DS1 Cross-Aisle Panel

Model 005-0005-0100

Installation Guide

1.1 Overview

1.1.1 Inspection

Compare the contents of the DS1 Cross-Aisle Panel shipping container with the packing list. Call Telect if anything is missing: **1-888-821-4856** or **1-509-921-6161**.

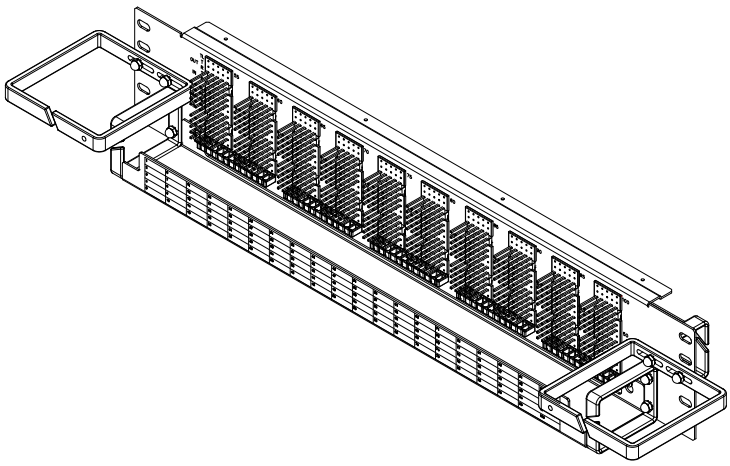


Figure 1 - Model 005-0005-0100

1.1.2 Technical Summary

The DS1 Cross-Aisle Panel functions as a termination field for interconnect cables between bay line-ups for T1 or E1 signals. With Telect's 100-terminal DS1 Cross-Aisle Panel, you can permanently connect bay line-ups with cross-aisle interconnects to avoid running individual conductors from one line-up to another. Then, when cross-connecting two DSX circuits, you need only connect each DSX circuit to the cross-aisle panel in its line-up.

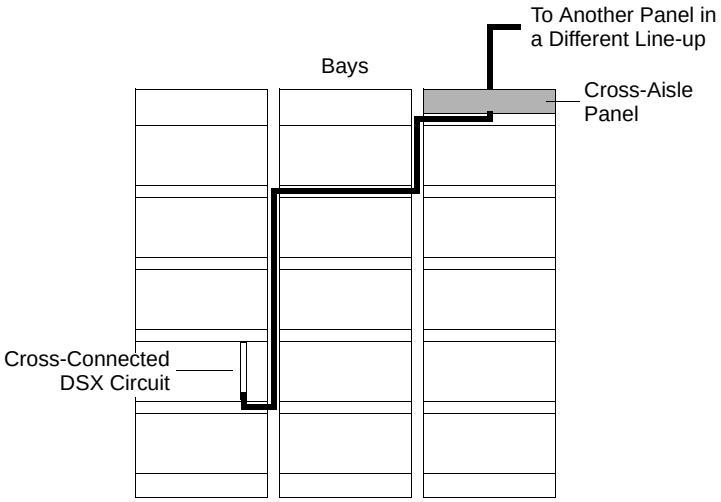


Figure 2 - Cross-connections

Model 005-0005-0100 consists of 100 sets of 5-pin wire-wrap terminals on the front, for the line-up conductors, and a corresponding set on the rear for the cross-aisle conductors. The panel is white, 4 in. in height and mounts to a 23-in. rack with either EIA or WECO spacing.

1.1.3 Specifications

1.1.3.1 DSX Signal

Return Loss: ≥ –26 dB, at 1/2 bit rate 772 KHz

Insertion Loss: < 0.5 dB, at 1/2 bit rate 772 KHz

Adjacent Channel Crosstalk: ≤ –60 dB, at bit rate 1544 KHz

Environmental

-55°C to +85°C, non-operating

-40°C to 65°C, operating

0% to 95%, humidity (noncondensing)

1.1.4 Multiple Line-up Considerations

For each bay in a multiple DSX line-up, you should either install a cross-aisle panel or leave space for one, in case you need to expand in the future. Wire all cross-aisle panels point-to-point with no multiples. Telect recommends a direct wiring layout: Cross-aisle panels are cabled from each bay in a line-up to the same numbered bays in the other line-ups, as shown on the right. Use horizontal wire-ways where necessary to extend the cross-connect to the terminating location.

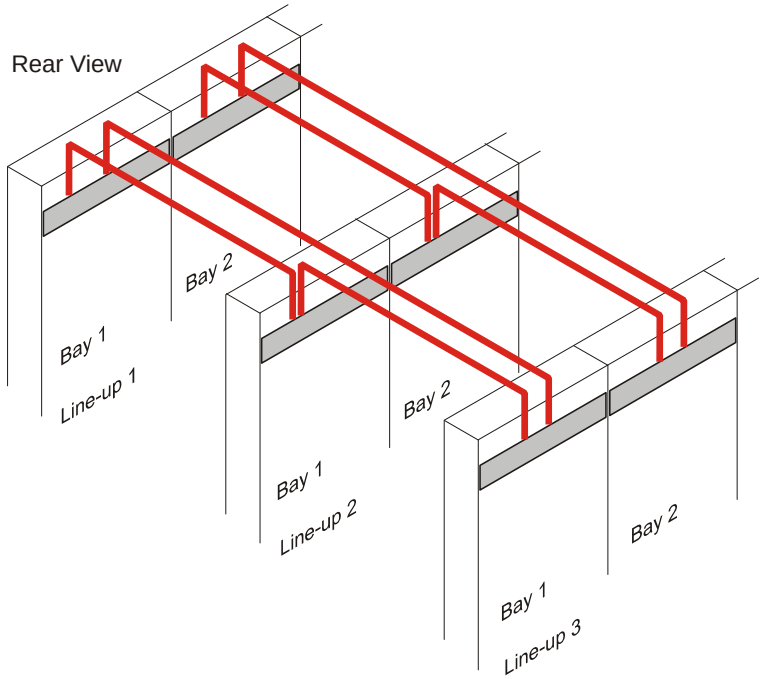


Figure 3 - Multiple Line-ups

1.1.5 Technical Support (USA)

By e-mail: getinfo@telect.com
By phone: 888-821-4856 or 509-921-6161

1.1.6 Tools and Equipment

- Phillips head screwdrivers
- Wire-wrap tools

Use listed components (UL-recognized, CSA, ETL, TUV agency) and tools.

2.1 Installation

CAUTION

CAUTION! Only qualified technicians may install and maintain this product.

ALERT

ALERT! These instructions presume you have verified that the Telect equipment being installed is compatible with the rest of the system, including power, ground, circuit protection, signal characteristics, equipment from other vendors, and local codes or ordinances.

These procedures may be modified to agree with site practices or procedures.

2.1.1 Connecting DS1 Cross-Aisle Panels

When connecting cross-aisle panels, use separate cables for each direction of the circuit, but ground the cable shield at only one end. Telect recommends using shielded twisted pair 24-AWG cable (min.). For multiple line-up systems, one common way to connect cross-aisle panels is to connect the OUT terminals in one line-up to the IN terminals of the other line-up.

2.1.2 Cross-Connecting DSX Circuits

Telect recommends using 24-AWG cable with independent twisted pairs wrapped together with a binder cable to make cross-connects. Do not exceed an overall cross-connect length of 85 ft., including cross-aisle cables, or signal loss will occur. Always cross-connect from OUT to IN and IN to OUT.

In the illustration below, the two cross-aisle panels are connected to each other. Therefore, to cross-connect two DSX circuits, you need only connect each DSX circuit to its corresponding cross-aisle panel, as follows:

1. Connect TL on DSX Jack 1 to TL on Cross-aisle panel 1.
2. Connect OUT on DSX Jack 1 to IN on Cross-aisle panel 1.
3. Connect IN on DSX Jack 1 to OUT on Cross-aisle panel 1.
4. Repeat Steps 1-3 for DSX Jack 2 to Cross-aisle panel 2.

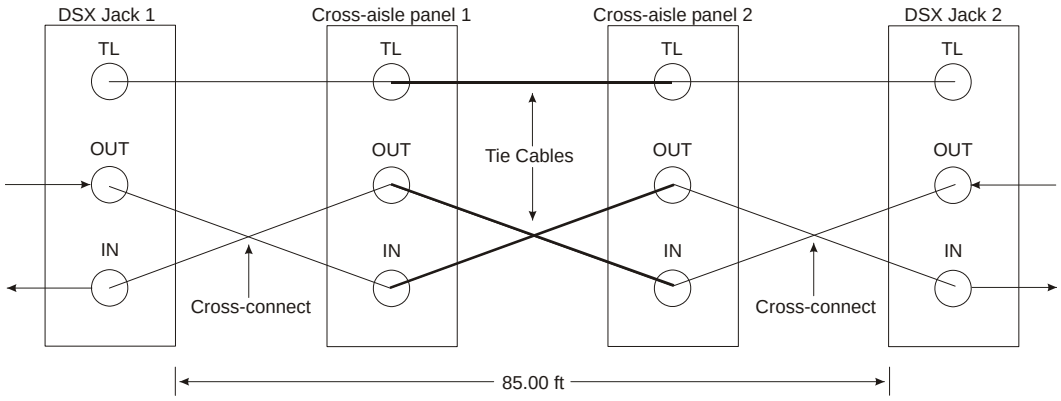


Figure 4 - Cross-Connecting DSX Circuits

Note that there are a total of three cross-connects in this standard configuration. One cross-connect, at either end, would also work. *There must be an odd number of cross-connects (1, 3, etc.) through the configuration!*

2.1.3 Rack-Mounting the DS1 Cross-Aisle Panel

To properly mount the DS1 Cross-Aisle Panel, you must insert the binding-head screws through the chassis and into the rack:

Procedure steps:

1. Loosely mount DS1 Cross-Aisle Panel to the front or rear rack flange using the four, 12-24 screws and washers provided.

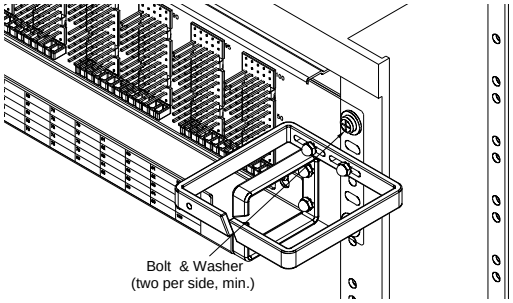


Figure 5 - Rack-Mounting the DS1 Cross-Aisle Panel

2. Tighten the screws to secure the panel to the rack. Torque to 35 in.-lbs (4.29 N•m).
3. Ground the chassis to the rack using the 8-32 grounding stud and lug provided on the rear of the panel, along with a 14-AWG, insulated, stranded wire.
4. Torque the KEPS nut to ~17 in.-lbs (~1.92 N•m).
5. Wire wrap all conductors to the front before beginning at the rear. The 24 AWG conductors are best for use here. Update the designation strips as you go.
6. Use the fanning strips below the wire wraps to neatly drop conductors into the front trough. Direct conductors along the trough to the pairs of rings on the right and left.
7. Break out the cross-aisle conductors and shield from the cross-aisle cable(s).

   Break out convenient lengths for routing from the furthest wire-wrapped pins at the rear, along the rear trough, and through the rings to where the cable will be anchored to the rack. Leave a little slack for reterminations, if necessary, at a later time.

8. Wire wrap the cross-aisle conductors, remembering to update the designation label as you go.
9. Anchor the cross-aisle cable stub to the rack. Don't forget to ground the cable's shield at ***one*** end of the cable.

This procedure is complete.

2.1.4 Removing Cross-Connects

Remove the discontinued DSX jumpers as follows to avoid snagging or straining the remaining jumper wires:

1. Disconnect each end of the jumper.
2. Cut off each bare end.
3. Remove each end of the jumper from the vertical wire-ways.
4. Carefully pull one end of the jumper to remove it from the horizontal wire-way.

2.1.5 Changing Cross-Connect Directions

When you change the direction of a cross-connect, do so where there is a ring, a tray, or a fanning strip, so that you can dress the wires neatly. Use the horizontal wire-ways between bays and the vertical wire-ways within bays.

3.1 Service

3.1.1 Owner Maintenance

Telect's DS1 Cross-Aisle Panel does not require preventive maintenance.

3.1.2 In-Warranty Service

For assistance with installation, component identification, or missing parts, call Telect at 1-888-821-4856 or 1-509-921-6161. Telect will repair or replace defective products. See "Repacking for Shipping" in this section.

Call a Customer Service Representative for a Return Material Authorization (RMA) before returning equipment.

3.1.3 Out-Of-Warranty Service

The procedure for out-of-warranty service is the same as for in-warranty service, except that Telect charges a processing fee, and you must submit a purchase order along with a Return Material Authorization (RMA) before returning equipment. Call a Customer Service Representative at 1-800-551-4567 for help getting these forms.

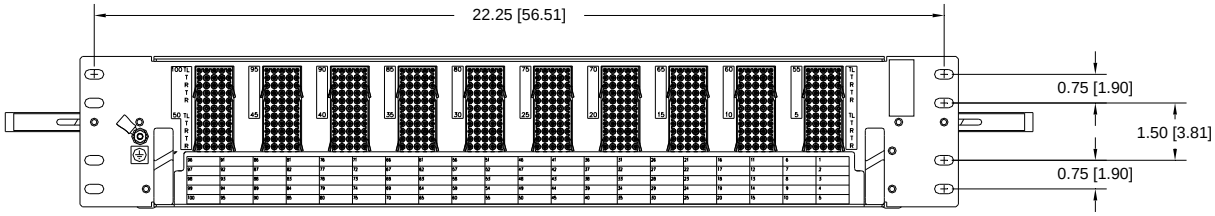
The processing fee guarantees a repair estimate and is credited against actual material and labor costs.

3.1.4 Repacking For Shipment

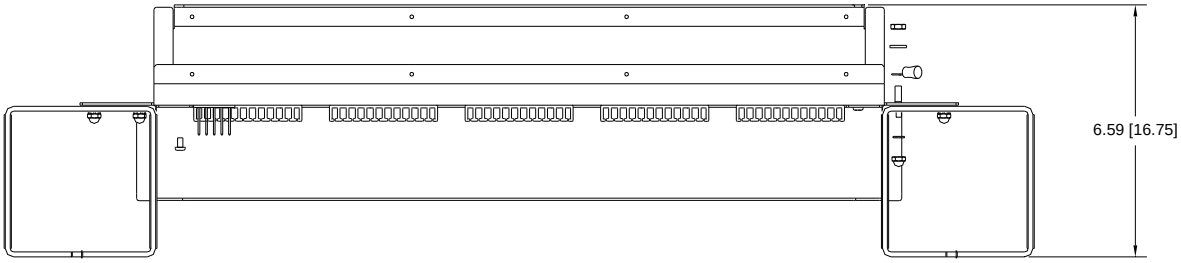
1. Tag the equipment showing owner's name, address, and telephone number, together with a detailed description of the problem.
2. Use the original shipping container if possible. If you do not have it, package the equipment in a way to prevent shipping damage. Include the RMA inside the container and printed on the outside near the address label.
3. Insure the package.

NOTE: Telect is not liable for shipping damage.

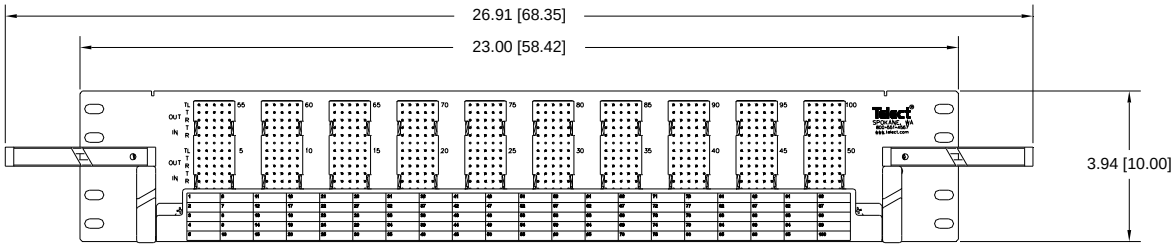
4.1 Dimensions



REAR VIEW



TOP VIEW



FRONT VIEW

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