Rail Australia Pty Ltd – Phoenix Train Order System *</b>             |            |  |   |
| Hitachi Rail   | -          | System Release NSW_SYS_TOS_3_2_4                                       |   |
| Hitachi Rail   | -          | TCS Subsystem Release NSW_BIN_TCS_1_4_9                                |   |
| Hitachi Rail   | -          | TOM Subsystem Release NSW_BIN_TOM_1_4_6                                |   |
| Hitachi Rail   | -          | FD Subsystem Release NSW_BIN_FD_1_4_1                                  |   |
| Hitachi Rail   | -          | XSD NSW_XSD_TOM_1_4_5  |   |
| Hitachi Rail   | -          | TOM Database Release NSW_DB_TOM_1_4_6                                  |   |
| Hitachi Rail   | -          | TCS Application Data Broadmeadow Application Data<br>NSW_APP_BMD_0_2_2 |   |
| Hitachi Rail   | -          | FD Data Release NSW_DAT_FD_1_4_0                                       |   |
| Hitachi Rail   | -          | MS.NET Framework 3.5   |   |
| Hitachi Rail   | -          | MS SQL Server 2005 SP2 64 bit standard                                 |   |
| Hitachi Rail   | -          | IIS 7.0  |   |

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| Supplier   | Part No  | Product/Description  | Condition/Remarks  |
|--|--|--|--|
| Hitachi Rail   | -  | Borland Silk Central Test Manager 2008 Version 8.8   |  |
| Hitachi Rail   | -  | Borland StarTeam Client 2008 Version 10.0  |  |
| <b>SENCITY Rail MIMO Antenna with Dual band GNSS/LNA</b>           |  |  |  |
| Mouser Electronics   | 1399.99.0152   | SENCITY Rail MIMO Antenna with Dual band GNSS/LNA  | Approved for 12 months trial for ATMS  |
| <b>"Thales' Train Protection and Warning System (TPWS)</b>         |  |  |  |
| Thales Australia   | Refer TA certificate for full list of approved items | Train Protection and Warning System  | Refer TA Certificate NESA-S083 on ARTC extranet  |
| <b>Siemens' Intelligent Processor Island Track Circuit (IPITC)</b> |  |  |  |
| Siemens  | 106257202  | Track Circuit, Intelligent Processor Island complete unit, Model IPITC, Programmable Frequencies 2.14KHz – 20.2KHz | Please refer the TA Certificate for firmware version.  |
| Siemens  | 106257150  | Track Circuit, Intelligent Processor Island – Board only   |  |
| Siemens  | 106257299  | Surge Protection Panel Track Rack Mount 4 way  |  |
| Siemens  | 106257296  | Surge Panel Surge Protection Panel, Battery & Single Track (Tx & Rx) Rack Mount 3 way                              |  |
| Siemens  | 106257298  | Surge Panel Surge Protection Panel Track – single unit Single track connection 6 wire                              |  |
| Siemens  | 106255553  | Surge Protector Lightning Arrestor, Heavy Duty   |  |
| Siemens  | 106255556  | Equalizer, Heavy Duty  |  |
| <b>Train Management and Control System (TMACS)</b>                 |  |  |  |
| 4tel/TFNSW   | TMCS   | TMACS version 5.4.0  | 1. Operations of the systems shall be in accordance with NSW Network Rules and ANSY-502 Train Order Working. |
|  | GPS Watchdog   | GPS watchdog version 10.1.0  |  |
|  | 4Trak  | Version 4.14.0   |  |

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| Supplier | Part No          | Product/Description | Condition/Remarks   |
|----------|------------------|---------------------|---|
|          | Authority Server | Version 1.5.0       | <p>2. Electronic Authorities (including proximity alarms) are to be disabled.</p> <p>3. Any update to the system requires the version number changes of TMCS, GPS Watchdog, 4Trak and Authority Server are to be endorsed by the TMACS CCB and approval by S&amp;T CAB.</p> <p>4. 4Tel shall send a report to ARTC Operational Technology team at the end of each calendar year summarizing any and all;</p> <p>4.1 Upgrades undertaken in the previous 12 months.</p> <p>4.2 Alleged or actual wrong side system failures – including any false proceed orders generated.</p> <p>4.3 System errors that affected the operational status of the system.</p> <p>4.4 Any recommended upgrades or improvements to improve system reliability or operational flexibility.</p> <p>5. ARTC Operational Technology team to provide the documentation to TfNSW submitted by 4Tel at the end of each calendar year.</p> <p>6. Train Operators complete training of all train drivers and associated staff in the applicable operational rules before TMACS becomes operational for a specific section of the rail network.</p> |

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| Supplier   | Part No | Product/Description               | Condition/Remarks   |
|--|---------|-----------------------------------|---------------------|
| <b>2.12 Cables</b>   |         |                                   |                     |
| Manufacture to provide the compliance report to ESA-11-01 for the cables and project team to check the compliance. |         | 2 CORE 7/0.85mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 2 CORE 7/1.04mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 2 CORE 7/1.35mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 2 CORE 7/1.70mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 2 CORE 19/1.35mm U/G POWER CABLE  | ARTC Spec ESA-11-01 |
|  |         | 3 CORE 7/0.85mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 4 CORE 7/0.85mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 4 CORE 7/1.35mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 5 CORE 7/1.04mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 5 CORE 7/1.70mm U/G POWER CABLE   | ARTC Spec ESA-11-01 |
|  |         | 4 CORE 7/0.50mm U/G SIGNAL CABLE  | ARTC Spec ESA-11-01 |
|  |         | 6 CORE 7/0.50mm U/G SIGNAL CABLE  | ARTC Spec ESA-11-01 |
|  |         | 10 CORE 7/0.50mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |
|  |         | 15 CORE 7/0.50mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |
|  |         | 25 CORE 7/0.50mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |
|  |         | 50 CORE 7/0.50mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |
|  |         | 10 CORE 7/0.67mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |
|  |         | 20 CORE 7/0.67mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |
|  |         | 30 CORE 7/0.67mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01 |

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| Supplier | Part No | Product/Description                          | Condition/Remarks   |
|----------|---------|--|---------------------|
|          |         | 4 CORE 7/0.85mm U/G SIGNAL CABLE             | ARTC Spec ESA-11-01 |
|          |         | 8 CORE 7/0.85mm U/G SIGNAL CABLE             | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 7/0.85mm U/G POWER CABLE         | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 7/1.04mm U/G POWER CABLE         | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 7/1.35mm U/G POWER CABLE         | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 7/1.70mm U/G POWER CABLE         | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 19/1.35mm U/G POWER CABLE        | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 19/1.78mm U/G POWER CABLE        | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 37/1.78mm U/G POWER CABLE        | ARTC Spec ESA-11-01 |
|          |         | 1 PAIR 1.27mm <sup>2</sup> U/G SSI DATA CABL | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 24/0.20mm FLEXIBLE SIGNAL CABLE  | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 7/0.40mm FLEXIBLE SIGNAL CABL    | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 56/0.30mm FLEXIBLE SIGNAL CABLE  | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 84/0.30mm FLEXIBLE SIGNAL CABLE  | ARTC Spec ESA-11-01 |
|          |         | SINGLE CORE 126/0.40mm FLEXIBLE SIGNAL CABLE | ARTC Spec ESA-11-01 |
|          |         | 4 PAIR 7/0.50mm U/G SIGNAL CABLE             | ARTC Spec ESA-11-01 |
|          |         | 8 PAIR 7/0.50mm U/G SIGNAL CABLE             | ARTC Spec ESA-11-01 |
|          |         | 12 PAIR 7/0.50mm U/G SIGNAL CABL             | ARTC Spec ESA-11-01 |
|          |         | 24 PAIR 7/0.50mm U/G SIGNAL CABLE            | ARTC Spec ESA-11-01 |
|          |         | 1 PAIR 7/0.85mm U/G SIGNAL CABL              | ARTC Spec ESA-11-01 |
|          |         | 4 PAIR 7/0.85mm U/G SIGNAL CABLE             | ARTC Spec ESA-11-01 |

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| Supplier   | Part No    | Product/Description              | Condition/Remarks                              |
|--|------------|----------------------------------|--|
|  |            | 8 PAIR 7/0.85mm U/G SIGNAL CABLE | ARTC Spec ESA-11-01                            |
|  |            | HF SCREENED TRACK CIRCUIT CABLES | ARTC Spec ESA-11-01                            |
|  |            | 4 Core Star Quad Cable           | ARTC Spec ESA-11-01                            |
|  |            | 12 core Single Mode Fibre Optic  | ARTC Spec ESA-11-01                            |
|  |            | 24 core Single Mode Fibre Opti   | ARTC Spec ESA-11-01                            |
| <b>2.13 Trackside Equipment</b>                        |            |                                  |  |
| <b>Weidmüller' Wiring Terminals and Fuse Holders *</b> |            |                                  |  |
| Weidmuller Pty. Ltd                                    | 0294360000 | TS15 AKZ 4                       | Not to be used for terminating external cable. |
| Weidmuller Pty. Ltd                                    | 0279660000 | TS32 SAK 2.5                     | Not to be used for terminating external cable. |
| Weidmuller Pty. Ltd                                    | 0128360000 | TS32 SAK 4                       |  |
| Weidmuller Pty. Ltd                                    | 0193260000 | TS32 SAK 6N                      |  |
| Weidmuller Pty. Ltd                                    | 0110060000 | TS32 SAK 10                      |  |
| Weidmuller Pty. Ltd                                    | 0550660000 | TS32 SAK 35N                     |  |
| Weidmuller Pty. Ltd                                    | 0303560000 | TS32 SAK 35                      |  |
| Weidmuller Pty. Ltd                                    | 1596240000 | TS 32 SAKH 35 EP/SW              |  |
| Weidmuller Pty. Ltd                                    | 170320000  | TS32 SAKG 28 II                  |  |
| Weidmuller Pty. Ltd                                    | 380460000  | TS35 SAK 2.5/35                  | Not to be used for terminating external cable. |

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| Supplier            | Part No     | Product/Description | Condition/Remarks   |
|---------------------|-------------|---------------------|---|
| Weidmuller Pty. Ltd | 443660000   | TS35 SAK 4/35       |   |
| Weidmuller Pty. Ltd | 380560000   | TS35 SAK 6/35       |   |
| Weidmuller Pty. Ltd | 443760000   | TS35 SAK 10/35      |   |
| Weidmuller Pty. Ltd | 608260000   | TS35 SAK 35N/35     |   |
| Weidmuller Pty. Ltd | 637320000   | TS35 SAKG 32/35 II  |   |
| Weidmuller Pty. Ltd | 03711.6 # ¶ | TS35 DK 4           | Not to be used for terminating external cable.                                  |
| Weidmuller Pty. Ltd | 590260000   | TS35 DK 4 QV*       | Not to be used for terminating external cable. (Replaces DK 4 Cat. No. 03711.6) |
| Weidmuller Pty. Ltd | 1608510000  | TS35 ZDU 2.5        | For non-vital internal circuits only.   |
| Weidmuller Pty. Ltd | 1674300000  | TS35 ZDK 2.5/1.5    | For non-vital internal circuits in local control panels only.                   |
| Weidmuller Pty. Ltd | 1689990000  | TS35 ZDK 2.5/1.5V   | For non-vital internal circuits in local control panels only.                   |
| Weidmuller Pty. Ltd | 9512190000  | WDU70N TS35         | Minimum conductor size: 16mm <sup>2</sup> solid, 25mm <sup>2</sup> stranded     |
| Weidmuller Pty. Ltd | 170420000   | TS32 SAKG 32 II     |   |
| Weidmuller Pty. Ltd | 170620000   | TS32 SAKG 46 II     |   |
| Weidmuller Pty. Ltd | 324020000   | TS32 SAKC 10 STB/RE | Without test sockets.   |
| Weidmuller Pty. Ltd | 324120000   | TS32 SAKC 10 2STB   | Non-preferred configuration.  |
| Weidmuller Pty. Ltd | 2710090000  | TS32 WTTB 6         | With 2 test sockets.  |
| Weidmuller Pty. Ltd | 1608680000  | TS35 ZTR 2.5        | Preferred configuration.  |

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| Supplier  | Part No          | Product/Description      | Condition/Remarks   |
|---|------------------|--------------------------|---|
| Weidmuller Pty. Ltd                               | 1878560000       | Best/D                   | Limited application. Vital circuits require case by case design approval. |
| Weidmuller Pty. Ltd                               | 1878560000       | Best/D                   | For non-vital internal circuits only.                                     |
| Weidmuller Pty. Ltd                               | 191120000        | TS32 SAKS 1/G25          | For non-vital internal circuits only, Reverse Diode circuit.              |
| Weidmuller Pty. Ltd                               | 211120000        | TS32 SAKS 3              |   |
| Weidmuller Pty. Ltd                               | 248920000        | TS32 SAKS 3 GZ/6.3X32    |   |
| Weidmuller Pty. Ltd                               | 359420000        | TS32 SAKS 5 380AC        | With RED fuse cap.  |
| Weidmuller Pty. Ltd                               | 501520000        | TS35 SAKS 1/35 /G25      | Max. 10 amp.  |
| Weidmuller Pty. Ltd                               | 667420000        | TS35 SAKS 3              |   |
| Weidmuller Pty. Ltd                               | 667520000        | TS35 SAKS 3/35 GZ/6.3X32 |   |
| Weidmuller Pty. Ltd                               | 502120000        | TS35 SAKS 5/35           | With RED fuse cap.  |
| Weidmuller Pty. Ltd                               | 323100000        | TS32 EK 2                |   |
| Weidmuller Pty. Ltd                               | 0354760000       | TS32 EK35                |   |
| <b>'Wago' Wiring Terminals and Fuse Holders *</b> |                  |                          |   |
| NHP Electrical Engineering Products Pty. Ltd.     | 279-101, 279-104 | DIN 35 Grey Blue         | Non-vital only.   |
| NHP Electrical Engineering Products Pty. Ltd.     | 280-101, 280-104 | DIN 35 Grey Blue         | May not be used to terminate external cables.                             |
| NHP Electrical Engineering Products Pty. Ltd.     | 281-101, 281-104 | DIN 35 Grey Blue         |   |

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| Supplier                                      | Part No            | Product/Description | Condition/Remarks   |
|---|--------------------|---------------------|---|
| NHP Electrical Engineering Products Pty. Ltd. | 282-101, 282-104 ¶ | DIN 35 Grey Blue    |   |
| NHP Electrical Engineering Products Pty. Ltd. | 283-101, 283-104   | DIN 35 Grey Blue    |   |
| NHP Electrical Engineering Products Pty. Ltd. | 284-101, 284-104 ¶ | DIN 35 Grey Blue    |   |
| NHP Electrical Engineering Products Pty. Ltd. | 280-646, 280-656   | DIN 35 Grey Blue    | May not be used to terminate external cables.                                 |
| NHP Electrical Engineering Products Pty. Ltd. | 280-641, 280-651   | DIN 35 Grey Blue    | May not be used to terminate external cables.                                 |
| NHP Electrical Engineering Products Pty. Ltd. | 281-631, 281-651   | DIN 35 Grey Blue    |   |
| NHP Electrical Engineering Products Pty. Ltd. | 264-711            | DIN 35 Grey         | For use in field equipment (signal head, trainstop, point machine etc.) only. |
| NHP Electrical Engineering Products Pty. Ltd. | 264-731            | DIN 35 Grey         | For use in field equipment (signal head, trainstop, point machine etc.) only. |
| NHP Electrical Engineering Products Pty. Ltd. | 282-126            | DIN 35 Grey         | Maximum 10 amp.   |
| NHP Electrical Engineering Products Pty. Ltd. | 282-128            | DIN 35 Grey         | Maximum 10 amp.   |
| NHP Electrical Engineering Products Pty. Ltd. | 282-107            | DIN 35 Yellow/Green | Maximum 7/0.85.   |
| NHP Electrical Engineering Products Pty. Ltd. | 283-107            | DIN 35 Yellow/Green | Maximum 7/1.7.  |

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| Supplier   | Part No    | Product/Description | Condition/Remarks                             |
|--|------------|---------------------|---|
| NHP Electrical Engineering Products Pty. Ltd.        | 284-107    | DIN 35 Yellow/Green |   |
| <b>Phoenix ' Wiring Terminals and Fuse Holders *</b> |            |                     |   |
| Phoenix Contact Pty. Ltd.                            | 13 02 01 1 | DIN 32 K4           |   |
| Phoenix Contact Pty. Ltd.                            | 13 02 07 9 | DIN 32 K4/E         | Only to be used individually.                 |
| Phoenix Contact Pty. Ltd.                            | 13 03 01 0 | DIN 32 K10          |   |
| Phoenix Contact Pty. Ltd.                            | 13 03 07 8 | DIN 32 K10/E        | Only to be used individually.                 |
| Phoenix Contact Pty. Ltd.                            | 13 04 01 9 | DIN 32 K16          |   |
| Phoenix Contact Pty. Ltd.                            | 13 04 07 7 | DIN 32 K16/E        | Only to be used individually.                 |
| Phoenix Contact Pty. Ltd.                            | 30 01 01 9 | DIN 32/35 UK 2.5    | May not be used to terminate external cables. |
| Phoenix Contact Pty. Ltd.                            | 30 03 01 7 | DIN 32/35 UK 4      |   |
| Phoenix Contact Pty. Ltd.                            | 30 04 36 2 | DIN 32/35 UK 5 N    |   |
| Phoenix Contact Pty. Ltd.                            | 30 05 01 5 | DIN 32/35 UK 10     |   |
| Phoenix Contact Pty. Ltd.                            | 30 05 07 3 | DIN 32/35 UK 10 N   |   |
| Phoenix Contact Pty. Ltd.                            | 30 06 01 4 | DIN 32/35 UK 16     |   |
| Phoenix Contact Pty. Ltd.                            | 30 06 04 3 | DIN 32/35 UK 16 N   |   |
| Phoenix Contact Pty. Ltd.                            | 30 07 01 3 | DIN 32/35 UK 25     |   |
| Phoenix Contact Pty. Ltd.                            | 30 08 01 2 | DIN 32/35 UK 35     |   |
| Phoenix Contact Pty. Ltd.                            | 30 10 01 3 | DIN 32/35 UKH 95    | Minimum Conductor 25mm <sup>2</sup> .         |
| Phoenix Contact Pty. Ltd.                            | 30 10 11 0 | DIN 32/35 UKH 150   | Minimum Conductor 35mm <sup>2</sup> .         |
| Phoenix Contact Pty. Ltd.                            | 30 10 21 7 | DIN 32/35 UKH 240   | Minimum Conductor 95mm <sup>2</sup> .         |

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| Supplier  | Part No                 | Product/Description       | Condition/Remarks          |
|---|-------------------------|---------------------------|----------------------------|
| Phoenix Contact Pty. Ltd.                               | 21 30 20 8              | DIN 32/35 UHV 25 M8/M8    |                            |
| Phoenix Contact Pty. Ltd.                               | 21 30 21 1              | DIN 32/35 UHV 50 M10/M10  |                            |
| Phoenix Contact Pty. Ltd.                               | 21 30 22 4              | DIN 32/35 UHV 95 M12/M12  |                            |
| Phoenix Contact Pty. Ltd.                               | 21 30 23 7              | DIN 32/35 UHV 150 M12/M12 |                            |
| <b>Weidmüller' Wiring Conductor and Cable Markers *</b> |                         |                           |                            |
| Weidmuller Pty. Ltd.                                    | 'Partex' Type PA1 & PA2 | 'Partex' Type PA1 & PA2   |                            |
| <b>'Critchley' Wiring Conductor and Cable Markers *</b> |                         |                           |                            |
| Tyco Electronics Pty Ltd                                | ZS09                    | Z-Type marker             | Closed slip-on characters. |
| Tyco Electronics Pty Ltd                                | ZS13                    | Z-Type marker             | Closed slip-on characters. |
| Tyco Electronics Pty Ltd                                | ZS18                    | Z-Type marker             | Closed slip-on characters. |
| Tyco Electronics Pty Ltd                                | ZS23                    | Z-Type marker             | Closed slip-on characters. |
| Tyco Electronics Pty Ltd                                | ZS35                    | Z-Type marker             | Closed slip-on characters. |
| Tyco Electronics Pty Ltd                                | HS032WE50               | HSI system                | For use on SSI plugs       |
| Tyco Electronics Pty Ltd                                | HS032YW50               | HSI system                | For use on SSI plugs       |
| Tyco Electronics Pty Ltd                                | 8259903                 | HSI system                | Markers                    |
| Tyco Electronics Pty Ltd                                | 8259904                 | HSI system                | Markers                    |
| Tyco Electronics Pty Ltd                                | 820532                  | HSI system                | Carriers                   |
| Tyco Electronics Pty Ltd                                | 825032                  | HSI system                | Carriers                   |
| Tyco Electronics Pty Ltd                                | 825232                  | HSI system                | Carriers                   |
| Tyco Electronics Pty Ltd                                | 825432                  | HSI system                | Carriers                   |

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|---|-------------------|--|---|
| Tyco Electronics Pty Ltd                                | 825532            | HSI system                                     | Carriers  |
| Tyco Electronics Pty Ltd                                | 825632            | HSI system                                     | Carriers  |
| Tyco Electronics Pty Ltd                                | KS65              | K-type system                                  | cable markers if used without carrier strip   |
| Tyco Electronics Pty Ltd                                | 1130              | K-type system                                  | Carrier strip for KS65; must be strapped to cable at both ends (flag type not permitted). |
| Tyco Electronics Pty Ltd                                | 1131              | K-type system                                  |   |
| Tyco Electronics Pty Ltd                                | 1132              | K-type system                                  |   |
| Tyco Electronics Pty Ltd                                | PM09512           | Permark System                                 | To utilise Saddle Fixing only. Only for use external to equipment housings.               |
| Tyco Electronics Pty Ltd                                | PM07507           | Permark System                                 | Only for use external to equipment housings.  |
| <b>'MRD Rail Technologies' Earth Leakage Detector *</b> |                   |  |   |
| MRD Rail Technologies Pty Ltd                           | ELD-AC            | 110/120 V AC 50 Hz AC only busbar monitoring.  | Not to be purchased new.  |
| MRD Rail Technologies Pty Ltd                           | ELD-AC/DC         | 110/120 V AC 50 Hz AC or DC busbar monitoring. | Not to be purchased new.  |
| MRD Rail Technologies Pty Ltd                           | ELD-AC/DC-12      | 9-18 V DC AC or DC busbar monitoring.          | Not to be purchased new.  |
| MRD Rail Technologies Pty Ltd                           | ELDAC/DC-AUTO-110 | 110/120 V AC 50 Hz AC or DC busbar monitoring. |   |
| MRD Rail Technologies Pty Ltd                           | ELDAC/DC-AUTO-12  | 9-18 V DC AC or DC busbar monitoring.          |   |
| MRD Rail Technologies Pty Ltd                           | ELDAC/DC-PMB      | Panel Mounting Bracket                         |   |
| <b>'Fortress Interlocks' Duplex Lock *</b>              |                   |  |   |
| Fortress Interlocks Pty Ltd                             | H31               | Key  |   |
| Fortress Interlocks Pty Ltd                             | H31               | Lock   |   |
| Fortress Interlocks Pty Ltd                             | CL                | Key  |   |
| Fortress Interlocks Pty Ltd                             | CL                | 90° RH Lock                                    |   |

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|--|----------------------|---|-------------------|
| Fortress Interlocks Pty Ltd                                      | CA10                 | Switch, Rotary switch   |                   |
| Fortress Interlocks Pty Ltd                                      |                      | cCase   |                   |
| <b>'MRD' RelayPro Automated Relay Tester *</b>                   |                      |   |                   |
| MRD  | RPTB-Q               | RelayPro (Firmware V1.0) Software Version 8.0.4                                 |                   |
| MRD  | RP-CK                | RelayPro Calibration Kit  |                   |
| MRD  | -                    | RelayPro Installer (Front End Software) V8.1.4                                  |                   |
| MRD  | RPA104               | Zero Reference  |                   |
| MRD  | RPA102               | 1R Precision Reference  |                   |
| MRD  | RPA105               | Test Base   |                   |
| MRD  | -                    | Carry Case  |                   |
| <b>NOSPARC Arc Suppressor *</b>                                  |                      |   |                   |
| Electronic Components Pty Ltd                                    | MHXAC1F480           | AC 480 Rev MHX  |                   |
| Electronic Components Pty Ltd                                    | MHXAC1F240           | AC 240 Rev MHX  |                   |
| Electronic Components Pty Ltd                                    | MHXAC1F120           | AC 120 Rev MHX  |                   |
| Electronic Components Pty Ltd                                    | MGXDC1F48            | DC 48 Rev MGX   |                   |
| Electronic Components Pty Ltd                                    | MGXDC1F24            | DC 24 Rev MGX   |                   |
| <b>Precision Timer Co' Series 606 &amp; 646 Recycle Timers *</b> |                      |   |                   |
| Precision Timer Co. Inc.   | 606-PP1CC/0.64S/0.2S | Series 606 1A 12v DC recycle timer configured for Pulsating aspect (Single LED) |                   |
| Precision Timer Co. Inc.   | 606-PP1CC/0.4S/0.4S  | Series 606 1A 12v DC recycle timer configured for Flashing aspect (Single LED)  |                   |

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| Supplier   | Part No               | Product/Description  | Condition/Remarks  |
|--|-----------------------|--|--|
| Precision Timer Co. Inc.   | 606-PP5CC/0.64S/0.2S  | Series 606 1A 120v AC recycle timer configured for Pulsating aspect (Single LED) |  |
| Precision Timer Co. Inc.   | 606-PP5CC/0.4S/0.4S   | Series 606 1A 120v AC recycle timer configured for Flashing aspect (Single LED)  |  |
| Precision Timer Co. Inc.   | 646A-PP5CC/0.64S/0.2S | Series 646 5A 120v AC recycle timer configured for Pulsating aspect (Single LED) |  |
| Precision Timer Co. Inc.   | 646A-PP5CC/0.4S/0.4S  | Series 646 5A 120v AC recycle timer configured for Flashing aspect (Single LED)  |  |
| <b>'Pivot Electronics' DATT Fliptop Disconnect and Test Terminal *</b> |                       |  |  |
| Pivot Electronics  | 002 0001              | DATT Disconnect and Test Terminal c/w Black Disconnect Link                      | 32A maximum load   |
| Pivot Electronics  | 002 0002              | DATT Disconnect and Test Terminal c/w Yellow Disconnect Link                     | To be used on every 10 <sup>th</sup> terminal.<br>32A maximum load |
| Pivot Electronics  | 100                   | Flatt Fuse Link Holder 20 x 5mm  | 32A maximum load   |
| Pivot Electronics  | 101                   | Flatt Fuse Link Holder 32 x 6mm  |  |
| Pivot Electronics  | 201                   | Power Jumper   |  |
| Pivot Electronics  | 202                   | DATT Bussing Comb 2 – way  |  |
| Pivot Electronics  | 203                   | DATT Bussing Comb 3 – way  |  |
| Pivot Electronics  | 204                   | DATT Bussing Comb 4 - way  |  |
| Pivot Electronics  | 205                   | DATT Bussing Comb 5 - way  |  |
| Pivot Electronics  | 206                   | DATT Bussing Comb 6 – way  |  |
| Pivot Electronics  | 207                   | DATT Bussing Comb 7 – way  |  |
| Pivot Electronics  | 208                   | DATT Bussing Comb 8 – way  |  |
| Pivot Electronics  | 209                   | DATT Bussing Comb 9 – way  |  |

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| Supplier          | Part No | Product/Description  | Condition/Remarks                                     |
|-------------------|---------|--|---|
| Pivot Electronics | 210     | DATT Bussing Comb 10 – way   |   |
| Pivot Electronics | 995     | Dummy Plug assembly, Orange  | To be used during staged works and commissioning only |
| Pivot Electronics | 996     | Dummy Plug assembly, Red   |   |
| Pivot Electronics | 997     | Dummy Plug assembly, Blue  |   |
| Pivot Electronics | 251     | Terminal MARKING SYSTEM [1,10], 5 OFF PER PACK (100 numbers) per card  |   |
| Pivot Electronics | 252     | Terminal MARKING SYSTEM [11,20] 5 OFF PER PACK (100 numbers) per card  |   |
| Pivot Electronics | 253     | Terminal MARKING SYSTEM [21,30], 5 OFF PER PACK (100 numbers) per card |   |
| Pivot Electronics | 254     | Terminal MARKING SYSTEM [31,40], 5 OFF PER PACK (100 numbers) per card |   |
| Pivot Electronics | 255     | Terminal MARKING SYSTEM [41,50], 5 OFF PER PACK (100 numbers) per card |   |
| Pivot Electronics | 256     | Terminal MARKING SYSTEM [51,60], 5 OFF PER PACK (100 numbers) per card |   |
| Pivot Electronics | 257     | Terminal MARKING SYSTEM [61,70], 5 OFF PER PACK (100 numbers) per card |   |
| Pivot Electronics | 258     | Terminal MARKING SYSTEM [71,80], 5 OFF PER PACK (100 numbers) per card |   |
| Pivot Electronics | 259     | Terminal MARKING SYSTEM [81,90], 5 OFF PER PACK (100 numbers) per card |   |

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| Supplier                                     | Part No    | Product/Description   | Condition/Remarks   |
|--|------------|---|---|
| Pivot Electronics                            | 260        | Terminal MARKING SYSTEM [91,100], 5 OFF PER PACK (100 numbers) per card |   |
| <b>TMAC – Rail Bonding Clamps *</b>          |            |   |   |
| TMAC (Thew and McCann Group)                 | TM00032    | MTOS1E2***TM<br>(PED T-Handle Single, 2m*95mm2, 2*CLE600 Clamps)        | PED maximum fault current rating 18kA/0.5 seconds. When two sets or more are used in parallel, the total rating is reduced by 10% |
| TMAC (Thew and McCann Group)                 | TM00033    | MTOS1E2***TM<br>(PED T-Handle Single, 6m*95mm2, 2*CLE600 Clamps)        | PED maximum fault current rating 18kA/0.5 seconds. When two sets or more are used in parallel, the total rating is reduced by 10% |
| TMAC (Thew and McCann Group)                 | TM00637    | MTOS1E2***TM<br>(PED T-Handle Single, 16m*95mm2, 2*CLE600 Clamps)       | PED maximum fault current rating 18kA/0.5 seconds. When two sets or more are used in parallel, the total rating is reduced by 10% |
| <b>Lock Focus Type EOL *</b>                 |            |   |   |
| Lock Focus                                   | Style H31  | EOL Lock manufactured by Lock Focus.                                    |   |
| Lock Focus                                   | -          | EOL Key   |   |
| Lock Focus                                   | Style CA10 | Rotary switch manufactured by Kraus & Naimer                            |   |
| Lock Focus                                   | -          | Master Series padlock with collar and chain,                            |   |
| Lock Focus                                   | -          | Lock Focus lock barrel fitted to padlock                                |   |
| <b>MRD Rail Technologies – EarthLogger *</b> |            |   |   |
| MRD Rail Technologies Pty Ltd                | ESL-A      | EarthSense,<br>1 Channel Insulation Monitor & Logger LAN + RS485        |   |

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|---|-------------|--|-------------------|
|   | ESL-B       | EarthSense,<br>1 Channel Insulation Monitor & Logger LAN + RS485   |                   |
|   | ESL4-A      | EarthSense,<br>4 Channel Insulation Monitor & Logger LAN + RS485<br>Universal Supply 85-265 V AC, 100-200 V DC   |                   |
|   | ESL4-B      | EarthSense,<br>4 Channel Insulation Monitor & Logger LAN + RS485<br>LV Supply 9-36V DC   |                   |
|   | ESL4-AM     | EarthSense,<br>4 Channel Insulation Monitor & Logger LAN + RS485<br>Universal Supply 85-265 V AC, 100-200 V DC   |                   |
|   | ESL4-BM     | EarthSense,<br>4 Channel Insulation Monitor & Logger LAN + RS485<br>LV Supply 9-36V DC   |                   |
| <b>Exelectronics - Schottky Diode Block *</b> |             |  |                   |
| Exelectronics                                 | E11008-3    | Schottky Diode Block 1-10A   |                   |
| Exelectronics                                 | E11031-1    | Schottky Diode Block 10-30A  |                   |
| <b>MRD RelayDoc *</b>                         |             |  |                   |
| MRD Rail Technologies Pty Ltd.                | RelayDoc-HV | RelayDoc Automated BR930 Relay Tester (includes software, BR930 Test Base with automatic pin code detection) – 130V (to be used for AC and DC relay testing) |                   |
|   | RD-CK       | RelayDoc Calibration Kit   |                   |
|   | RD-CASE     | Shock-resistant carry case   |                   |

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| Supplier                                 | Part No      | Product/Description   | Condition/Remarks |
|--|--------------|---|-------------------|
| <b>Phoenix Contact' Terminal Range *</b> |              |   |                   |
| Phoenix Contact Pty. Ltd.                | 1076793      | PT 10-MTL<br>(Knife disconnect terminal)                            |                   |
| Phoenix Contact Pty. Ltd.                | 1080201      | PT 10-TG<br>(Fuse terminal)   |                   |
| Phoenix Contact Pty. Ltd.                | 3005947      | FBS 2-10<br>(PT 10-MTL & PT 10TG Jumper 2 position)                 |                   |
| Phoenix Contact Pty. Ltd.                | 3005948      | FBS 5-10<br>(PT 10-MTL, PT 10TG Jumper 5 position)                  |                   |
| Phoenix Contact Pty. Ltd.                | 3247954      | Switch Lock (White)<br>(PT 4MT & PT 10MTL compatible)               |                   |
| Phoenix Contact Pty. Ltd.                | 3046498      | P-FU<br>(Fuse Plug)   |                   |
| Phoenix Contact Pty. Ltd.                | 1104018      | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 1-50)   |                   |
| Phoenix Contact Pty. Ltd.                | 1104019      | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 51-100) |                   |
| Phoenix Contact Pty. Ltd.                | 1053027:0001 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 1-10)   |                   |
| Phoenix Contact Pty. Ltd.                | 1053027:0011 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 11-20)  |                   |
| Phoenix Contact Pty. Ltd.                | 1053027:0021 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 21-30)  |                   |
| Phoenix Contact Pty. Ltd.                | 1053027:0031 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 31-40)  |                   |

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| Supplier                  | Part No      | Product/Description  | Condition/Remarks |
|---------------------------|--------------|--|-------------------|
| Phoenix Contact Pty. Ltd. | 1053027:0041 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 41-50)   |                   |
| Phoenix Contact Pty. Ltd. | 1053027:0051 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 51-60)   |                   |
| Phoenix Contact Pty. Ltd. | 1053027:0061 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 61-70)   |                   |
| Phoenix Contact Pty. Ltd. | 1053027:0071 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 71-80)   |                   |
| Phoenix Contact Pty. Ltd. | 1053027:0081 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 81-90)   |                   |
| Phoenix Contact Pty. Ltd. | 1053027:0091 | Marking Top (PT 10-MTL& PT 10-TG) - Terminal labels (Number 91-100)  |                   |
| Phoenix Contact Pty. Ltd. | 1104048      | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 1-50)   |                   |
| Phoenix Contact Pty. Ltd. | 1104020      | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 51-100) |                   |
| Phoenix Contact Pty. Ltd. | 810025:0001  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 1-10)   |                   |
| Phoenix Contact Pty. Ltd. | 810025:0011  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 11-20)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0021  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 21-30)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0031  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 31-40)  |                   |

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| Supplier                  | Part No      | Product/Description  | Condition/Remarks |
|---------------------------|--------------|--|-------------------|
| Phoenix Contact Pty. Ltd. | 810025:0041  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 41-50)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0051  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 51-60)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0061  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 61-70)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0071  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 71-80)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0081  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 81-90)  |                   |
| Phoenix Contact Pty. Ltd. | 810025:0091  | Marking Side (PT 10-MTL& PT 10-TG) - Terminal labels (Number 91-100) |                   |
| Phoenix Contact Pty. Ltd. | 1104010      | Marking Top (P-FU) - Terminal labels (Number 1-50)                   |                   |
| Phoenix Contact Pty. Ltd. | 1104011      | Marking Top (P-FU) - Terminal labels (Number 51-100)                 |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0001 | Marking Top (P-FU) - Terminal labels (Number 1-10)                   |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0011 | Marking Top (P-FU) - Terminal labels (Number 11-20)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0021 | Marking Top (P-FU) - Terminal labels (Number 21-30)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0031 | Marking Top (P-FU) - Terminal labels (Number 31-40)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0041 | Marking Top (P-FU) - Terminal labels (Number 41-50)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0051 | Marking Top (P-FU) - Terminal labels (Number 51-60)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0061 | Marking Top (P-FU) - Terminal labels (Number 61-70)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0071 | Marking Top (P-FU) - Terminal labels (Number 71-80)                  |                   |
| Phoenix Contact Pty. Ltd. | 1052028:0081 | Marking Top (P-FU) - Terminal labels (Number 81-90)                  |                   |

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|---------------------------|--------------|--|-------------------|
| Phoenix Contact Pty. Ltd. | 1052028:0091 | Marking Top (P-FU) - Terminal labels (Number 91-100)     |                   |
| Phoenix Contact Pty. Ltd. | 3211933      | PT 4-MT (Through terminal)                               |                   |
| Phoenix Contact Pty. Ltd. | 3030420      | D-ST 4 (End cover)                                       |                   |
| Phoenix Contact Pty. Ltd. | 3030336      | FBS 2-6 (PT 4-MT Jumper 2 position)                      |                   |
| Phoenix Contact Pty. Ltd. | 3030242      | FBS 3-6 (PT 4-MT Jumper 3 position)                      |                   |
| Phoenix Contact Pty. Ltd. | 3030255      | FBS 4-6 (PT 4-MT Jumper 4 position)                      |                   |
| Phoenix Contact Pty. Ltd. | 3030349      | FBS 5-6 (PT 4-MT Jumper 5 position)                      |                   |
| Phoenix Contact Pty. Ltd. | 1008238      | FBS 6-6 (PT 4-MT Jumper 6 position)                      |                   |
| Phoenix Contact Pty. Ltd. | 3030271      | FBS 10-6 (PT 4-MT Jumper 10 position)                    |                   |
| Phoenix Contact Pty. Ltd. | 3030365      | FBS 20-6 (PT 4-MT Jumper 20 position)                    |                   |
| Phoenix Contact Pty. Ltd. | 1104016      | Marking Side (PT 4-MT) - Terminal labels (Number 1-50)   |                   |
| Phoenix Contact Pty. Ltd. | 1104017      | Marking Side (PT 4-MT) - Terminal labels (Number 51-100) |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0001 | Marking Side (PT 4-MT) - Terminal labels (Number 1-10)   |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0011 | Marking Side (PT 4-MT) - Terminal labels (Number 11-20)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0021 | Marking Side (PT 4-MT) - Terminal labels (Number 21-30)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0031 | Marking Side (PT 4-MT) - Terminal labels (Number 31-40)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0041 | Marking Side (PT 4-MT) - Terminal labels (Number 41-50)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0051 | Marking Side (PT 4-MT) - Terminal labels (Number 51-60)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0061 | Marking Side (PT 4-MT) - Terminal labels (Number 61-70)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0071 | Marking Side (PT 4-MT) - Terminal labels (Number 71-80)  |                   |
| Phoenix Contact Pty. Ltd. | 0808765:0081 | Marking Side (PT 4-MT) - Terminal labels (Number 81-90)  |                   |

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|---|--------------|--|-------------------|
| Phoenix Contact Pty. Ltd.                           | 0808765:0091 | Marking Side (PT 4-MT) - Terminal labels (Number 91-100)         |                   |
| Phoenix Contact Pty. Ltd.                           | 3212064      | PT POWER 35  |                   |
| Phoenix Contact Pty. Ltd.                           | 3212066      | PT POWER 35 PE (Earth terminal)                                  |                   |
| Phoenix Contact Pty. Ltd.                           | 1104021      | Marking (PT POWER 35 & PT POWER 35 PE)                           |                   |
| Phoenix Contact Pty. Ltd.                           | 3260100      | PT POWER 95  |                   |
| Phoenix Contact Pty. Ltd.                           | 3260106      | PT POWER 95 PE (Earth terminal)                                  |                   |
| Phoenix Contact Pty. Ltd.                           | 1104021      | Marking (PT POWER 95 & PT POWER 95 PE)                           |                   |
| Phoenix Contact Pty. Ltd.                           | 800307       | UBE/D (Name Tag)   |                   |
| Phoenix Contact Pty. Ltd.                           | 0808095      | ESL (Name tag stickers)  |                   |
| Phoenix Contact Pty. Ltd.                           | 0800886      | E/NS 35N (End clamp)   |                   |
| <b>2.14 Rail Connection</b>                         |              |  |                   |
| <b>'Weidmüller' Wiring Conductor Crimping Tool*</b> |              |  |                   |
| Weidmuller Pty. Ltd.                                | 9006120000   | Crimping Tool CTI 6  |                   |
| <b>'Siemens' PEGA 1211 Test Set. *</b>              |              |  |                   |
| Siemens   | PEGA 1211    | FTGS/GLS/AZS Test Set  |                   |
| <b>ERICO' Track Bonding Components *</b>            |              |  |                   |
| ERICO Products Australia                            | A1215        | Channel Pin  |                   |
| ERICO Products Australia                            | A1197        | 6mm S/S tapered bolt, M6 S/S 'Nylock' nut & 2 x S/S star washers |                   |

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|--------------------------|----------------------|---|-------------------|
| ERICO Products Australia | A1234                | 12 mm S/S tapered bolt, copper bush, flat washer, spring washer, standard nut & ½ Locknut |                   |
| ERICO Products Australia | 715070               | SK 19/14 (12mm bolt single rail-web contact)  |                   |
| ERICO Products Australia | 715070               | SK 122/20 (12mm bolt single rail-web contact)   |                   |
| ERICO Products Australia | KIT6                 | 6mm stud weld kit   |                   |
| ERICO Products Australia |                      | 6mm S/S stud, S/S flat washer, S/S spring washer, S/S hex locknut & 2 x S/S star washers  |                   |
| ERICO Products Australia | SB32                 | Weld-metal cartridge  |                   |
| ERICO Products Australia | PBHVT20P120AIM       | Rail web mould  |                   |
| ERICO Products Australia | T320                 | Flint ignitor   |                   |
| ERICO Products Australia | B136B                | Mould cleaning tool   |                   |
| ERICO Products Australia | T317                 | Duxseal compound  |                   |
| ERICO Products Australia | KIT6PLUS             | 6mm stud weld kit. As KIT6 with electrically ignited cartridge                            |                   |
| ERICO Products Australia | PB32PLUSF80          | Electrical ignited weld-metal cartridge   |                   |
| ERICO Products Australia | KIT12                | 12mm stud weld kit  |                   |
| ERICO Products Australia |                      | 12mm S/S stud, S/S flat washer, S/S spring washer, S/S hex nut & S/S hex locknut          |                   |
| ERICO Products Australia | PB90                 | Weld-metal cartridge  |                   |
| ERICO Products Australia | PBHVT20P120AIMHV M12 | Rail web mould  |                   |
| ERICO Products Australia | T320                 | Flint ignitor   |                   |
| ERICO Products Australia | B136B                | Mould cleaning tool   |                   |
| ERICO Products Australia | T317                 | Duxseal compound  |                   |

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|--|-------------|--|-------------------|
| ERICO Products Australia                         | FS0016      | 12mm stud weld kit. As KIT12 without PB90 cartridge              |                   |
| ERICO Products Australia                         | KIT12PLUS   | 12mm stud weld kit. As KIT12 with electrically ignited cartridge |                   |
| ERICO Products Australia                         | PB90PLUSF80 | Electrical ignited weld-metal cartridge                          |                   |
| ERICO Products Australia                         | SBA252S0    | Clip for 19mm o/d cable  |                   |
| ERICO Products Australia                         | SBA252S1    | Clip for 25mm o/d cable  |                   |
| ERICO Products Australia                         | SBA2522     | Clip for 31mm o/d cable  |                   |
| ERICO Products Australia                         | SBA251      | Clip for 3/8' cable  |                   |
| ERICO Products Australia                         | SBA248B     | Clip for 3/8' cable  |                   |
| ERICO Products Australia                         | GCHSC89     | 4 x Clips for 3/8' cable   |                   |
| ERICO Products Australia                         | GCHSC1924   | 3 x Clips for 19-24mm o/d cable                                  |                   |
| ERICO Products Australia                         | GCHSC2530   | 2 c Clips for 25-30mm o/d cable                                  |                   |
| ERICO Products Australia                         | N/A         | Flexible Glue  |                   |
| <b>'ERICO' Rail Drilling and Bonding Tools *</b> |             |  |                   |
| ERICO Products Australia                         | SBC105C     | T-21 Rail mould clamp connector frame                            |                   |
| ERICO Products Australia                         | MFU11032    | Magnetic handle clamp  |                   |
| ERICO Products Australia                         | SBT320      | Flint ignitor  |                   |
| ERICO Products Australia                         | SBB32130    | Fling ignitor with extension handle                              |                   |
| ERICO Products Australia                         | PLUSCU      | Ignition Control Unit  |                   |
| ERICO Products Australia                         | PLSCULD     | Replacement cable 4.6mm  |                   |
| ERICO Products Australia                         | PLSCULD15   | Replacement cable 15m  |                   |
| ERICO Products Australia                         | 715345      | HSKE manual Insertion Tool                                       |                   |

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| Supplier                 | Part No | Product/Description          | Condition/Remarks |
|--------------------------|---------|------------------------------|-------------------|
| ERICO Products Australia | 715218  | Hydraulic head adaptor       |                   |
| ERICO Products Australia | 715216  | Mandrel                      |                   |
| ERICO Products Australia | 715215  |                              |                   |
| ERICO Products Australia | 716338  | Extraction bush / mandrel    |                   |
| ERICO Products Australia | 716336  |                              |                   |
| ERICO Products Australia | 716540  | Test-gauge                   |                   |
| ERICO Products Australia | 715645  | Test-gauge                   |                   |
| ERICO Products Australia | 716542  | Test-gauge                   |                   |
| ERICO Products Australia | 715685  | SBM-VS Rail drilling machine |                   |
| ERICO Products Australia | 715360  | BSK-1 Rail clamp             |                   |
| ERICO Products Australia | 715375  | Coolant tank with pump       |                   |
| ERICO Products Australia | 715695  | Metal case                   |                   |
| ERICO Products Australia | 715395  | Tooling set                  |                   |
| ERICO Products Australia | 716315  | SSB 8 drill                  |                   |
| ERICO Products Australia | 716074  | ASB 8 mounting adaptor       |                   |
| ERICO Products Australia | 716320  | SSB 13 drill                 |                   |
| ERICO Products Australia | 716185  | SSB 19 drill                 |                   |
| ERICO Products Australia | 715520  | ZSP cooling adaptor          |                   |
| ERICO Products Australia | 715305  | SBHM 22 drill                |                   |
| ERICO Products Australia | 715660  | 83mm Cooling pin             |                   |
| ERICO Products Australia | 715075  | LR-1 Coolant                 |                   |

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| Supplier                    | Part No       | Product/Description  | Condition/Remarks    |
|-----------------------------|---------------|--|----------------------|
| ERICO Products Australia    | 715365        | Rail web neutral axis bonding height template                      |                      |
| ERICO Products Australia    | 715542        |  |                      |
| ERICO Products Australia    | 715545        |  |                      |
| ERICO Products Australia    | 716534        | Axle Counter head mounting inter-hold distance gauge               |                      |
| ERICO Products Australia    | 716527        |  |                      |
| ERICO Products Australia    | 715537        | Axle Counter head height template                                  |                      |
| ERICO Products Australia    | 715526        |  |                      |
| ERICO Products Australia    | 715527        |  |                      |
| Safe track Pin Brazing**    |               |  |                      |
| Transient Control Australia | SAFE 94350    | SAFETRACK PIN BRAZING KIT  | ** - Refer ESC-07-04 |
|                             | SAFE 10011    | SAFETRACK 8MM STANDARD PIN   |                      |
|                             | SAFE 2003     | SAFETRACK 8MM STANDARD FERRULE                                     |                      |
|                             | SAFE 5007     | SAFETRACK M12 T CONNECTOR  |                      |
|                             | SAFE 301010   | SAFETRACK RAIL BOND Railbond 25mm <sup>2</sup> L=1.1 MTR/40degree  |                      |
|                             | SAFE 30570100 | SAFETRACK EXTENSION CABLE 200MM/25MM <sup>2</sup> M6 NUT & BOLT    |                      |
|                             | SAFE 3275     | SAFETRACK RAILBOND L = 410MM 25MM <sup>2</sup> COPPER 2X 8MM BONDS |                      |
|                             | SAFE 3050     | SAFETRACK RAILBOND 25mm <sup>2</sup> COPPER L=200mm 2 X 8MM BONDS  |                      |

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| Supplier                                       | Part No | Product/Description | Condition/Remarks |
|--|---------|---------------------|-------------------|
| <b>2.15 Cable Route</b>                        |         |                     |                   |
| <b>Linpac cable route pits and troughing *</b> |         |                     |                   |
| Linpac Rotational Mouldings                    | VP0152  | P2 Injection Pit    |                   |
| Linpac Rotational Mouldings                    | VP0153  | P3 Injection Pit    |                   |
| Linpac Rotational Mouldings                    | VP0155  | P5 Injection Pit    |                   |
| Linpac Rotational Mouldings                    | UG2005  | LP5 Pit             |                   |
| Linpac Rotational Mouldings                    | UG2010  | LP5 Collar          |                   |
| Linpac Rotational Mouldings                    | UG2300  | LP5 Lid             |                   |
| Linpac Rotational Mouldings                    | UG2006  | LP6 Lid             |                   |
| Linpac Rotational Mouldings                    | UG2011  | LP6 Collar          |                   |
| Linpac Rotational Mouldings                    | UG2400  | LP6 Lid             |                   |
| Linpac Rotational Mouldings                    | UG2007  | LP7 Pit             |                   |
| Linpac Rotational Mouldings                    | UG2017  | LP7 Collar          |                   |
| Linpac Rotational Mouldings                    | UG2008  | LP8 Pit             |                   |
| Linpac Rotational Mouldings                    | UG2009  | LP9 Pit             |                   |
| Linpac Rotational Mouldings                    | UG2033  | G3 Pit              |                   |
| Linpac Rotational Mouldings                    | UG2030  | G3 Collar           |                   |
| Linpac Rotational Mouldings                    | UG2055  | G3 Lid              |                   |
| Linpac Rotational Mouldings                    | UG2090  | Platform Pit        |                   |
| Linpac Rotational Mouldings                    | UG2075  | Round Pit           |                   |

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|--|---------|--|-------------------|
| Linpac Rotational Mouldings                            | UG2072  | Cable Tray                             |                   |
| Linpac Rotational Mouldings                            | UG2071  | Cable Tray Lid                         |                   |
| Linpac Rotational Mouldings                            | CM0029  | Cable Guard                            |                   |
| Metwest Engineering - Pre-Cast Concrete Pits and GLT * |         |  |                   |
| Metwest Engineering                                    | 1540    | Concrete Pit 1/8 Abbott                |                   |
| Metwest Engineering                                    | 1729    | Concrete Pit 1/4 Abbott Short          |                   |
| Metwest Engineering                                    | 763     | Concrete Pit 1/2 Abbott Short          |                   |
| Metwest Engineering                                    | 693     | Concrete Pit 1/2 Abbott Long           |                   |
| Metwest Engineering                                    | 1541    | Concrete Pit 3/4 Abbott                |                   |
| Metwest Engineering                                    | 1098    | Concrete Pit Full Abbott c/w knockouts |                   |
| Metwest Engineering                                    | 738     | Concrete Pit Zeppo c/w knockouts       |                   |
| Metwest Engineering                                    | 863     | Concrete Pits Costello Lite            |                   |
| Metwest Engineering                                    | 1103    | Concrete Riser 1/2 Abbott 300mm        |                   |
| Metwest Engineering                                    | 1102    | Concrete Riser 3/4 Abbott 300mm        |                   |
| Metwest Engineering                                    | 1590    | Concrete Riser Full Abbott 150mm       |                   |
| Metwest Engineering                                    | 1149    | Concrete Riser Full Abbott 300mm       |                   |
| Metwest Engineering                                    | 1101    | Concrete Riser Full Abbott 600mm       |                   |
| Metwest Engineering                                    | 1148    | Concrete Riser Full Abbott 1200mm      |                   |
| Metwest Engineering                                    | 600     | Concrete Riser Zeppo 150               |                   |
| Metwest Engineering                                    | 574     | Concrete Riser Zeppo 300               |                   |
| Metwest Engineering                                    | 611     | Concrete Riser Zeppo 600               |                   |

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|---|---------|--------------------------------------|---|
| Metwest Engineering   | 870     | Concrete Riser Zeppo 900             |   |
| Metwest Engineering   | 772     | Concrete Lid 1/2 Abbott Class D 6*9  |   |
| Metwest Engineering   | 1550    | Concrete Lid 1/4 Abbott Class D 6*6  |   |
| Metwest Engineering   | 1595    | Concrete Lid 3/4 Abbott Class D      |   |
| Metwest Engineering   | 662     | Concrete Lid 3/4 Abbott Full Class D |   |
| Metwest Engineering   | 879     | Concrete Zeppo Class D               |   |
| Metwest Engineering   | 1542    | Pit Lid 1/4 Abbott Hinged            |   |
| Metwest Engineering   | 1543    | Pit Lid 1/8 Abbott Hinged            |   |
| Metwest Engineering   | 1544    | Pit Lid 3/4 Abbott 2 Piece           |   |
| Metwest Engineering   | 1555    | Pit Lid Full Abbott Alum. Class A    |   |
| Metwest Engineering   | 4       | Pit Lid 2 Piece Zeppo & Costello     |   |
| Metwest Engineering   | 692     | Pit Lid 1/2 Abbott Long and Short    |   |
| Metwest Engineering   | 511     | Single Compartment GLT               |   |
| Metwest Engineering   | 500     | Double Compartment GLT               |   |
| Metwest Engineering   | 499     | Single Compartment GLT Lid           |   |
| Metwest Engineering   | 498     | Double Compartment GLT Lid           |   |
| Metwest Engineering - Pre-Cast Concrete Pits and GLT            |         |                                      |   |
| Metwest Engineering   |         | Precast Concrete Bases               | Approved based on its existing historical application on the ARTC network |
| ‘Cubis Systems’ STAKKAbox™ Fortress Pits - Class B Load rated * |         |                                      |   |
| CUBIS Systems   | 620660  | Stakka Box Fortress 610*D150         |   |

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| Supplier   | Part No       | Product/Description  | Condition/Remarks                   |
|--|---------------|--|-------------------------------------|
| CUBIS Systems  | 620990        | Stakka Box Fortress 915*D150                                   |                                     |
| CUBIS Systems  | 620120        | Stakka Box Fortress 1220*D150                                  |                                     |
| CUBIS Systems  | 620600        | 600*600 Fortress COV and Frame Set Class B                     |                                     |
| CUBIS Systems  | 620900        | 900*900 Fortress COV and Frame Set Class B                     |                                     |
| CUBIS Systems  | 620122        | 1200*1200 Fortress COV and Frame Set Class B                   |                                     |
| CUBIS Systems  | RC5003        | Fortress Access Ladder and Bracket Kit                         |                                     |
| 'Cubis Systems' Pre-Cast Concrete Pits and Access Covers * |               |  |                                     |
| CUBIS Systems  | 524110N       | 1/2 Pit 1000*600*1195  |                                     |
| CUBIS Systems  | 524112N       | 1/2 Pit 1000*600*1005  |                                     |
| CUBIS Systems  | 524121        | 1/2 Pit extension piece 1000*600*300                           |                                     |
| CUBIS Systems  | 524113N       | 3/4 Pit 1000*1000*1195   |                                     |
| CUBIS Systems  | 591065N       | 3/4 Bell top pit 1100*900*1050                                 |                                     |
| CUBIS Systems  | 524118N       | Full Pit 1200*1200*1195  |                                     |
| CUBIS Systems  | 524109        | Circular Pit 1200 Dia*1195                                     |                                     |
| CUBIS Systems  | 524108        | Circular Riser 1200 Dia*300                                    |                                     |
| Channell HDPE Pits and Accessories #                       |               |  |                                     |
| Channell   | BULK012N07210 | BULK0 w Floor & SHIELD Bolt Down Cover - 406mm x 406mm x 324mm | Cover equivalent to Class C loading |
| Channell   | BULK118N07210 | BULK1 w Floor & SHIELD Bolt Down Cover - 540mm x 394mm x 457mm | Cover equivalent to Class C loading |
| Channell   | BULK218N07210 | BULK2 w Floor & SHIELD Bolt Down Cover - 700mm x 460mm x 474mm | Cover equivalent to Class C loading |

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| Supplier | Part No              | Product/Description  | Condition/Remarks                   |
|----------|----------------------|--|-------------------------------------|
| Channell | BULK218N07110        | BULK2 w Floor & SHIELD L-Bolt Cover - 700mm x 460mm x 474mm              | Cover equivalent to Class C loading |
| Channell | BULKU132418R09101110 | BULK2 w Floor & Rapid Locate SHIELD Cover - 700mm x 460mm x 474mm        | Cover equivalent to Class C loading |
| Channell | 77086010             | BULK2 w Floor & SUPERBULK-S Drop In Cover - 700mm x 460mm x 474mm        | Cover equivalent to Class D loading |
| Channell | BULK324N07210        | BULK3 w Floor & SHIELD Bolt Down Cover - 847mm x 552mm x 608mm           | Cover equivalent to Class C loading |
| Channell | BULK324N07210        | BULK3 w Floor & SHIELD L-Bolt Cover - 847mm x 552mm x 608mm              | Cover equivalent to Class C loading |
| Channell | BULK324N07510        | BULK3 w Floor & SHIELD Cover (Padlockable) - 847mm x 552mm x 608mm       | Cover equivalent to Class C loading |
| Channell | BULKU173024R09100910 | BULK3 w Floor & SHIELD Cover (Rapid Locate) - 847mm x 552mm x 608mm      | Cover equivalent to Class C loading |
| Channell | 77086110             | BULK3 w Floor & SUPERBULK-S Drop in Cover - 847mm x 552mm x 608mm        | Cover equivalent to Class D loading |
| Channell | BULK1730244N102010   | BULK3 w Floor & SUPERBULK Cover - 847mm x 552mm x 608mm                  | Cover equivalent to Class D loading |
| Channell | BULK424N07210        | BULK4 (24") w Floor & SHIELD Bolt Down Cover - 1026mm x 731mm x 610mm    | Cover equivalent to Class C loading |
| Channell | BULK424N07110        | BULK4 (24") w Floor & SHIELD L-Bolt Cover - 1026mm x 731mm x 610mm       | Cover equivalent to Class C loading |
| Channell | BULK424N07510        | BULK4 (24") w Floor & SHIELD Cover (Padlockable) -1026mm x 731mm x 610mm | Cover equivalent to Class C loading |

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|----------|----------------------|--|--|
| Channell | BULKU243624R09100910 | BULK4 (24") w Floor & SHIELD Cover (Rapid Locate) - 1026mm x 731mm x 610mm | Cover equivalent to Class D loading                                  |
| Channell | 77086210             | BULK4 (24") w Floor & SUPERBULK-S Drop in Cover - 1026mm x 731mm x 610mm   | Cover equivalent to Class D loading                                  |
| Channell | BULK2436244N102010   | BULK4 (24") w Floor & SUPERBULK Cover - 1026mm x 731mm x 610mm             | Cover equivalent to Class D loading                                  |
| Channell | BULK436N07210        | BULK4 (36") w Floor & SHIELD Bolt Down Cover - 1026mm x 731mm x 914mm      | Cover equivalent to Class C loading                                  |
| Channell | BULK436N07110        | BULK4 (36") w Floor & SHIELD L-Bolt Cover - 1026mm x 731mm x 914mm         | Cover equivalent to Class C loading                                  |
| Channell | BULK436N07510        | BULK4 (36") w Floor & SHIELD Cover (Padlockable) - 1026mm x 731mm x 914mm  | Cover equivalent to Class C loading                                  |
| Channell | BULKU243636R09130510 | BULK4 (36") w Floor & SHIELD Cover (Rapid Locate) - 1026mm x 731mm x 914mm | Cover equivalent to Class C loading                                  |
| Channell | 77086310             | BULK4 (36") w Floor & SUPERBULK-S Drop in Cover - 1026mm x 731mm x 914mm   | Cover equivalent to Class D loading                                  |
| Channell | BULK2436344N102010   | BULK4 (36") w Floor & SUPERBULK Cover - 1026mm x 731mm x 914mm             | Cover equivalent to Class D loading                                  |
| Channell | BULK536N07210        | BULK5 w Floor & SHIELD Bolt Down Cover - 1314mm x 731mm x 914mm            | Cover equivalent to Class C loading                                  |
| Channell | 77030010             | BULK5 w Floor & SUPERBULK Cover - 1314mm x 731mm x 914mm                   | Cover equivalent to Class D loading                                  |
| Channell | BULK736N07210        | BULK7 w Floor & SHIELD Bolt Down Cover - 1333mm x 883mm x 915mm            | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |

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| Supplier | Part No              | Product/Description   | Condition/Remarks  |
|----------|----------------------|---|--|
| Channell | BULK736N07110        | BULK7 w Floor & SHIELD L-Bolt Cover - 1333mm x 883mm x 915mm                | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell | BULK736N07510        | BULK7 w Floor & SHIELD Cover (Padlockable) - 1333mm x 883mm x 915mm         | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell | BULKU304836R10100910 | BULK7 w Floor & SHIELD Cover (Rapid Locate) - 1333mm x 883mm x 915mm        | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell | 77086410             | BULK7 w Floor & SUPERBULK-S Drop in Cover - 1333mm x 883mm x 915mm          | Cover equivalent to Class D loading<br>Suitable for Main Cable Route |
| Channell | BULK736N11210        | BULK7 w Floor & SUPERBULK Cover - 1333mm x 883mm x 915mm                    | Cover equivalent to Class D loading<br>Suitable for Main Cable Route |
| Channell | BULK836N07210        | BULK8 (36") w Floor & SHIELD Bolt Down Cover - 1657mm x 1060mm x 915mm      | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell | BULK836N07510        | BULK8 (36") w Floor & SHIELD Cover (Padlockable) - 1657mm x 1060mm x 915mm  | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell | 77087010             | BULK8 (36") w Floor & SHIELD Cover (Rapid Locate) - 1657mm x 1060mm x 915mm | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell | 77086510             | BULK8 (36") w Floor & SUPERBULK-S Drop in Cover - 1657mm x 1060mm x 915mm   | Cover equivalent to Class D loading<br>Suitable for Main Cable Route |
| Channell | BULK848N07210        | BULK8 (48") w Floor & SHIELD Bolt Down Cover - 1657mm x 1060mm x 1219mm     | Cover equivalent to Class C loading                                  |

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| Supplier               | Part No        | Product/Description  | Condition/Remarks  |
|------------------------|----------------|--|--|
|                        |                |  | Suitable for Main Cable Route  |
| Channell               | BULK848N07510  | BULK8 (48") w Floor & SHIELD Cover (Padlockable) - 1657mm x 1060mm x 1219mm  | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell               | 77087110       | BULK8 (48") w Floor & SHIELD Cover (Rapid Locate) - 1657mm x 1060mm x 1219mm | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell               | 77086610       | BULK8 (48") w Floor & SUPERBULK-S Drop in Cover - 1657mm x 1060mm x 1219mm   | Cover equivalent to Class D loading<br>Suitable for Main Cable Route |
| Channell               | BULK942N07210  | BULK9 w Floor & SHIELD Bolt Down Cover - 2065mm x 1061mm x 1066mm            | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell               | BULK942N07510  | BULK9 w Floor & SHIELD Cover (Padlockable) - 2065mm x 1061mm x 1066mm        | Cover equivalent to Class C loading<br>Suitable for Main Cable Route |
| Channell               | BULK942N011210 | BULK9 w Floor & SUPERBULK Drop in Cover - 2065mm x 1061mm x 1066mm           | Cover equivalent to Class D loading<br>Suitable for Main Cable Route |
| Channell               | 770722         | GLB1111 Earth Pit - 295mm x 295mm x 406mm                                    |  |
| Channell               | 770721         | GLB912 Earth Pit - 242mm x 318mm x 305mm                                     |  |
| Channell               | 770720         | GLB610 Earth Pit - 158mm x 216mm x 254mm                                     |  |
| Channell – Accessories |                |  |  |
| Channell               | BULKA1212-EXT  | BULK0 Extension  | Custom sizes available   |
| Channell               | BULKA1118-EXT  | BULK1 Extension  | Custom sizes available   |

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|---|-----------------|--|---------------------------------------|
| Channell  | BULKA1324-EXT   | BULK2 Extension                                  | Custom sizes available                |
| Channell  | BULKA1730-EXT10 | BULK3 Extension                                  | 254mm / Custom Sizes also available   |
| Channell  | BULKA2436-EXT10 | BULK4 Extension                                  | 254mm / Custom Sizes also available   |
| Channell  | BULKA2448-EXT14 | BULK5 Extension                                  | 356mm / Customer Sizes also available |
| Channell  | BULKA3048-EXT14 | BULK7 Extension                                  | 356mm / Customer Sizes also available |
| Channell  | BULKA3660-EXT   | BULK8 Extension                                  | Custom sizes available                |
| Channell  | BULKA3676-EXT   | BULK9 Extension                                  | Custom sizes available                |
| Channell  | BULKARC1730     | BULK3 Riser                                      |                                       |
| Channell  | BULKARC2436     | BULK4 Riser                                      |                                       |
| Channell  | BULKARM2448     | BULK5 Riser                                      |                                       |
| Channell  | BULKARC3048     | BULK7 Riser                                      |                                       |
| Channell  | 770160          | Access Ladder and bracket Kit                    | Customized to specific pit depth      |
| Channell  | ACC03017160     | Marker Locator Device                            | Packet of 12                          |
| Channell  | ACC03028696G    | Cable Hook Bracket                               | Packet of 12                          |
| Channell  | ACC03009905     | Step Bracket Wedge                               | Each                                  |
| Channell  | 770161          | Tri-Lobe High Security Bolts (SHIELD BULK1 to 3) | Packet of 4                           |
| Channell  | 770162          | Tri-Lobe High Security Bolts (SHIELD BULK4+)     | Packet of 4                           |
| Channell  | HK02240         | Hook/Wrench w/Tri-Lobe Socket Combination Tool   | Each                                  |
| <b>'TufDuct' - Cable Route Management System*</b> |                 |  |                                       |
| TufDuct   | TB-1000         | TufDuct Brush - 1m                               | Miscellaneous                         |

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|----------|------------|--------------------------------|-------------------|
| TufDuct  | TP-1200-S  | TufDuct Prisma Standard - 1.2m |                   |
| TufDuct  | TP-1200-L  | TufDuct Prisma Large - 1.2m    |                   |
| TufDuct  | TDA-Feet   | TufDuct Feet                   |                   |
| TufDuct  | TDA-UL-090 | TufDuct U Locator 090 Series   |                   |
| TufDuct  | TDA-LL     | TufDuct L Locator              |                   |
| TufDuct  | TD090S     | TufDuct Straight - 090         | 090 Series Duct   |
| TufDuct  | TD090B     | TufDuct Bend - 090             |                   |
| TufDuct  | TD090T     | TufDuct Tee - 090              |                   |
| TufDuct  | TD090G-D   | TufDuct Gradient Down - 090    |                   |
| TufDuct  | TD090G-U   | TufDuct Gradient Up - 090      |                   |
| TufDuct  | TD090EP-F  | TufDuct End Plate Female - 090 |                   |
| TufDuct  | TD090EP-M  | TufDuct End Plate Male         | 135 Series Duct   |
| TufDuct  | TD135S     | TufDuct Straight - 135         |                   |
| TufDuct  | TD135B     | TufDuct Bend - 135             |                   |
| TufDuct  | TD135T     | TufDuct Tee - 135              |                   |
| TufDuct  | TD135G-D   | TufDuct Gradient Down - 135    |                   |
| TufDuct  | TD135G-U   | TufDuct Gradient Up - 135      |                   |
| TufDuct  | TD135EP-F  | TufDuct End Plate Female - 135 |                   |
| TufDuct  | TD135EP-M  | TufDuct End Plate Male - 135   | 150 Series Duct   |
| TufDuct  | TD150S     | TufDuct Straight - 150         |                   |
| TufDuct  | TD150B     | TufDuct Bend - 150             |                   |

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|----------|-------------|--|--------------------|
| TufDuct  | TD150T      | TufDuct Tee - 150                        |                    |
| TufDuct  | TD150G-D    | TufDuct Gradient Down - 150              |                    |
| TufDuct  | TD150G-U    | TufDuct Gradient Up - 150                |                    |
| TufDuct  | TD150EP-F   | TufDuct End Plate Female - 150           |                    |
| TufDuct  | TD150EP-M   | TufDuct End Plate Male - 150             |                    |
| TufDuct  | TD200S      | TufDuct Straight - 200                   | 200 Series Duct    |
| TufDuct  | TD200B      | TufDuct Bend - 200                       |                    |
| TufDuct  | TD200T      | TufDuct Tee - 200                        |                    |
| TufDuct  | TD200G-D    | TufDuct Gradient Down - 200              |                    |
| TufDuct  | TD200G-U    | TufDuct Gradient Up - 200                |                    |
| TufDuct  | TD200EP-F   | TufDuct End Plate Female - 200           |                    |
| TufDuct  | TD200EP-M   | TufDuct End Plate Male - 200             |                    |
| TufDuct  | TD300S      | TufDuct Straight - 300                   | 300 Series Duct    |
| TufDuct  | TD300B      | TufDuct Bend - 300                       |                    |
| TufDuct  | TD300T      | TufDuct Tee - 300                        |                    |
| TufDuct  | TD300G-D    | TufDuct Gradient Down - 300              |                    |
| TufDuct  | TD300G-U    | TufDuct Gradient Up - 300                |                    |
| TufDuct  | TD300EP-F   | TufDuct End Plate Female - 300           |                    |
| TufDuct  | TD300EP-M   | TufDuct End Plate Male - 300             |                    |
| TufDuct  | TD300W      | TufDuct Walkway - 300 Per 1m single unit | 300 Series Walkway |
| TufDuct  | TD300W-B IN | TufDuct Walkway Bend- 300 Internal       |                    |

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|----------|-------------|------------------------------------|------------------------------|
| TufDuct  | TD300W-B EX | TufDuct Walkway Bend- 300 External |                              |
| TufDuct  | TD300W-T    | TufDuct Walkway Tee - 300          |                              |
| TufDuct  | TD430S      | TufDuct Straight - 430             | 430 Series Duct              |
| TufDuct  | TD430B      | TufDuct Bend - 430                 |                              |
| TufDuct  | TD430T      | TufDuct Tee - 430                  |                              |
| TufDuct  | TD430G-D    | TufDuct Gradient Down - 430        |                              |
| TufDuct  | TD430G-U    | TufDuct Gradient Up - 430          |                              |
| TufDuct  | TD430EP-F   | TufDuct End Plate Female - 430     |                              |
| TufDuct  | TD430EP-M   | TufDuct End Plate Male - 430       |                              |
| TufDuct  | TFR-030     | TufDuct Flexible Round 30mm        | Flexible Round Conduit Coils |
| TufDuct  | TFR-040     | TufDuct Flexible Round 40mm        |                              |
| TufDuct  | TFR-050     | TufDuct Flexible Round 50mm        |                              |
| TufDuct  | TFR-065     | TufDuct Flexible Round 65mm        |                              |
| TufDuct  | TFR-080     | TufDuct Flexible Round 80mm        |                              |
| TufDuct  | TFR-100     | TufDuct Flexible Round 100mm       |                              |
| TufDuct  | TFR-150     | TufDuct Flexible Round 150mm       |                              |
| TufDuct  | TFR-200     | TufDuct Flexible Round 200mm       |                              |
| TufDuct  | TFR-BM-030  | TufDuct Bell Mouth - 30mm          | Flexible Round Bellmouths    |
| TufDuct  | TFR-BM-040  | TufDuct Bell Mouth - 40mm          |                              |
| TufDuct  | TFR-BM-050  | TufDuct Bell Mouth - 50mm          |                              |
| TufDuct  | TFR-BM-065  | TufDuct Bell Mouth - 65mm          |                              |

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|----------|------------|--------------------------------|--|
| TufDuct  | TFR-BM-080 | TufDuct Bell Mouth - 80mm      |  |
| TufDuct  | TFR-BM-100 | TufDuct Bell Mouth - 100mm     |  |
| TufDuct  | TFR-BM-125 | TufDuct Bell Mouth - 125mm     |  |
| TufDuct  | TFR-BM-150 | TufDuct Bell Mouth - 150mm     |  |
| TufDuct  | TFR-BM-200 | TufDuct Bell Mouth - 200mm     |  |
| TufDuct  | TFR-CF-025 | Conduit/Flexible Joiner - 25mm | Flexible Round<br>Conduit to Flexible Joiner |
| TufDuct  | TFR-CF-030 | Conduit/Flexible Joiner - 30mm |  |
| TufDuct  | TFR-CF-040 | Conduit/Flexible Joiner- 40mm  |  |
| TufDuct  | TFR-CF-050 | Conduit/Flexible Joiner- 50mm  |  |
| TufDuct  | TFR-CF-080 | Conduit/Flexible Joiner- 80mm  |  |
| TufDuct  | TFR-CF-100 | Conduit/Flexible Joiner- 100mm | Flexible Round<br>End Caps                   |
| TufDuct  | TFR-EC-030 | TufDuct Flexible End Cap - 30  |  |
| TufDuct  | TFR-EC-040 | TufDuct Flexible End Cap - 40  |  |
| TufDuct  | TFR-EC-050 | TufDuct Flexible End Cap - 50  |  |
| TufDuct  | TFR-EC-065 | TufDuct Flexible End Cap - 65  |  |
| TufDuct  | TFR-EC-080 | TufDuct Flexible End Cap - 80  |  |
| TufDuct  | TFR-EC-100 | TufDuct Flexible End Cap - 100 |  |
| TufDuct  | TFR-EC-125 | TufDuct Flexible End Cap - 125 |  |
| TufDuct  | TFR-EC-150 | TufDuct Flexible End Cap - 150 |  |
| TufDuct  | TFR-EC-200 | TufDuct Flexible End Cap - 200 | Flexible Round                               |
| TufDuct  | TFR-SJ-030 | TufDuct Straight Joiner - 030  |  |

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|---|------------|-------------------------------------|---------------------------------|
| TufDuct   | TFR-SJ-040 | TufDuct Straight Joiner - 040       | Straight Joiner                 |
| TufDuct   | TFR-SJ-050 | TufDuct Straight Joiner - 050       |                                 |
| TufDuct   | TFR-SJ-065 | TufDuct Straight Joiner - 065       |                                 |
| TufDuct   | TFR-SJ-080 | TufDuct Straight Joiner - 080       |                                 |
| TufDuct   | TFR-SJ-100 | TufDuct Straight Joiner - 100       |                                 |
| TufDuct   | TFR-SJ-125 | TufDuct Straight Joiner - 125       |                                 |
| TufDuct   | TFR-SJ-150 | TufDuct Straight Joiner - 150       |                                 |
| TufDuct   | TFR-SJ-200 | TufDuct Straight Joiner - 200       |                                 |
| TufDuct   | TFR-UC-030 | TufDuct Uni Connector - 030         | Flexible Round<br>Uni Connector |
| TufDuct   | TFR-UC-040 | TufDuct Uni Connector - 040         |                                 |
| TufDuct   | TFR-UC-050 | TufDuct Uni Connector - 050         |                                 |
| TufDuct   | TFR-UC-065 | TufDuct Uni Connector - 065         |                                 |
| TufDuct   | TFR-UC-080 | TufDuct Uni Connector - 080         |                                 |
| TufDuct   | TFR-UC-100 | TufDuct Uni Connector - 100         |                                 |
| TufDuct   | TFR-UC-125 | TufDuct Uni Connector - 125         |                                 |
| TufDuct   | TFR-UC-150 | TufDuct Uni Connector - 150         |                                 |
| 2.16 Enclosures   |            |                                     |                                 |
| 'Garard Moulded Pre-cast' Pre-cast Concrete Equipment Housing * |            |                                     |                                 |
| Garard Moulded Pre-Cast   | ARTC 1     | Pre-cast concrete Equipment Housing |                                 |

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|---|-----------------|---------------------------------|-------------------|
| 'AFL Australia' Fiber Patch Panel Enclosure Kit * |                 |                                 |                   |
| AFL Australia                                     | AFL1RU-F-16STSM | Fiber Patch Panel Enclosure Kit |                   |

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