

Aerial Distribution Products

Aerial NetReach™ DSLAM/XC Cabinets

Description and Installation Manual (631-201-212), Revision F



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ADMONISHMENTS USED IN THIS DOCUMENT



DANGER! Warns of a hazard the reader *will* be exposed to that will *likely* result in death or serious injury if not avoided. (ANSI, OSHA)



WARNING! Warns of a potential hazard the reader *may* be exposed to that *could* result in death or serious injury if not avoided. This admonition is not used for situations that pose a risk only to equipment, software, data, or service. (ANSI)



CAUTION! Warns of a potential hazard the reader *may* be exposed to that *could* result in minor or moderate injury if not avoided. (ANSI, OSHA) This admonition is not used for situations that pose a risk only to equipment, data, or service, even if such use appears to be permitted in some of the applicable standards. (OSHA)



ALERT! Alerts the reader to an action that *must be avoided* in order to protect equipment, software, data, or service. (ISO)



ALERT! Alerts the reader to an action that *must be performed* in order to prevent equipment damage, software corruption, data loss, or service interruption. (ISO)



FIRE SAFETY! Informs the reader of fire safety information, reminders, precautions, or policies, or of the locations of fire-fighting and fire-safety equipment. (ISO)



SAFETY! Informs the reader of general safety information, reminders, precautions, or policies not related to a particular source of hazard or to fire safety. (ISO, ANSI, OSHA)



IMPORTANT SAFETY INSTRUCTIONS

Safety Precautions Definition

Definitions of the safety admonishments used in this document are listed under "Admonishments Used in this Document" on page 4.

General Safety Precautions

The following precautions shall be observed at all time when handling and installing the enclosure:

- Observe the general safety precautions against personal injury and equipment damage.
- The procedures outlined in this manual are only recommended guidelines. Ensure that all NEC (National Electric Code) and local codes for safety and wiring are followed.
 - Use listed two-hole compression connectors (lugs) to terminate all ground connections. Selected lug shall match wire and type, and crimped applied as specified by the lug manufacturer.
 - Apply NO-OX-ID-A to all ground connections.
 - Insulation of field-wire conductors should be rated no less than 105 °C, and gauge in a manner that is consistent with the NEC and local codes.
- Always use a non-contact voltage detector, when approaching an enclosure, to verify no leaks or shorts are presents on the external body.
- Read Enclosure Placement in its entirety prior to attempting to handle or secure the enclosure.
- A minimum of two persons are required to safely install the enclosure.
- Hard hats and steel-toed boots should be worn while maneuvering the enclosure.
- Safety glasses should always be on while on-site.
- Safety gloves should be on when working in temperature extremes, with batteries, or with sharp objects.
- All electricians, operators, and technicians have been trained for the task at hand.
- Keep bystanders away.
- Ensure that all personnel on site are familiar with the first-aid kit location and emergency procedures in the event of an injury.
- Never leave the enclosure unattended. If leaving the site, close and secure the enclosure.



You Must Follow Approved Safety Procedures



DANGER! Performing the following procedures may expose you to hazards. These procedures should be performed by qualified technicians familiar with the hazards associated with this type of equipment. These hazards may include shock, energy, and/or burns. To avoid these hazards:

- a) The tasks should be performed in the order indicated.
- b) Remove watches, rings, and other metal objects.
- c) Prior to contacting any uninsulated surface or termination, use a voltmeter to verify that no voltage or the expected voltage is present. Check for voltage with both AC and DC voltmeters prior to making contact.
- d) Wear eye protection.
- e) Use certified and well maintained insulated tools. Use double insulated tools appropriately rated for the work to be performed.

Voltages

AC Input Voltages



DANGER! This system operates from AC input voltage capable of producing fatal electrical shock. AC input power must be completely disconnected from the branch circuits wiring used to provide power to the system before any AC electrical connections are made. Follow local lockout/tagout procedures to ensure upstream branch circuit breakers remain de-energized during installation. DO NOT apply AC input power to the system until all electrical connections have been completed and checked.

DC Output and Battery Voltages



DANGER! This system produces DC power and may have a battery source connected to it. Although the DC voltage is not hazardously high, the rectifiers and/or battery can deliver large amounts of current. Exercise extreme caution not to inadvertently contact or have any tool inadvertently contact an output terminal or battery terminal or exposed wire connected to an output terminal or battery terminal. NEVER allow a metal object, such as a tool, to contact more than one termination or battery terminal at a time, or to simultaneously contact a termination or battery terminal and a grounded object. Even a momentary short circuit can cause sparking, explosion, and injury.



Specific Safety Precautions



DANGER! RISK OF ELECTRICAL SHOCK, GENERAL

All ground connections must be installed and verified prior to connecting any power cables (AC or DC) and turning-up of enclosure.

When connecting any discrete power connection, make the connection first with the ground/return and break last with ground/return.

Do not install equipment showing any physical damage.



DANGER! RISK OF ELECTRICAL SHOCK, AC Proper actions, include, but not limited to:

- a) Verify before contacting the enclosure that no current leakage or ground fault condition is present.
- b) Verify a proper ground is in place.
- c) Verify for AC hook-up, all enclosure circuit breakers are OFF and the utility incoming feed is OFF.

Use a trained licensed electrician.



DANGER! RISK OF ELECTRIC SHOCK

The DC bus is powered by DUAL power sources - Rectifiers and DC Batteries.

To properly work on the system, de-energize by disconnecting BOTH power sources. Even with the batteries turned off by using a local battery (circuit breaker) disconnect, batteries are still "LIVE" and hazardous, including a voltage >50 VDC, and a source of high short circuit current.

Use extreme caution around the batteries and terminals.

Do not smoke.



DANGER! RISK OF ELECTRICAL SHOCK, OSP CABLES

If joint buried cables are used, check the cable sheath for voltage in accordance with local standards. If voltage is detected, do not proceed with the installation. Contact the supervisor and do not proceed until the voltage hazard is eliminated.



DANGER! RISK OF CHEMICAL EXPOSURE

A battery can present harmful chemicals. Refer to the Battery Installation Manuals and MSDS supplied with the batteries. Work in a ventilated area and follow all safety procedures.

At a minimum, wear safety glasses and gloves when working with batteries.





WARNING! PREVENT INJURIES, FROM LIFTING THE ENCLOSURE

Follow all local safety practices while lifting the enclosure. Wear all locally approved safety gear. All persons working with lifting equipment must wear standard safety headgear, eye protection, and (when required) gloves.

Keep bystanders away from work operations at all times.

Do not lift the enclosure over people. Do not let anyone work, stand, or pass under a lifted enclosure.

Use all four points (eyebolts) to lift the enclosure.

Do not move or lift the enclosure with the front door open.

Never lift or move the enclosure with batteries or rectifiers installed.

Do not allow the lifting equipment or enclosure to touch any electrical wiring or equipment.

Operate all lifting equipment within safety constraints, as defined by the manufacturer and local practices; for example, do not exceed the capacity of reach.

Do not use slings, clevises or shackles of insufficient capacity.

Crane Operation:

Only properly trained operators shall operate the crane.

Do not operate the crane until all stabilizers are extended. The stabilizers must be in firm contact with the ground or other adequate support structure. Do not retract or extend the stabilizers when the enclosure is suspended from the crane.

Do not lift the enclosure over people. Do not let anyone work, stand, or pass under a lifted enclosure.

Only the crane rigging crew should set up the crane and rigging.

Do not exceed the lifting capacity of the crane.

Forklift Operation:

The forklift must be rated for a lifting capacity of 4,000 lbs (1814 kg), or greater.

Required Equipment:

One hoist, crane, or forklift capable of lifting 4,000 lbs (1814 kg).

Four wire-rope slings, 8-ft. (2.44 m) long (minimum). Each sling should have 1,500 lb. (700 kg) capacity.

Four connecting links (clevises) (rated for a minimum of 1500 lb), to attach the wire-rope slings to the enclosure lifting eyes.

A 75-ft (20 m) rope, 5/8" (1.5 cm) in diameter, to use as a tagline. A tagline is used to guide the enclosure into position while it is lifted and lowered.





CAUTION! PREVENT EQUIPMENT DAMAGE, PROPER HANDLING Do not stack nor lay the enclosure on its side.

Similarly, do not stack batteries or lay them on their side. Do not tip batteries -- keep in upright position at all times.

To avoid possible personnel injury or damage to the enclosure, do not remove it from the pallet until at the installation site, at the point of transfer onto the pad.



DANGER! PREVENT EQUIPMENT DAMAGE, MAINTAIN VENTILATION

To optimize the service life of this equipment, make sure there are no obstructions in front of the ventilation openings.



WARNING! RISK OF INJURY, FROM UNSECURED ENCLOSURE

Do not push or lean against an unsecured (unbolted) enclosure as it may tip over causing bodily injury.

Do not pull cables, terminate cables, install or place any batteries or rectifiers until enclosure has been secured onto a pad.

Use caution when opening and closing doors to an enclosure not secured onto a pad.



WARNING! RISK OF INJURY TO EYES AND SKIN, FROM OPTIC DEVICES

Do not look into a fiber cable or device, nor hold such cable or device against body, fabric or other material.



WARNING! RISK OF HAZARDOUS SUBSTANCES

After handling of the enclosure or any such component, such as batteries, cables, busbars, etc., always wash hands immediately after.



WARNING! RISK OF EXPLOSION

For safety reasons, never restrict or block the airflow through the door or entry panel ventilation openings.



CAUTION! PREVENT EQUIPMENT DAMAGE, FROM CONDENSATION

Until the enclosure is turned up for service, the bags of desiccant shipped with the enclosure must remain in the enclosure to prevent condensation.

Once service is in-place, remove the desiccant.



CAUTION! PREVENT EQUIPMENT DAMAGE, BUILD A GOOD PAD

The pad should be level to within 1/4 in (6.4 mm) over the entire length and width, with a crown in the middle to prevent any pooling of water and twist to the enclosure frame.

When mounting the enclosure on a pad, the compression strength of the concrete pad used must be a minimum of 4000 psi as determined by ASTM C39 test of compression strength of concrete cylinders.

Always use a barrier pad between the concrete and the pad to prevent corrosion.





CAUTION! PREVENT EQUIPMENT DAMAGE, OPERATING TEMPERATURE

The enclosure is approved for operation in an environment with an expected temperature range of -40°F to +115°F (-40° C to +46°C) and 5% to 95% relative humidity range, condensing. Do not use at temperatures or humidity exceeding these ranges.

The enclosure is not for indoor use.



CAUTION! PREVENT DAMAGES CAUSED BY ELECTROSTATIC DISCHARGES (ESD)

When handling the ECU unit, wear an appropriate antistatic device (a wrist strap for example) that is properly connected to a designated antistatic grounding point (on a framework, on an anti-static floor mat, etc.). ESD-protective packaging material shall also be used when carrying/shipping the ECU unit.

Personal Protective Equipment (PPE)



DANGER! ARC FLASH AND SHOCK HAZARD.

Appropriate PPE and tools required when working on this equipment. An appropriate flash protection boundary analysis should be done determine the "hazard/risk" category, and to select proper PPE.

Only authorized and properly trained personnel should be allowed to install, inspect, operate, or maintain the equipment.

Do not work on LIVE parts. If required to work or operate live parts, obtain appropriate Energized Work Permits as required by the local authority, per NFPA 70E "Standard for Electrical Safety in the Workplace".

Hazardous Voltage

DANGER! HAZARD OF ELECTRICAL SHOCK.

More than one disconnect may be required to de-energize the system before servicing.

Handling Equipment Containing Static Sensitive Components



ALERT! Installation or removal of equipment containing static sensitive components requires careful handling. Before handling any equipment containing static sensitive components, read and follow the instructions contained on the Static Warning Page.

Maintenance and Replacement Procedures



CAUTION! When performing any step in procedures that requires removal or installation of hardware, use caution to ensure no hardware is dropped and left inside the unit; otherwise service interruption or equipment damage may occur.



NOTE! When performing any step in procedures that requires removal of existing hardware, retain all hardware for use in subsequent steps, unless otherwise directed.



STATIC WARNING

This equipment contains static sensitive components. The warnings listed below must be observed to prevent damage to these components. Disregarding any of these warnings may result in personal injury or damage to the equipment.

- 1. Strictly adhere to the procedures provided in this document.
- 2. Before touching any equipment containing static sensitive components, discharge all static electricity from yourself by wearing a wrist strap grounded through a one megohm resistor. Some wrist straps have a built-in one megohm resistor; no external resistor is necessary. Read and follow wrist strap manufacturer's instructions outlining use of a specific wrist strap.
- 3. Do not touch traces or components on equipment containing static sensitive components. Handle equipment containing static sensitive components only by the edges that do not have connector pads.
- After removing equipment containing static sensitive components, place the equipment only on conductive or anti-static material such as conductive foam, conductive plastic, or aluminum foil. Do not use ordinary Styrofoam[™] or ordinary plastic.
- 5. Store and ship equipment containing static sensitive components only in static shielding containers.
- 6. If necessary to repair equipment containing static sensitive components, wear an appropriately grounded wrist strap, work on a conductive surface, use a grounded soldering iron, and use grounded test equipment.



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ABOUT THIS DOCUMENT

Purpose

This practice provides a description of the Aerial NetReach™ DSLAM/XC Cabinet as well as installation instructions.

Intended Audience

This document is intended for those installing the enclosure, planning the installation, or supporting this enclosure.

Information Not Provided in this Document

Refer to other local practices, building codes, and manufacturers' documents as applicable for the correct methods, tools, and materials to be used in performing procedures not specifically described in this document. This includes, but is not limited to:

If your cabinet is equipped with RLS terminal blocks, then refer to the following documents for specific information on wire terminations on RLS50:

- 641-202-002, RLS50 Self-Strip Block Description and Installation
- 641-202-009, RLS50 Self-Strip Block Feed-Thru Half-Tap Activator Kit Description and Installation

Notice of Disclaimer

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DESCRIPTION

Application

The Aerial NetReach™ DSLAM/XC Cabinet is a pole-mounted cross-connect/interface system equipped with RLS self-strip terminal blocks. See (**Figure 1**).

Figure 1: Aerial DSLAM Cross-Connect



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Table 1 lists the catalog and enclosure part numbers.

Table 1:	Enclosure	Part Numbers
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	Part Number	Catalog Number	Description
	F1010897	ADSXC02RLSGBLP	PL MT 200PR DSXC GBM LP
Ū	F1010898	ADSXC02RLSCFLP	PL MT 200PR DSXC CF LP
	F1010899	ADSXC03RLSGBLP	PL MT 300PR DSXC GBM LP
	F1010900	ADSXC03RLSCFLP	PL MT 300PR DSXC CF LP
Mo	F1010901	ADSXC04RLSGBLP	PL MT 400PR DSXC GBM LP
-ine Power	F1010902	ADSXC04RLSCFLP	PL MT 400PR DSXC CF LP
	F1010903	ADSXC06RLSGBLP	PL MT 600PR DSXC GBM LP
	F1010904	ADSXC06RLSCFLP	PL MT 600PR DSXC CF LP
	F1010905	ADSXC09RLSGBLP	PL MT 900PR DSXC GBM LP
	F1010906	ADSXC09RLSCFLP	PL MT 900PR DSXC CF LP
	F1010907	ADSXC02RLSGBAC	PL MT 200PR DSXC GBM AC
	F1010908	ADSXC02RLSCFAC	PL MT 200PR DSXC CF AC
	F1010909	ADSXC03RLSGBAC	PL MT 300PR DSXC GBM AC
5	F1010910	ADSXC03RLSCFAC	PL MT 300PR DSXC CF AC
AC Power	F1010911	ADSXC04RLSGBAC	PL MT 400PR DSXC GBM AC
	F1010912	ADSXC04RLSCFAC	PL MT 400PR DSXC CF AC
Ā	F1010913	ADSXC06RLSGBAC	PL MT 600PR DSXC GBM AC
	F1010914	ADSXC06RLSCFAC	PL MT 600PR DSXC CF AC
	F1010915	ADSXC09RLSGBAC	PL MT 900PR DSXC GBM AC
	F1010916	ADSXC09RLSCFAC	PL MT 900PR DSXC CF AC

Construction

The cabinet is manufactured of mill-galvanized steel and painted with a cool white finish. It measures 46"(W) x 62"(H) x 14" (D). The cabinet offers maximum ventilation in the DSLAM equipment chamber located to the right of the cross-connect chamber. The cross-connect blocks are contained in the weather-resistant half of the cabinet.

The cabinet doors are secured by an industry-standard B-216 type latch that features a padlockable hasp and weather-resistant gasketing.

Terminal Blocks

The terminal block field is a drop-down style panel and is secured with hex head bolt. All blocks are hard-wired to a harness behind the block face and are encapsulated for moisture resistance.

The cabinet is equipped with 50-pair RLS self-strip terminal blocks. See Figure 2.

For information on RLS terminal blocks, see document 641-202-002, *RLS50 Self-Strip Block Description and Installation*.



Figure 2: RLS50 Terminal Block





INSTALLING THE ENCLOSURE



ALERT! It is recommended that you use a class 3 or larger pole and that you make sure the pole is plumb. However, these recommendations may be superseded by outside plant engineering or construction practices, the particulars of the installation site, future planning considerations, local state, or Federal codes, or the method of deployment.

Choosing and Preparing a Location for the Cabinet

The cabinet can be installed at any height. For ease of access, install the cabinet at working level per local practices.

Installing the Cabinet

Perform the following steps to install an Aerial NetReach™ DSLAM/XC Cabinet:



CAUTION! Wear safety goggles when drilling.

Procedure

1. Drill a 11/16-inch hole through the pole for the top bracket. See **Figure 3**.

Figure 3: Top Pole-Mounting Bracket



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- 2. Secure the top bracket to the pole with a 5/8-inch through bolt. Level the bracket before tightening the bolt.
- 3. Raise the unit using a block and tackle or winch line passed through a snatch block attached to the top of the sling. Guide the unit during the hoisting operation with a hand line fastened to the bottom pole-mounting bracket.
- 4. Place the enclosure on top of the pole-mounted bracket and verify that both brackets on the enclosure are properly engaged and sitting levelled on the pole bracket. See **Figure 4**.





- 5. Secure the bottom pole mounting by drilling a 11/16-inch hole through the pole and using a 5/8-inch through bolt. See **Figure 5**.
- 6. Attach the supplied stabilizer bars to the bottom of the enclosure using the supplied "U" clamps, do not tighten. See **Figure 5**.
- 7. Attach the other end of the stabilizer bars to the pole using two 3/8-inch bolts per bar. See Figure 5.
- 8. Tighten all mounting hardware.

CAUTION! Be sure the area above the hoisting operation is clear of power lines or obstructions. Also, be sure to follow all local and company safety practices during lifting.



Figure 5: Bottom Pole-Mounting Bracket





CONNECTING AC FEED (WHERE APPLICABLE)



ALERT! Grounding should be accomplished according to local practices and in accordance with the latest NEC codes.



ALERT! Have a licensed electrician make the AC power connections.

DANGER! ELECTRICAL HAZARD

Observe all safety precautions as specified by local building codes and the National Electric Code[®] (NEC). All procedures should be performed by a licensed electrician. If local building codes specify procedures different from those in this section, follow local codes.



DANGER! Before installation, the AC grounding electrode system must be bonded to an AC main service power neutral/ground bus. Contact your local power company or local practices for information about codes or restrictions for your installation.

CAUTION! Insure all cabinet circuit breakers are in the "OFF" position before applying AC power.

Perform the following steps to terminate an AC feed to the cabinet:

- 1. Open Aerial DSLAM Cabinet and locate the AC load center if equipped.
- 2. Select one of the open knock-out positions on the floor of the cabinet below the AC load center and remove.
- 3. Run Seal-Tight into the cabinet through the knock-out and terminate to the AC load center.
- 4. Properly seal the Seal-Tight at the entry point into the cabinet.
- 5. Run appropriate gauge conductors, based on distance, that is sufficient to support a 15A/120V circuit and complies with all local practices.
- 6. Ground properly per local practice.
- 7. Properly terminate conductors within AC load center.
- 8. Replace front access panel on load center.
- 9. Turn-on circuit breaker.
- 10. Close load center door.
- 11. Close and lock cabinet doors.



Figure 6: AC Load Center





MOUNTING THE DSLAM UNITS



WARNING! If so equipped, outlets are not a convenience outlet and not GFI Protected. As such, the craft person should not use this outlet for any reason, other than for permanent equipment within the enclosure providing telecom-data service.

Mounting Adtran or Calix DSLAM require the respective manufacturers CoolPed style mounting bracket kits for each DSLAM to be installed. See **Figure 7**.



NOTE! For Adtran 4th Generation TA-1148 DSLAM, order Adtran part number 1179779G4 CoolPed mounting bracket kit.

NOTE! For Calix E3-48 DSLAM. Order Calix part number 100-03222 CoolPed mounting bracket kit.

For specific direction on mounting the DSLAM, please refer to the DSLAM manufacturers CoolPed DSLAM mounting instructions.

The Vertiv Aerial DSLAM/XC ships with four mounting bars to accept various hardened DSLAM units. Depending on the make and model of DSLAM to be installed, the number of mounting bars and their respective positions may vary.

Figure 7: DSLAM Units



ADTRAN 4TH GEN TA1148



CALIX E3-48



Perform the following steps to mount Adtran 4th Gen TA-1148 hardened DSLAM in the cabinet:

- 1. Prepare the three (3) mounting bars required for the Adtran 4th Gen TA-1148.
- 2. Remove the fourth bar.
- 3. Position the three bars accordingly to accept the DSLAM.
- 4. Position the middle bar to accepts the top of the bottom/left DSLAM and the bottom of the top of the top/right DSLAM. See **Figure 8**.
- 5. To attach DSLAM, refer to Adtran instructions for mounting in a CoolPed. Adtran mounting kit (1179779G4) 4th Gen 1148V CoolPed Mounting Bracket Kit is required.



Figure 8: Adtran 4th Gen TA-1148

Perform the following steps to mount Calix E3-48 hardened DSLAM in the cabinet:

- 1. Prepare the four (4) mounting bars required for the Calix E3-48.
- 2. Position the four (4) bars accordingly to accept the DSLAM.
- 3. Position the middle bar to accepts the top of the bottom/left DSLAM and the bottom of the top of the top/right DSLAM. See **Figure 9**.
- 4. To attach DSLAM, refer to Calix instructions for mounting in a CoolPed. Calix mounting kit (100-03222) E3-48 Vertiv CoolPed Mounting Bracket Kit is required.



NOTE! All cable entry and exit are via the appropriate ports or knockouts in the cabinet bottom.

Figure 9: Calix E3-48





JUMPER WIRING

Before You Begin

Before running cross-connect jumper wire, craft personnel should become familiar with the numbering sequence chosen by their respective companies. Feeder, distribution and DSLAM distribution pair labels are provided with the cabinet so that each operator can label the blocks based on their specific requirements.

A typical block layout is shown below in Figure 10.

Figure 10: Typical Layout of Terminal Blocks

DSLAM IN 1-50	DSLAM OUT 1-50	DSLAM IN 1-50	DSLAM OUT 1-50	DSLAM IN 1-50	DSLAM OUT 1-50	DSLAM IN 1-50	DSLAM OUT 1-50	DSLAMIN 1-50	DSLAM OUT 1-50
BLANK	BLANK	BLANK	BLANK	DSLAM IN 51-100	DLSAM OUT 51-100	DSLAM IN 51-100	DLSAM OUT 51-100	XDSLAMIN 51-100	DLSAM OUT 51-100
FEEDER 1-50	DIST 1-50	FEEDER 1-50	DIST 1-50	FEEDER 1-50	DIST 1-50	FEEDER 1-50	DIST 1-50	FEEDER 1-50	DIST 1-50
BLANK	BLANK	FEEDER 51-100	DIST 51-100	FEEDER 51-100	DIST 51-100	FEEDER 51-100	DIST 51-100	FEEDER 51-100	DIST 51-100
BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	FEEDER 101-150	DIST 101-150	FEEDER 101-150	DIST 101-150
BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	FEEDER 151-200	DIST 151-200	FEEDER 151-200	DIST 151-200
BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	FEEDER 201-250	DIST 201-250
BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	FEEDER 251-300	DIST 251-300
BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK	FEEDER 301-350	DIST 301-350
200 TOT	AL PAIR	300 TOT	AL PAIR	400 TOT	AL PAIR	600 TOT	AL PAIR	900 TO	TAL PAIR

Suggested Aerial DSLAM/XC Block Layouts

In the block layouts shown above, the feeder and distribution jumpers would be run as you normally would in a standard cross connect for customers who subscribe to POTS only services.

When a customer requires advance services, simply cut the jumper in the middle. Then run the jumper that is connected to the feeder block to the appropriate pair on the 'DSL-In' blocks. Next, run the jumper that is connected to the distribution blocks to the appropriate pair on the 'DSL-Out' blocks. If the existing jumper is not long enough to perform the above operation, simply remove it and re-run a new jumper between the appropriate pairs.

Terminate each cross-connecting jumper wire pair as described in Terminating Jumper Wires on RLS Blocks (for RLS terminal blocks).



Terminating Jumper Wires on RLS Blocks

For specific information on terminating wire pairs on RLS blocks, see document 641-202-002, *RLS50 Self-Strip Block Description and Installation*. For information on dual wire termination to a pair, see document 641-202-009, RLS50 *Self-Strip Block Feed-Thru Half-Tap Activator Kit Description and Installation*. Once you have terminated a wire pair, continue on to Routing Wire to route the wires.

Once you have terminated a wire pair, continue on to Routing Wire to route the wires.

Figure 11: Routing Wire



'Typical' RLS Block

Routing Wire

Perform the following steps to route a jumper wire pair:

- 1. Route the wires horizontally between the activator rows to the wiring trough. See **Figure 11**.
- 2. Place the wire behind the wire retainers at the sides or bottom of the terminal field, and make a finger loop in the wire to provide enough slack to trace the wires when necessary.
- 3. Route the cross-connecting jumper wire to the assigned activator and cut to required length.
- 4. Terminate the jumper wire pair on the distribution field as you did on the feeder field.



ACCESSORIES

Refer to the following table for list of accessories (AC).

Contact Vertiv Customer Service at 800-800-1280 for information regarding Accessories and 800-800-5260 opt 2 or 3 for Technical Services.

Table 2: Accessories

Part Number	Description
P29869	Spool shaft for cross-connect wire
P69681	One-pair tester - RLS
P53828	Special service caps - RLS (package of 80)
P64541	Green (feeder) RLS block numbers 1-2100
P53350	Blue (distribution) RLS block numbers 1-3600
138006	Violet RLS block numbers 1-450
138007	Yellow RLS block numbers 1-450
F1009767	Expansion/Replacement Tight Twist RLS50, 710 connector
F016941	Expansion/Replacement Tight Twist RLS50, GBM connector



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