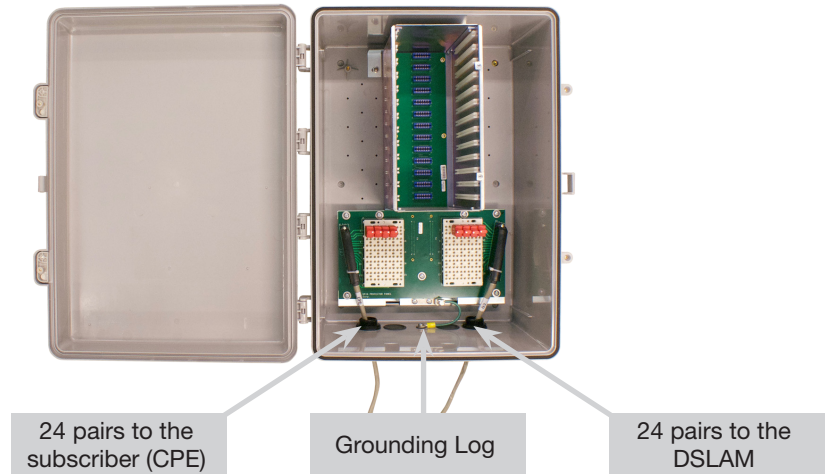


# BRX-XLR-24

## 24-pair Sealed Enclosure

### Quick Start Guide



\* Shown with optional Gas Tube Protection Module

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Slot Number	Pair Assignment	Pair Color
1 (topmost slot)	1 (left side), 2 (right side)	White-Blue / White-Orange
2	3 (left side), 4 (right side)	White-Green / White-Brown
3	5 (left side), 6 (right side)	White-Slate / Red-Blue
4	7 (left side), 8 (right side)	Red-Orange / Red-Green
5	9 (left side), 10 (right side)	Red-Brown / Red-Slate
6	11 (left side), 12 (right side)	Black-Blue / Black Orange
7	13 (left side), 14 (right side)	Black-Green / Black-Brown
8	15 (left side), 16 (right side)	Black-Slate / Yellow-Blue
9	17 (left side), 18 (right side)	Yellow-Orange / Yellow-Green
10	19 (left side), 20 (right side)	Yellow-Brown / Yellow-Slate
11	21 (left side), 22 (right side)	Violet-Blue / Violet-Orange
12 (bottom slot)	23 (left side), 24 (right side)	Violet-Green / Violet-Brown

## Connecting the BRX-XLR-24

**Step 1:** Select the location where the BRX-XLR-24 will be inserted using the BRX Cloud Calculator for the **longest** loop.

**Step 2:** Connect the grounding lug of the unit to a proper ground (usually available near the splice point).

**Step 3:** Insert a BRX-BYPASS-TEST module in slot 1 and ensure that both switches are in BYPASS mode.

**Step 4:** Connect the first two (2) pairs to be amplified to the first two (2) pairs of the BRX-XLR-24. Make sure to match the DSLAM pair number to the CPE pair number.

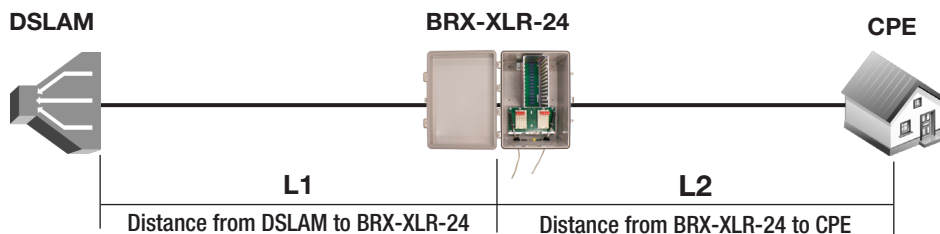
**Step 5:** Test for continuity between the DSLAM pair and CPE pair at the splice point. If the circuits are active, the LEDs on the BRX-BYPASS-TEST module will be ON to confirm that the sealing current is present on both lines. If either circuit is not active, the continuity testing will confirm that the connections are reliable.

**Step 6:** Replace the BRX-BYPASS-TEST module with a BRX-XLR-M module.

**Step 7:** The DSLAM and CPE will now retrain the circuit and bring up the ADSL2+ / ADSL link with the amplified bandwidth. The performance may be limited (or capped) by a setting in the DSLAM configuration.

**Step 8:** Repeat **steps 3 to 7** for the other eleven (11) slots of the BRX-XLR-24 enclosure.

## Summary Diagram of Typical Installation



**IMPORTANT NOTE:** The BRX-XLR unit is powered from the Sealing Current found on a standard POTS pair. Each pair of the BRX-XLR-24 is powered independently with each pair requiring the presence of the -48Vdc sealing current for proper operation. The BRX-XLR-24 will not operate on a dry pair (line with no -48Vdc sealing current). You can use the Positron BRX Power Injector to provide the -48Vdc sealing current when operating on dry pairs.

## Placement Guidelines for BRX-XLR Devices

The BRX-XLR amplifies ADSL2+ and ADSL loops and is designed to deliver solid amplification of the loops as long as the BRX-XLR device is installed within 45% to 75% of the total loop distance. It is recommended to install the BRX-XLR unit at an existing splice point that is within the recommended placement range. When multiple splice points exist within that range, you should select the one that is most convenient.

The BRX-XLR installation should follow these simple rules:

- L1 - Minimum Loop Length from DSLAM to BRX-XLR** should be no less than 6500 feet (2 km) for 24 AWG (0.5 mm) gauge or 5000 feet (1.5 km) for 26 AWG (0.4 mm) gauge.
- L2 - Minimum Loop Length from CPE to BRX-XLR** should be no less than 650 feet (200 m) for 24 AWG (0.5mm) gauge or 500 feet (150 m) for 26 AWG (0.4 mm) gauge.

For a **10 / 1 Mbps service**, the recommended range is as follows (single pair):

- Maximum total loop length:** 17500 feet (5.3 km) for 24 AWG (0.5mm) gauge or 12750 feet (3.9 km) for 26 WG (0.4 mm) gauge.
- Recommended placement range:** 8000 to 12000 feet (2.4 to 3.6 km) of 24 AWG (0.5mm) gauge or 5700 to 8900 feet (1.7 to 2.7 km) of 26 AWG (0.4 mm) gauge.

The **BRX Cloud Calculator** can help determine the optimal installation location for each specific loop. To access the BRX Cloud Calculator, sign up on the Positron Access Portal at [www.positronaccess.com/Portal.php](http://www.positronaccess.com/Portal.php). You will get a username and password to access the Portal.

## Recommended DSLAM Settings

In order to fully benefit from the amplified ADSL2+ / ADSL signal, there are a few DSLAM settings to be set as per the following recommendation:

Parameter	Downstream	Upstream
Maximum Bitrate	32000 kbps	1296 kbps
Maximum Delay	8 msec	8 msec
Path Latency	Interleaved	
Impulse Noise Protection (INP)	2	1
Target SNR Margin	6.0 dB	6.0 dB

You should also make sure that the DSLAM and/or the BRAS settings are not set at a lower level than the target service offered to the subscriber for this loop.

**NOTE:** You should always follow your corporate guidelines for the DSLAM settings if they differ from the Positron recommendation. If in doubt, you should check with the Engineering or Operation team.