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Introduction

About DataTrack

The DataTrack System from ETC is a professional-grade track system that offers built-in DMX/RDM wiring with two separate circuits that can be independently switched or dimmed. DataTrack can be used for hybrid systems using both conventional and LED fixtures.

DataTrack easily blends into its surroundings, providing power and data reliably and discretely. It's the solution for a variety of permanent applications, including art galleries, museums, retail displays, lobbies, comedy clubs, nightclubs, and venues with low ceilings or the need to feed power and data to track-mounted luminaires.

The DataTrack System includes an extensive selection of adapters, feeds, end caps, couplers, hanging accessories, and other accessories to fit most any installation requirements.

DataTrack offers:

- Two-circuit track with separate neutrals
- Up to 32 DMX devices per data run
- Up to 20 RDM devices per data run
- Suspended or surface mounting (recessed mounting also available; contact your local ETC representative for more information)
- 3-amp, 5-amp, 8-amp, and 12-amp current-limiting breakers located directly at the track
- Up to 22 pounds of weight per foot when properly supported
- Two-year warranty
- White, black powder-coated, and silver anodized finishes
- 4 ft, 8 ft, and 12 ft (1.21 m, 2.43 m, and 3.65 m) sections that can be field-cut to custom lengths as required
- Easy surface mounting using pre-punched holes positioned every 8 in (20.32 cm) in the track (self-tapping screws can be used in places where there are no pre-punched holes)

Data

DataTrack provides integrated wiring for DMX-512A (ANSI E.1.11) and bidirectional RDM (ANSI E1.20-2010) control signals. The electrical specifications of these DMX512A and RDM standards are based on ANSI/TIA/EIA-485-A-1998.

DMX512A standards require a continuous daisy-chain data-link topology with a terminating switch or resistor with a value of 100–120 ohms to eliminate ringing and signal reflection. No "Tees" or "Stars" are permitted.

Wire used for bringing the DMX signal into the DataTrack system must be Belden 9729 or equivalent with shield connected to ground at one end, preferably the signal source.

Load Capacity

DataTrack distributes one or two 120VAC circuits, up to 20A each. Each circuit has an independent neutral for individual control and a common ground.

- Maximum Feed: 2 x 20A branch circuits
- Maximum Load: 2 x 2,400W (2.4kW)
- Supply Wiring: 5 x 12 AWG feed wires

Document Conventions

This document uses the following conventions to draw your attention to important information.



Note: *Notes are helpful hints and information that is supplemental to the main text.*



CAUTION: *A Caution statement indicates situations where there may be undefined or unwanted consequences of an action, potential for data loss or an equipment problem.*



WARNING: A Warning statement indicates situations where damage may occur, people may be harmed, or there are serious or dangerous consequences of an action.



WARNING: RISK OF ELECTRIC SHOCK! This warning statement indicates situations where there is a risk of electric shock.

Please email comments about this manual to: TechComm@etconnect.com

General Warnings

Read and save these instructions before installing ETC DataTrack, and refer to them when making additions to or changes in the DataTrack configuration.



WARNING: Mains voltage must be switched off before installation or maintenance of track or track components.



WARNING: Do not install any part of this track system less than 5 ft (1.5 m) above the floor.



WARNING: Do not install any fixture assembly closer than 6 in (15.2 cm) from any curtain or similar combustible material.



WARNING: Always disconnect electrical power before adding to or changing the configuration of the track.



WARNING: Do not attempt to energize anything other than lighting track fixtures on the track.



WARNING: Do not attempt to connect power tools, extension cords, appliances, or similar devices to the track.



CAUTION: *This document describes 120V DataTrack installations and is not intended for for the planning and installation of 230V installations. 230V installations require different power configurations than those described here.*



CAUTION: *For indoor use only. Do not use in wet or damp locations.*



CAUTION: *Unauthorized modification of DataTrack or DataTrack components may void ETC warranty.*



CAUTION: *Material used for ceiling mounting must conform to building regulations.*



Note: *Never mount the DataTrack system on a wall. Wall-mount installation is not supported.*



Note: *Do not slide track adapters when moving fixtures. Fixtures should be fully removed from the track, relocated, and then properly re-attached.*

Help from ETC Technical Services

This manual will guide you through the planning, installation, operation, and troubleshooting of a DataTrack system.

If you are having difficulties, your most convenient resources are the references given in this user manual. To search more widely, try the ETC website at etcconnect.com. If none of these resources are sufficient, contact ETC Technical Services directly at one of the offices identified below. Emergency service is available from all ETC offices outside of normal business hours.

When calling for support, please try to have the following information available:

- Product model
- Other components in your system (luminaires connected, control source, etc.)

Americas

ETC, Inc.
Technical Services Department
3031 Pleasant View Road
Middleton, WI 53562
800-775-4382 (USA, toll-free)
+1-608 831-4116
service@etcconnect.com

United Kingdom

ETC Ltd
Technical Services Department
26-28 Victoria Industrial Estate
Victoria Road,
London W3 6UU England
+44 (0)20 8896 1000
service@etceurope.com

Asia

ETC Asia
Technical Services Department
Room 1801, 18/F
Tower 1, Phase 1 Enterprise Square
9 Sheung Yuet Road
Kowloon Bay, Kowloon, Hong Kong
+852 2799 1220
service@etcasia.com

Germany

ETC GmbH
Technical Services Department
Ohmstrasse 3
83607 Holzkirchen, Germany
+49 (80 24) 47 00-0
techserv-hoki@etcconnect.com

Chapter 1

Planning

Planning the Track Layout

Consider the following elements as you plan your track layout:

- **Track orientation:** Each piece of DataTrack has a top and a bottom.
- **Conduit entry points:** Each piece has limited available conduit knockouts.
- **Data paths and termination locations:** Plan the DMX data paths before installation. DMX data paths must be contiguous daisy chains with terminations. Stars, loops, or Y's will result in faulty performance of DMX fixtures.
- **Coupler and Track Connections:** Couplers will only fit into DataTrack in one orientation. The ground/data bus connection of the coupler must mate with the ground/data bus portion of the track. This is important to keep in mind when purchasing couplers (ground left versus ground right, ground inside versus ground outside). All product references to ground orientation also refer to data bus orientation, as illustrated below.

See [Parts and Accessories](#) on [page 28](#) for a list of available DataTrack parts.

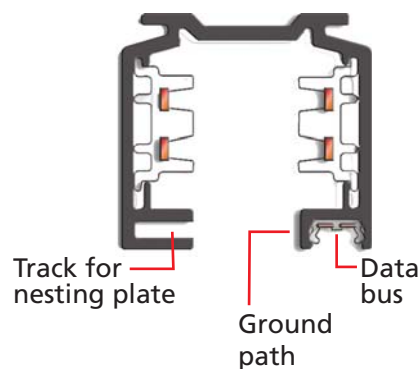


Figure 1: Coupler and track connections

Planning the Installation

Consider the following elements as you plan your DataTrack installation:

- [Electrical Requirements](#)
- [Ground Path](#)
- [Suspended Load Capacity](#)
- [DMX Data Path](#)

Electrical Requirements



CAUTION: *Electrical installation must be performed by a qualified electrician in accordance with local electrical codes.*

- Maximum Feed: 2 x 20A branch circuits
- Maximum Load: 2 x 2,400W (2.4kW)
- Supply Wiring: 5 x 12 AWG feed wires

Ground Path

The ground path must be continuous with no interruptions. A ground path can cross itself any number of times. Continuity is the sole concern in planning a DataTrack ground path.



Note: *There are a variety of configurations that can be assembled using the available DataTrack couplers. However, couplers only fit into DataTrack in one orientation. The data connection of the coupler must mate with the data connection of the track. This is important to keep in mind when choosing couplers (ground left versus ground right, ground inside versus ground outside).*

The following illustrations show examples of ground paths. These drawings are plan views, showing the DataTrack system as if you were looking at it from above.

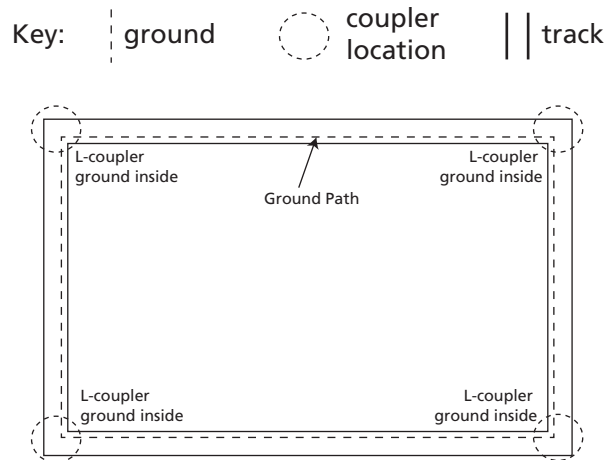


Figure 2: Simple ground path system

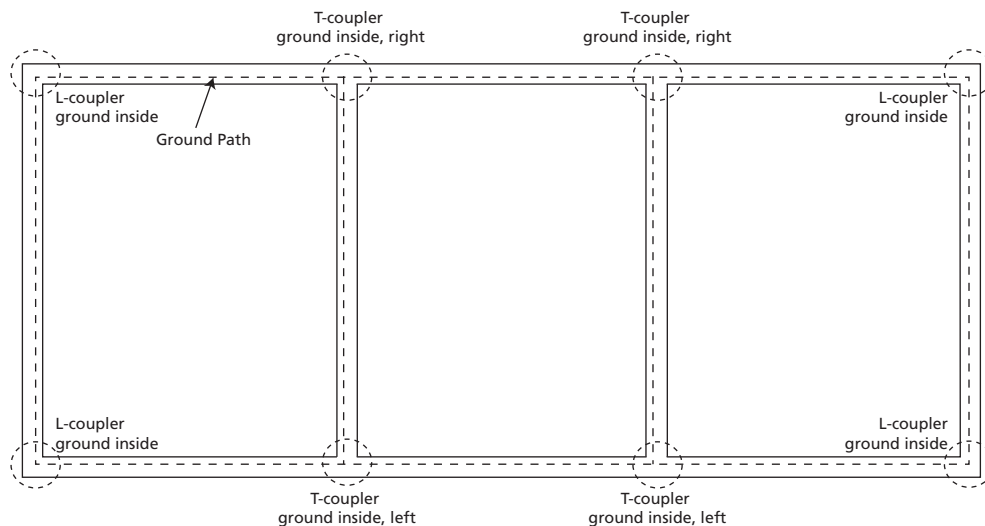


Figure 3: Advanced ground path system



Note: *These figures show a continuous ground path within the DataTrack system. If any of the couplers shown in these examples were replaced with an outside ground model, the ground path would be broken and the DataTrack would not be properly grounded (and the couplers would not physically fit within the track).*

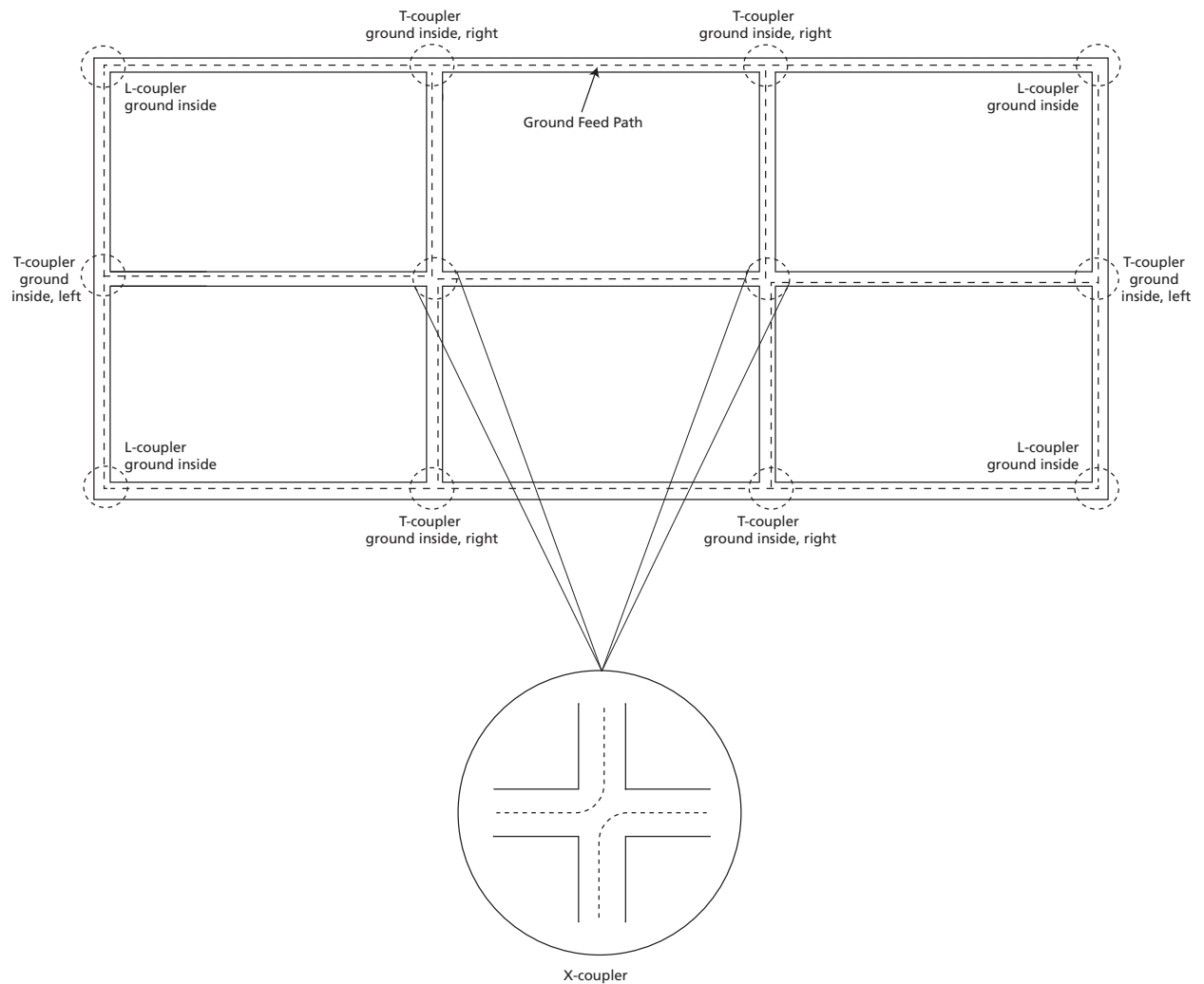


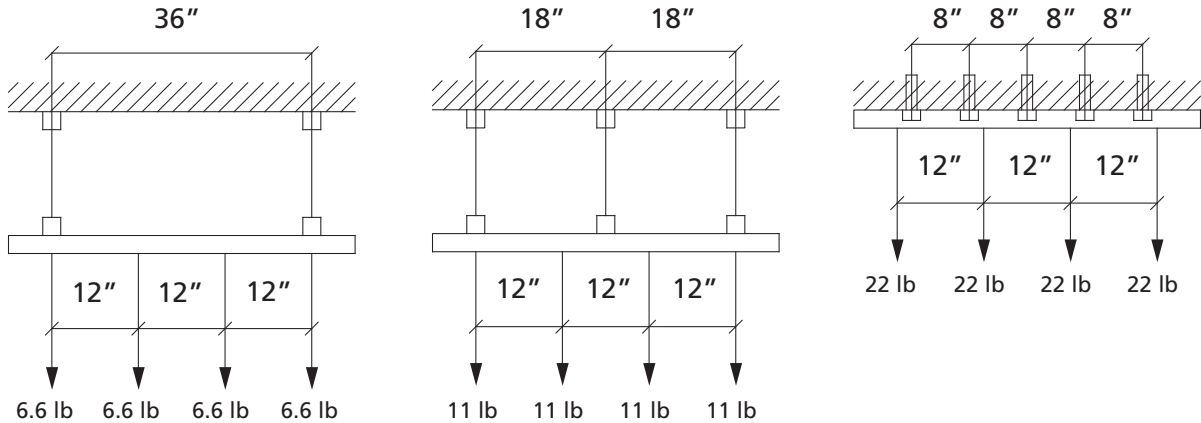
Figure 4: Complex ground path system



Note: *X-couplers must be properly aligned. If the X-couplers are rotated 90°, the ground connectors will no longer align with the ground connectors of the T-couplers. Similarly, if the T-couplers have the ground connectors on the left side of the T instead of the right (as shown), they will not align with the connectors in the X-couplers.*

Suspended Load Capacity

The maximum weight DataTrack can support per linear foot varies based on the distance between mounting points. The following examples represent the maximum supported load based on various distances between mounting points. The distance shown at the top of each illustration is the distance between mounting points. The bottom of each illustration shows supported loads mounted onto the track on 12 in (30.48 cm) centers.



Distance between mounting points	Maximum load per foot
36 in (91.44 cm)	6.6 lb (2.99 kg)
18 in (45.72 cm)	11 lb (4.98 kg)
8 in (20.32 cm)	22 lb (9.97 kg)

Figure 5: Suspended load capacity

DMX Data Path



CAUTION: Data transmission will become unreliable if DMX is not installed according to standard protocols.



CAUTION: ETC recommends laying out the DMX data path for your track configuration BEFORE ordering all track and couplers to ensure that no loops, stars, or Y's are created that would disrupt data transmission.



Note: The DMX data line is only for low voltage with an approximate value of 50V 2A maximum.



Note: If DataTrack L-couplers, X-couplers, or T-couplers are required in your system, you may need to disconnect one or more data-line connections to avoid data loops.

The following illustrations show examples of DMX data paths. These drawings are plan views, showing the DataTrack system as if you were looking at it from above.

If you have additional DMX termination questions, please contact your local ETC representative.

For more information on DMX, visit the ETC website:

<http://www.etcconnect.com/Support/Articles/DMX-512-Info.aspx>

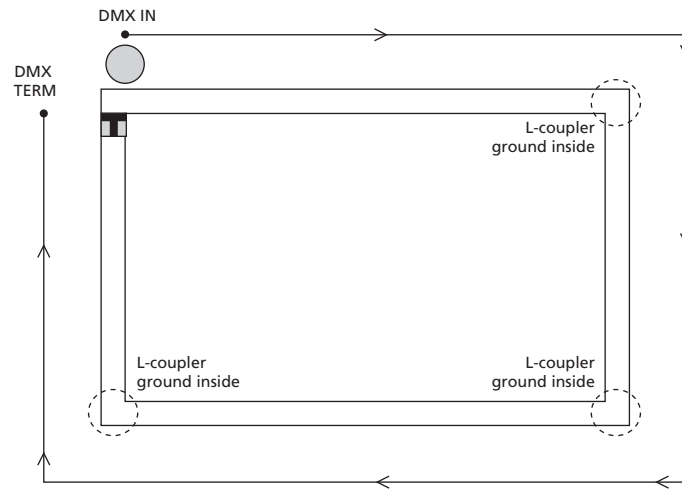


Figure 6: Simple DMX system

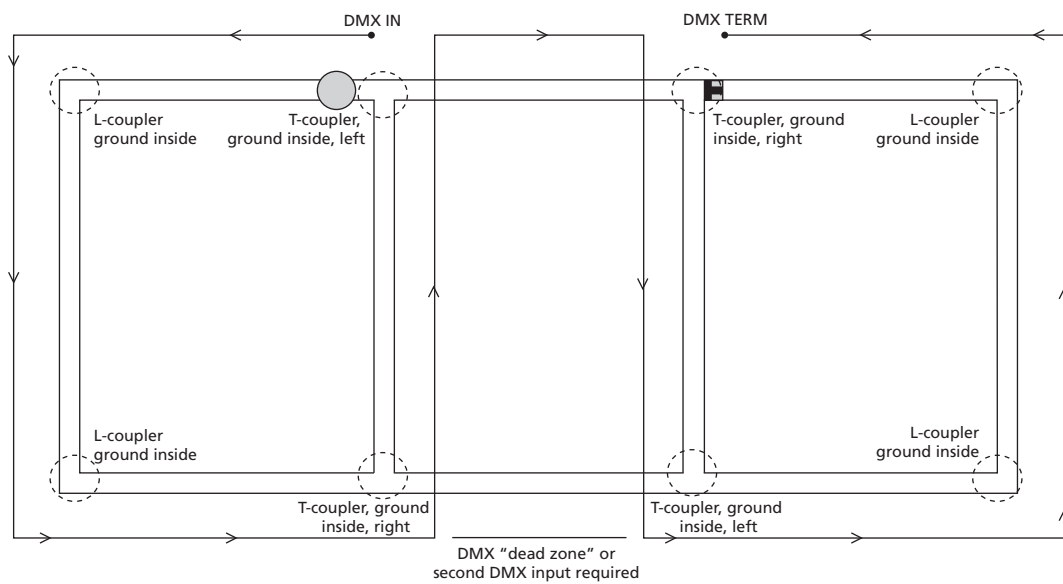


Figure 7: Advanced DMX system

Key: ● start ■ end of line termination ∇ data ○ coupler location || track ★ coupler wiring may require modification (see note below)

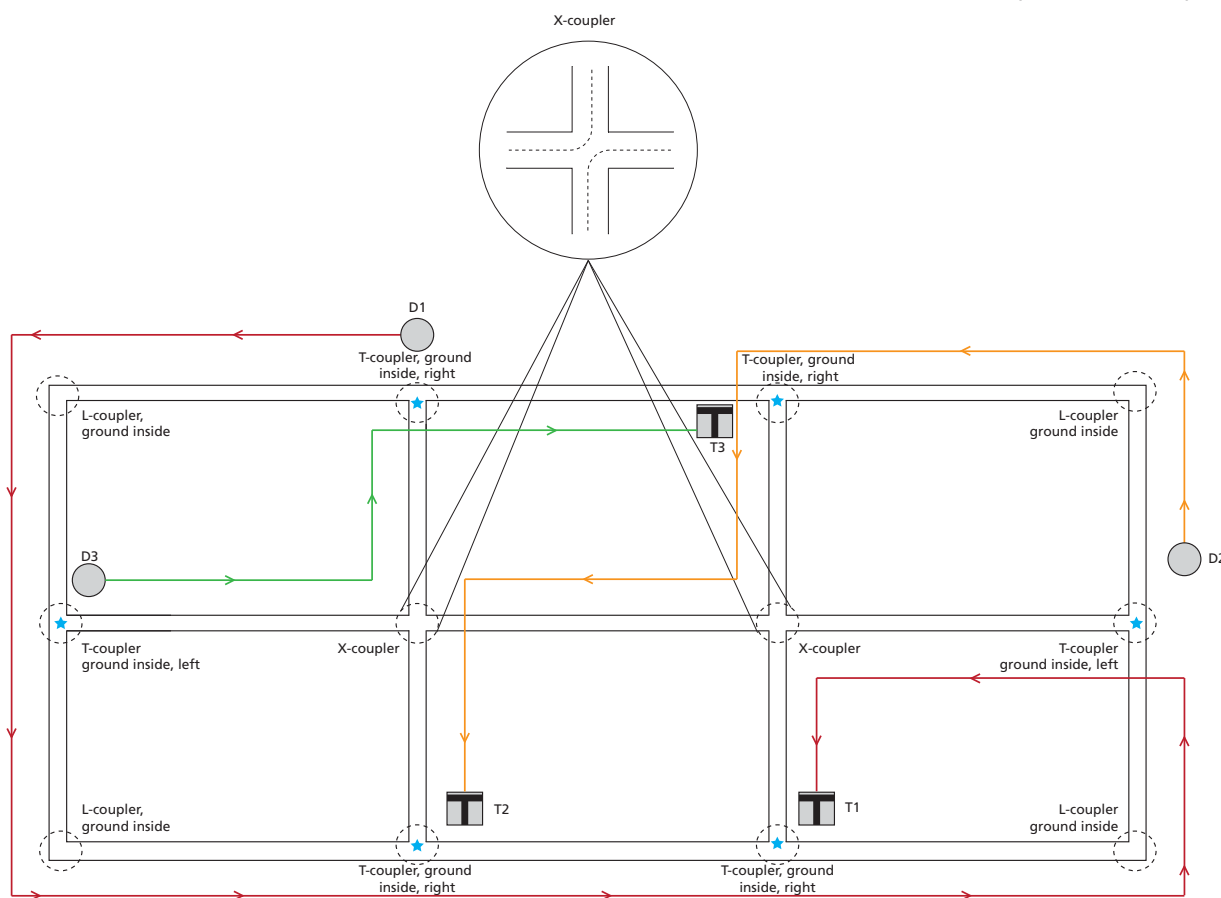


Figure 8: Complex DMX system



Note: Midfeeds would be required for each DMX feed (D1, D2, D3) in the example above. Some coupler wiring (in couplers indicated with a star in the example above) may need to be disconnected for the data line to function as shown. See [Reconfiguring DMX Data Lines](#) on [page 43](#) for more information.

Chapter 2

Installation



CAUTION: *Before installing or using the DataTrack system, read and understand the following information:*

- *Only use electrical fittings identified for use with the DataTrack system.*
 - *DataTrack is to be installed by qualified personnel only.*
 - *It is the responsibility of the installer to ensure the electrical, mechanical and thermal compatibility of the track system and the fittings.*
 - *Materials used for ceiling mounting should conform to relevant building regulations.*
 - *It is essential to cover the ends of the track with end covers or protective caps.*
 - *DataTrack does not support the use of power supply cords or convenience receptacle adapters.*
 - *The DataTrack system is to be supplied by up to two branch circuits. Track does not support mounting by electrical cables.*
-

Cutting Track

DataTrack comes in standard lengths of 4 ft, 8 ft, and 12 ft (121 cm, 243 cm, and 365 cm). These pieces can be cut to custom length on site. In order to ensure proper performance, cut pieces should be used at the end of a run of track with no feeds or couplers attached to the cut end. In cases where a cut piece of track must be used with a coupler or feed accessory, please note the following:

- ETC recommends using a power miter saw with appropriate metal blade to cut the track.
- Cuts must be square and perpendicular to the track.
- Cuts should be made from the open side towards the top.
- Be careful to prevent the DMX wire from being dislodged from the track and/or deformed while cutting the track. Test to confirm that the cut edge will properly fit into feed and splice pieces of the track before proceeding with installation.
- Cuts should not be made on the labeled end of a piece of track.
- The minimum distance that the bus bar can be cut back from the edge of the track profile is 0.08 in (2 mm). The bus bar does not have to be moved out of the track profile.
- Use a file to remove burrs after cutting.

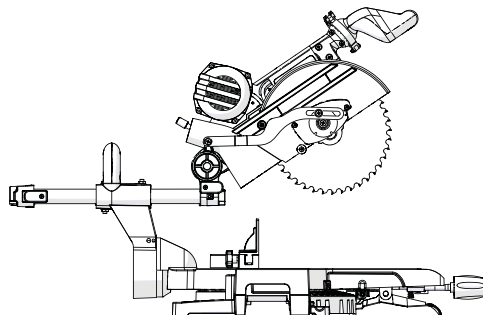


Figure 1: Power miter saw for cutting track



Note: *ETC is not responsible for damage caused by the installer or due to modification of the system by the installer.*

Installation Methods

DataTrack can be surface-mounted directly to a ceiling or suspended by threaded rod, aircraft cable, or drop ceiling T-track. A variety of mounting accessories are available. See [DataTrack Mounting Accessories](#) on [page 37](#) for more details.

It is important that the DataTrack system is properly installed to relieve stress on connection joints. Stress on the connection joints due to weight overload and/or unlevel track installation may cause improper connection of the joints. This will cause poor performance of the system.

Properly installed surface-mounted track will relieve stress on the connection joints. When planning your installation, consider track stability as well as suspended load capacity when determining the number of attachment points to the structure.

Suspended track mounting using threaded rod or wire rope causes the most stress on the connection joints. When using the suspended mounting method, be sure the connection joints are secure. It is strongly encouraged that installers use more than the minimum required number of suspension points when mounting DataTrack by a cable or threaded rod.

Be sure to follow the installation instructions supplied with each component when installing the track system.



Note: *Track suspended by threaded rod or wire rope will move when mounting and adjusting fixtures. If this is undesirable, consider surface mounting instead.*

Surface Mounting

- Pre-punched holes are positioned every 8 in (20.32 cm) in the track for surface mounting or attaching the track to Unistrut or other mounting hardware.
- Self-tapping screws can be used in places where there are no pre-punched holes to improve the stability of track connection points.
- Pre-drilling holes for bolts or other attachment hardware is also permissible.
- Determining the appropriate mounting hardware is the responsibility of the installing contractor.



Figure 2: Pre-punched hole



Note: *Mounting points may interfere with fixture track adapters depending on the hardware used for installation. Consider the desired fixture locations when determining mounting point locations.*



CAUTION: *DataTrack must only be supported by the top of the track. Do not wall-mount track or attach through the side walls of the track.*
It is the responsibility of the installer to provide suitable hardware for attaching DataTrack to the building structure and to ensure that the structure is sufficient for the load of the DataTrack system and attached fixtures.

Suspension Mounting

- Standard kits are available for suspension mounting with 1/16 in (1.6 mm) aircraft cables. See [page 38](#).
- When mounting with threaded rod, the recommended threaded rod size is 3/8 in (9.52 mm).
- Additional track accessories are required for suspension mounting. See [DataTrack Mounting Accessories](#) on [page 37](#) for more details.
- Be sure to consider track stability in suspension mounting applications. Vibrations caused by HVAC operation and other building systems could impact the function of the DataTrack system.



Note: *All hardware for attaching wire rope or threaded rod to appropriate building structure is the responsibility of the installing contractor.*

Installing End Feeds

1: Prepare the end feeds.

For top feed:

- a: Remove the cover screw.
- b: Remove the cover.
- c: Remove the plug.

For end feed:

- a: Remove the cover screw.
- b: Remove the cover.
- c: Remove the plug.
- d: Install the wire guide to the end feed connector.

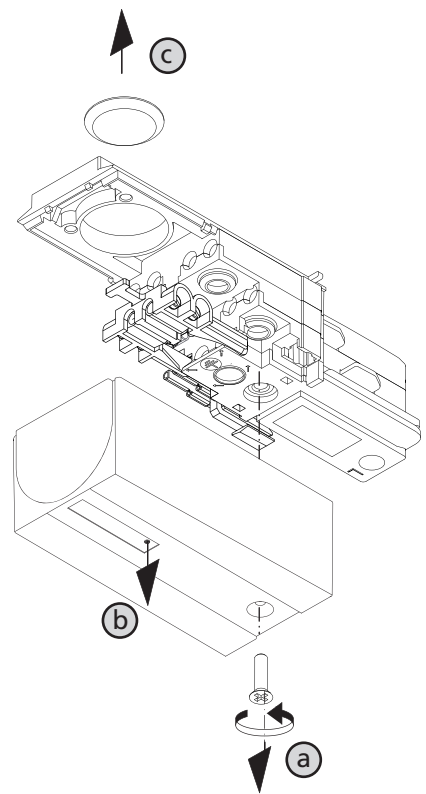


Figure 3: Prepare the top feed

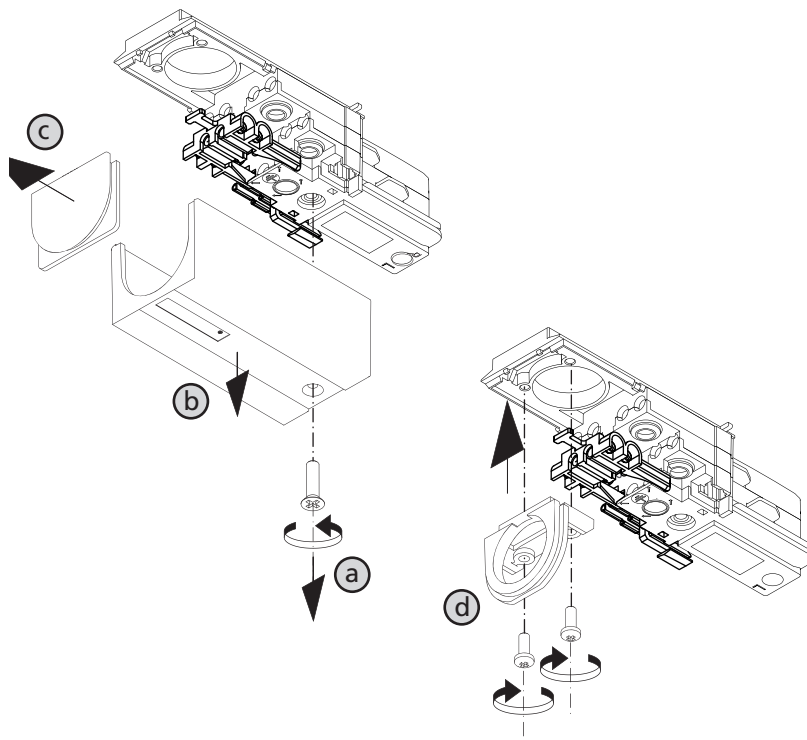
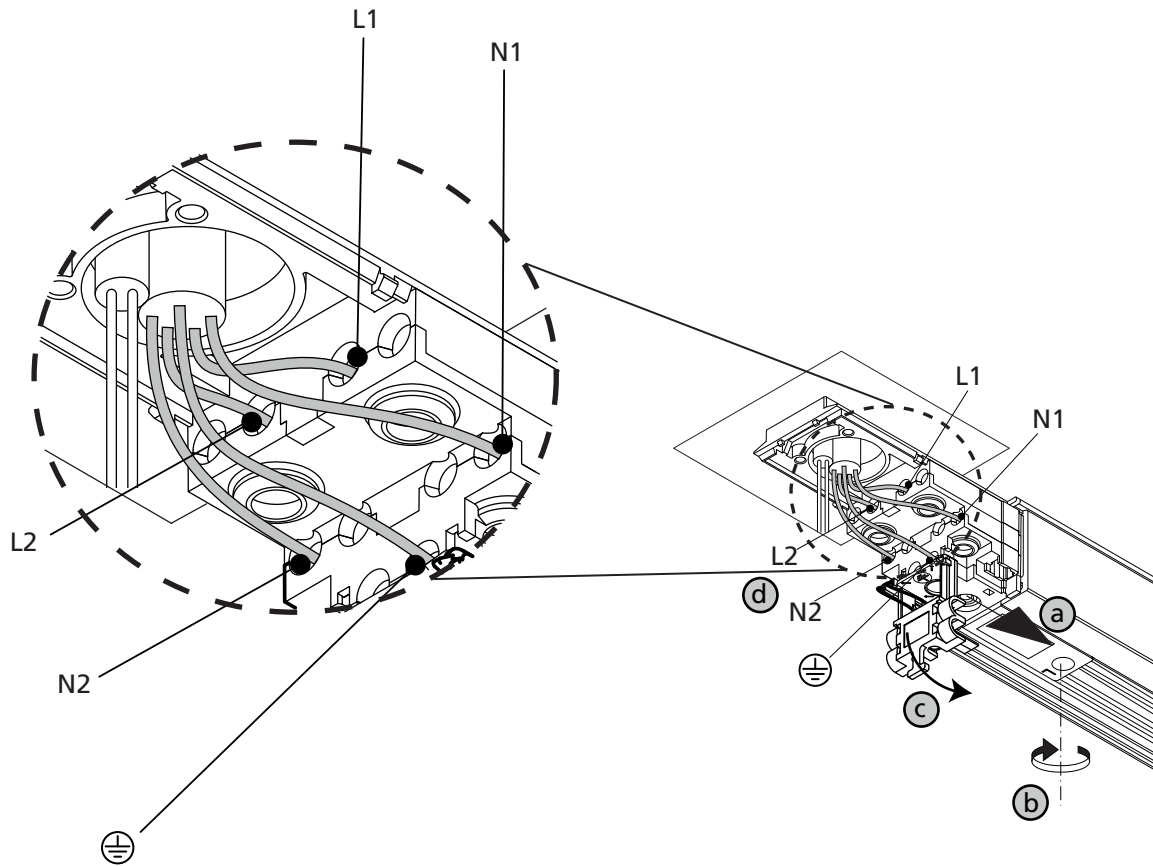


Figure 4: Prepare the end feed

- 2: Connect the end feed.
 - a: Slide the end feed onto the track until it is flush with the track edge.
 - b: Secure the end feed to the track with the provided screw.
 - c: Rotate the wire retainer down.
 - d: Connect the feed wires to the terminals as illustrated, and secure the screws.



Electrical connection for two 20A circuits at 120V AC:

Maximum load: 2,400W

Fuses: 2 x 20A

Supply wire: 5 x 12 AWG recommended

Data line maximum voltage: 20V

Data line maximum current: 250mA

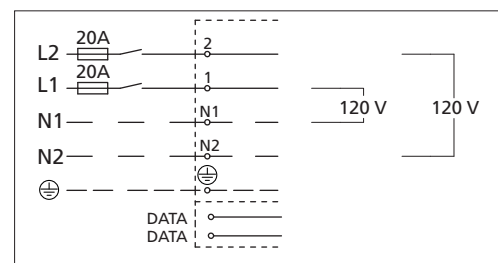


Figure 5: Connect the end feed

- 3: Connect DMX wiring.
 - a: Install the wire retainer.
 - b: Connect data line wires to screws as illustrated to track.
 - c: Install the cover.
 - d: Install the cover screw.

When using DataTrack with DMX, it may be necessary to use separate feed connectors for power and data.

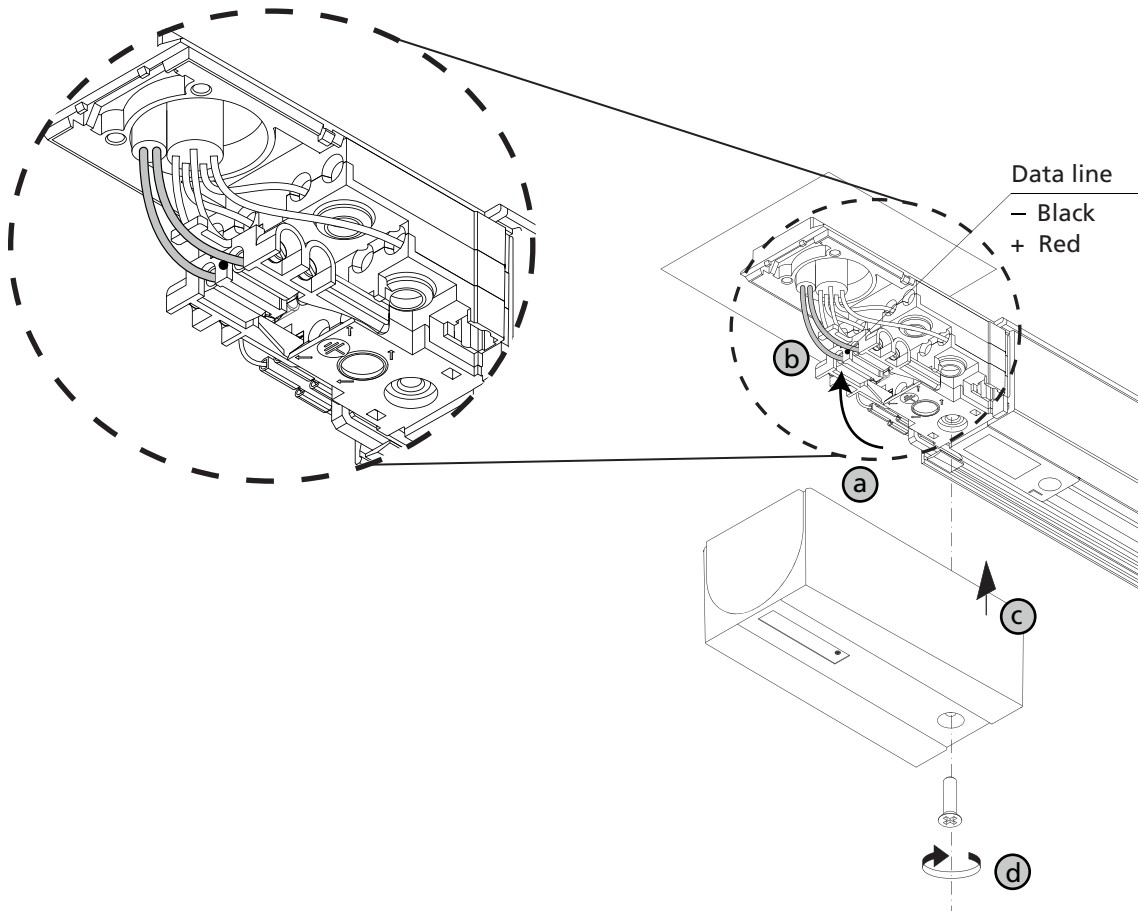


Figure 6: Connect DMX wiring

Installing Mid Feeds

- 1: Install the mid feed in any position on a surface-mounted track. Remove burrs.

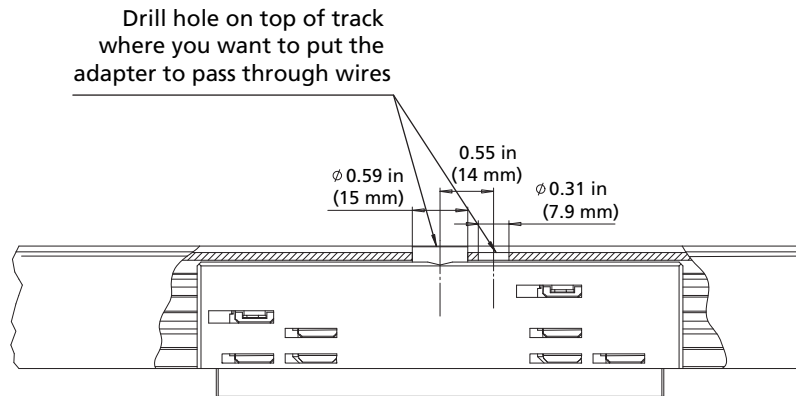


Figure 7: Install the mid feed

- 2: Mount the mid feed canopy.

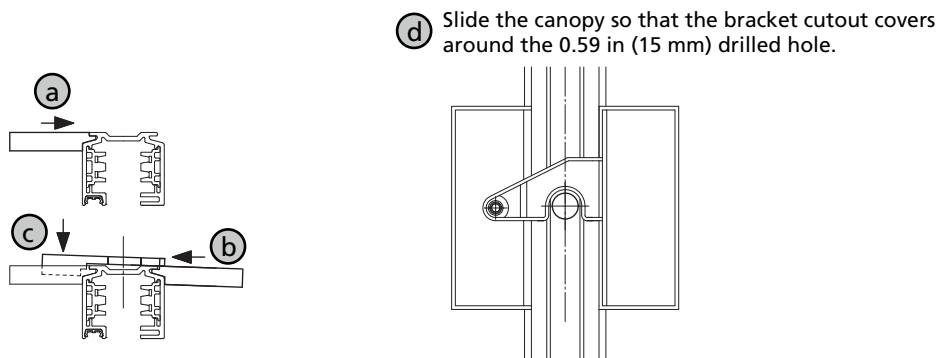


Figure 8: Mount the mid feed canopy

- 3: Feed the power line wires through the track. Concurrently mount the track by referring to the instructions provided with the track.

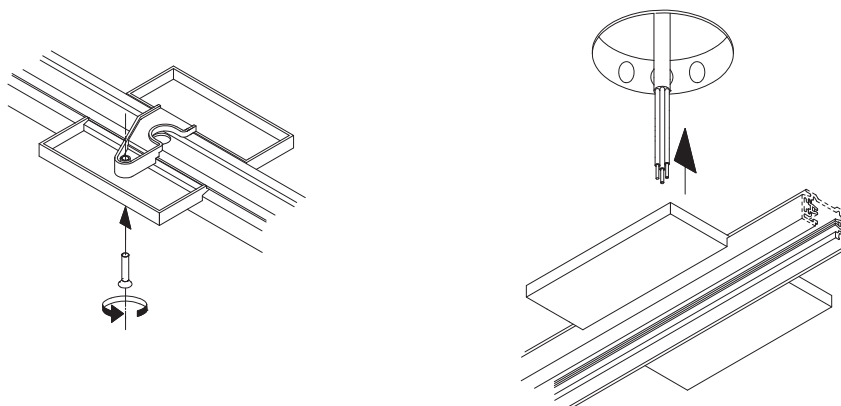


Figure 9: Feed power lines and mount track

- 4: Before mounting, press in the catch using a screwdriver and remove the cover.

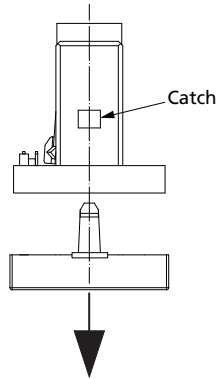


Figure 10: Press in the catch and remove cover

- 5: Insert the mid feed into the track at the prepared position.

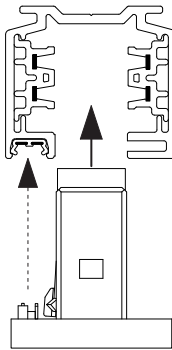


Figure 11: Mounting example

- 6: Using the enclosed hexagonal head wrench, turn all contact screws in the direction indicated by the arrow.

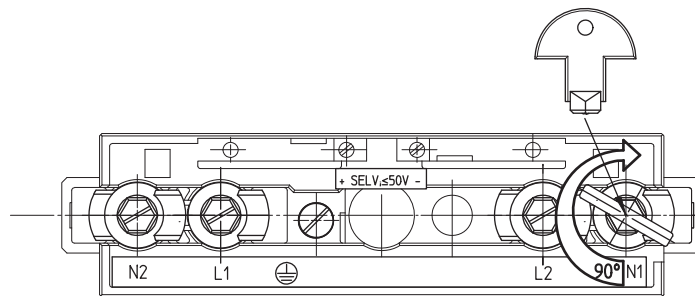


Figure 12: Mechanical attachment to track

- 7: After the mid feed has been fixed securely into place, wire the individual circuits and the earth conductor as shown. When wiring the track, check that the earth conductor (green/yellow) and the neutral conductors (white) are connected as indicated in [Figure 13](#) and [Figure 14](#). Circuits 1 and 2 can be wired as required.

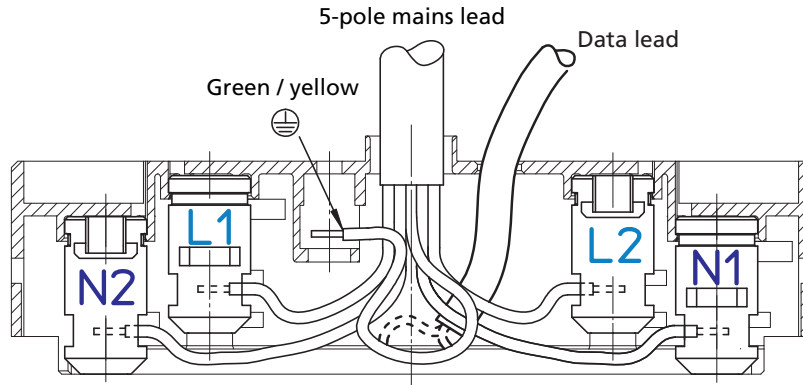


Figure 13: Wiring

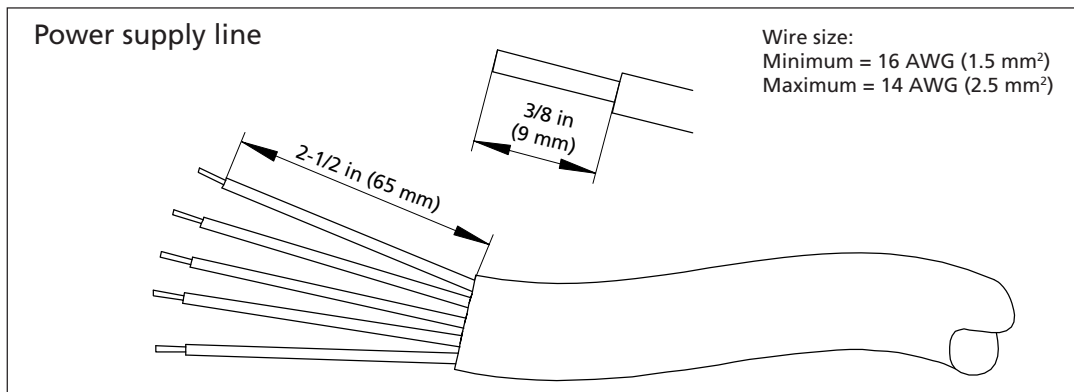


Figure 14: Dismantling and insulation strip lengths

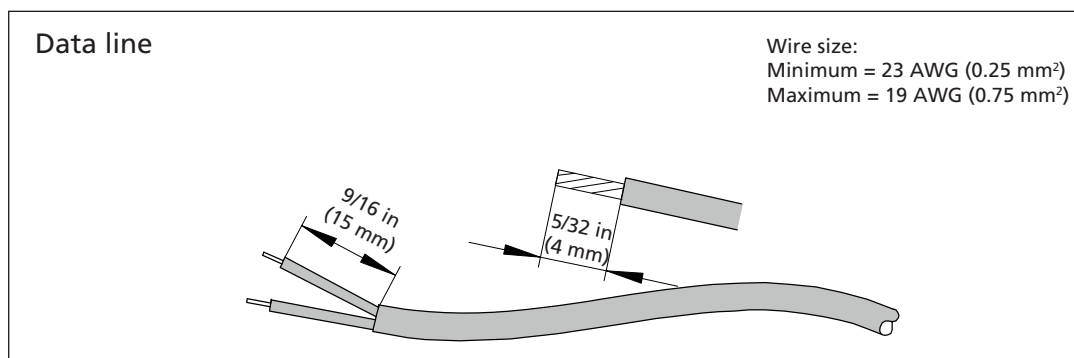


Figure 15: Dismantling and insulation strip lengths

- 8: When the wiring is complete:
 - a: Place the hex-head wrench in the cover.
 - b: Reposition the cover.
 - c: Click into place.

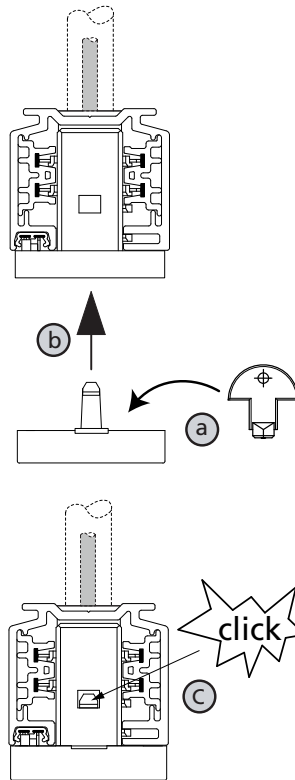


Figure 16: Secure the cover

Standard DMX control systems may only be used if they fulfill SELV (Safety-Extra-Low-Voltage) requirements.

If not, use a SELV safety component.

Data line (maximum) 2 x AWG 18

DMX control system permissible

Data lead max. 20V, 250 mA

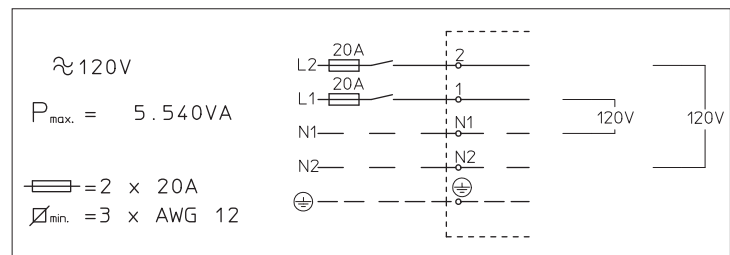


Figure 17: Wiring

Current limiting circuit breaker (sold separately)

14

13

12

11

10

9

8

7

6

5

4

3

2

1

- ## Installation



Note: *T24 (Title 24) current limiters have a 12" section of track installed on each end feed when shipped. Straight couplers are required to splice the 12" sections with other sections of track.*



Note: *Current limiters are only ceiling mounted.*

Installing Current Limiting Feed Connector on a J-Box

The center line of the track must be on the center of the J-Box, and the mounting holes for the J-Box must be at a 45° angle to the center line of the track.

- 1: Remove the cover.
- 2: Push current limiting circuit breakers into plate. Breakers ordered separately.
- 3: Fasten plate to J-Box, passing supply wires through rectangular hole. Secure plate by securing two mounting screws (not supplied) through plate and into J-Box.
- 4: Attach wires per [Wiring End Feeds](#) on [page 23](#).
- 5: Slide track onto feed connectors. Make sure contact blades insert into the gap of the track bus bars.
- 6: Tighten feed connector locking screws.
- 7: Fasten cover with supplied theft-resistant screws, taking caution to avoid pinching any wires.

See [Powering On DataTrack](#) on [page 24](#).

Installing Current Limiting Feed Connector Using Flexible or Rigid Conduit

- 1: Remove the cover.
- 2: Mark the center line of plate on ceiling to determine the mounting location of the feed connector.
- 3: Make a hole in the ceiling for the electrical connector in a position that coincides with one of the round knockouts.
- 4: Remove one round knockout where the power is to be passed through. Do not remove any other knockouts.
- 5: Push current limiting breakers into plate. Breakers ordered separately.
- 6: Attach electrical connector (not supplied) to round knockout in plate.
- 7: Pass supply wires through hole in ceiling and through electrical connector.
- 8: Mount plate to ceiling using 2 plate mounting holes. Mounting hardware not supplied.
- 9: Attach wires per [Wiring End Feeds](#) on [page 23](#).
- 10: Slide track onto feed connectors. Make sure contact blades insert into the gap of the track bus bars.
- 11: Tighten feed connector locking screws.
- 12: Fasten cover with supplied theft-resistant screws, taking caution to avoid pinching any wires.

See [Powering On DataTrack](#) on [page 24](#).

Wiring End Feeds

- 1: Strip ground wire and connect to a 0.25 in (6.35 mm) female quick disconnect terminal (not supplied). Push terminal onto tap clamp at ground plate. Use provided green wire for connecting between tap clamp and feed connector terminal.
- 2: Strip white Neutral 1 wire and connect to Neutral 1 terminal (N1) of feed connector. Clamp wire using screw. See *Figure 18*.

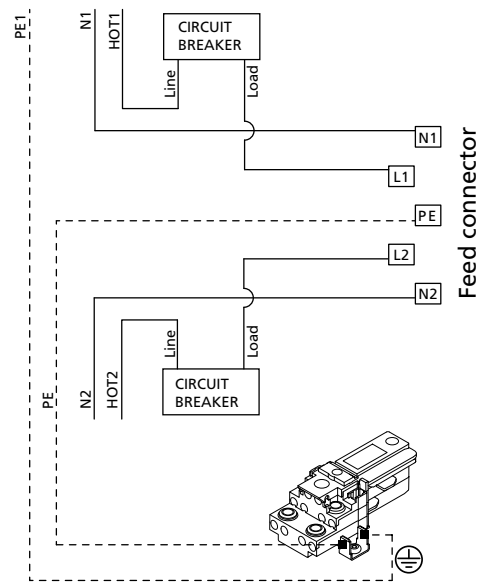


Figure 18: End feed wiring

- 3: Strip Hot 1 supply wire and connect to a 0.25 in (6.35 mm) female quick disconnect (not supplied). Push onto the Line tap clamp on the current limiting circuit breaker.
- 4: Connect load from current limiting circuit breaker to track feed connector terminal (L1) using provided wire. See *Figure 18*.
- 5: Follow the same instructions for Neutral 2 and Hot 2.

Wiring In-line Feeds

- 1: Strip ground wire and connect to a 0.25 in (6.35 mm) female quick disconnect terminal (not supplied). Push terminal onto tap clamp at ground plate. Use provided green wire for connecting between tap clamp and feed connector terminal.
- 2: Strip white Neutral wire and connect to Neutral 1 terminal (N1) of feed connector. Clamp wire using screw. See [Figure 19](#).

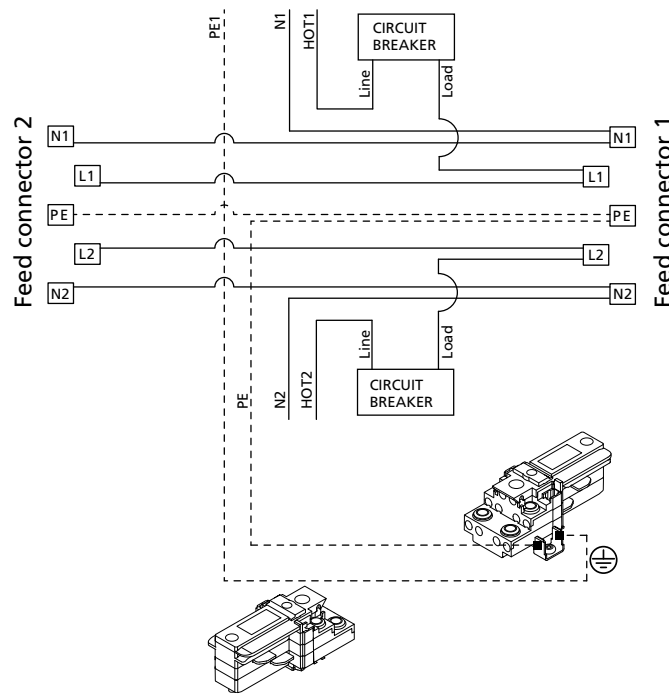


Figure 19: In-line feed wiring

- 3: Measure and strip a new wire (not provided) and connect N1 terminal (Feed Connector 1) to N1 terminal (Feed Connector 2).
- 4: Strip Hot 1 supply wire and connect to a 0.25 in (6.35 mm) female quick disconnect (not supplied). Push onto the Line tap clamp on the current limiting circuit breaker.
- 5: Connect load from current limiting circuit breaker to feed connector terminal L1 using provided wire.
- 6: Measure and strip a new wire (not provided) and connect L1 terminal (Feed Connector 1) to L1 terminal (Feed Connector 2).
- 7: Follow the same instructions for Neutral 2 and Hot 2.

Powering On DataTrack

- 1: Place luminaires on track.
- 2: Switch current limiting circuit breakers to ON position.
- 3: Turn main power supply connector to the ON position.
 - The current limiting circuit breakers will automatically switch to OFF if current ratings are exceeded.
 - If current limiting circuit breakers will not remain on: Reduce the wattage on the track so the total wattage is less than the wattage specified on the current limiting circuit breakers. Turn the current limiting circuit breakers to ON.

Chapter 3

Troubleshooting

Loss of Power



WARNING: When working on electrical systems, turn off the breakers that are powering the track as well as the wall switches. Wall switches can be accidentally turned back on while you are working.

Problem	Troubleshooting	Remedy
Lights do not work	• Check breakers	• Reset breakers. Replace if required.
	• Check bulbs	• Replace bulb with known good bulb and check.
	• Check for proper installation of adapter on track	• Remove adapter and clean contact points with a dry cloth. Reinstall, making sure adapter is locked into place properly.
	• Check data connection	• See Data Issues on page 26 .
	• Check for power	• Ensure there is voltage to the track.
Loss of power	• Check breakers	• Reset breakers. Replace if required.
	• Check couplers for contact with multiple track installations	• If visual check is inconclusive, track may have to be taken down and coupler re-installed.
No power with configurations other than straight runs	• Check all connections of track	• If connections check is good, check components for proper earth inside/outside. If parts are incorrect, change parts for the correct current flow.
	• Check live end feeds and couplers ("T", "L," etc.) for proper ground path	
Lights flickering	• Check bulb for proper installation	• Turn switch off, remove bulb, inspect end for any oxidation, clean off any end with dry rag or towel, install bulb back into fixture. Turn switch back on.
	• Check adapters for proper security	• Remove adapters and reinstall, making sure they are properly secured.
	• Verify data and power contact prongs are not bent	• Remove adapters and verify all contact points and prongs are not bent. Reinstall.
	• Verify contacts and adapter prongs are clean	• Remove adapters and clean prongs. Reinstall.
	• Verify connections between tracks are properly installed and secured	• Verify all track sections are secured properly and mounting surface and track sections are level. Verify all suspended track is level and the correct number of pendant supports is being used based on the weight being supported. Verify all pendant clips are properly installed over track seams.

Data Issues

Problem	Troubleshooting	Remedy
Loss of data on surface track	<ul style="list-style-type: none"> Check track to be secured properly to mounting surface 	<ul style="list-style-type: none"> Use proper fastener to secure track.
	<ul style="list-style-type: none"> Check track to be level 	<ul style="list-style-type: none"> Spacers may have to be used to correct.
	<ul style="list-style-type: none"> Check track to be connected to next section of track without gaps between sections and ensure they are both level with each other 	<ul style="list-style-type: none"> Secure ends with proper fastener. Spacers may be used between ceiling and track to make the track level. Ensure that both track sections are level with each other at the joint. If track pieces are not level, remove or loosen the ceiling fastener from one piece, align to the other piece of track, refasten track to ceiling, making sure tracks stay aligned. Verify track system is not sagging and no gaps exist between sections of track.
	<ul style="list-style-type: none"> Make sure the end sections of track have been properly secured to mounting surface 	<ul style="list-style-type: none"> Secure track ends to surface with proper fasteners.
	<ul style="list-style-type: none"> Check the data bus contact on the electrical straight coupler 	<ul style="list-style-type: none"> Bend tabs up so contacts do not fully collapse and then reinstall on coupler. Check again for data.
Loss of data on suspended track (cable or pendant)	<ul style="list-style-type: none"> Check that the joined track sections have been joined by pendant clips 	<ul style="list-style-type: none"> Track sections must be joined by pendant clip. Use 2 in (5.08 cm) independent clips. Use 4 in (10.16 cm) clips where track meets
	<ul style="list-style-type: none"> Check for proper number of suspension points based on the load applied to the track (see Suspended Load Capacity on page 8) 	<ul style="list-style-type: none"> If the number of suspension points is less than the recommended number, remove some of the load or add suspension points.
	<ul style="list-style-type: none"> Check track to be level 	<ul style="list-style-type: none"> Use a level and place on track. Make necessary changes to cables or adjust pendants.
	<ul style="list-style-type: none"> Check mounting surface to be level 	<ul style="list-style-type: none"> Use a level and place on mounting surface. Adjust cables or pendants accordingly.
	<ul style="list-style-type: none"> Check data bus contacts 	<ul style="list-style-type: none"> Bend tabs up so contacts do not fully collapse and then reinstall on coupler. Check again off data.
No data	<ul style="list-style-type: none"> Check track for actually being a "data bus" track 	<ul style="list-style-type: none"> Replace track with correct "data bus" track.
	<ul style="list-style-type: none"> Check multi adapter to be equipped with the data bus contact 	<ul style="list-style-type: none"> Remove adapter. Open and check if data bus contact is installed and installed correctly. If not, install a data bus contact.
	<ul style="list-style-type: none"> Changed data bus contact but still no data 	<ul style="list-style-type: none"> Replace data bus contact with one known to be good and test again. If data works, change contacts. If still bad, check clips for proper support points.

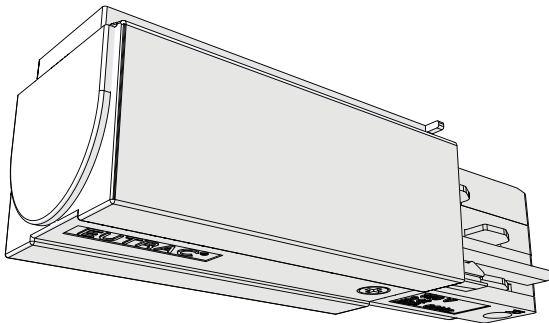
Problem	Troubleshooting	Remedy
Multi adapter will not close after data bus contact is installed and wiring connected	<ul style="list-style-type: none"> Check wiring routing and connections are properly secured 	<ul style="list-style-type: none"> Open adapter by removing two side screws. Check connections and routing.
		<ul style="list-style-type: none"> Verify nipple is installed properly, making sure the notch on the nipple is locked in place with the rib on the inside of adapter.
		<ul style="list-style-type: none"> Make sure data bus contact is installed properly.
		<ul style="list-style-type: none"> Make sure correct data bus contact is installed.
Multi adapter will not close after inserting nipple	<ul style="list-style-type: none"> Make sure nipple is installed properly 	<ul style="list-style-type: none"> The notches on the nipple should align with rib on adapter to prevent free turning.
	<ul style="list-style-type: none"> Verify the two cover screws are aligned properly 	<ul style="list-style-type: none"> Remove screws, align side cover of adapter with screw holes. Hand-start one screw and then the other.
	<ul style="list-style-type: none"> Make sure wires are not interfering with cover 	<ul style="list-style-type: none"> Finish securing screws with screwdriver.
No data through current limiter	<ul style="list-style-type: none"> Make sure wires are not interfering with cover 	<ul style="list-style-type: none"> Remove cover. Tuck any loose wires out of the way when closing the cover. Never interfere with wire connections.
	<ul style="list-style-type: none"> Check circuit breaker on limiter 	<ul style="list-style-type: none"> Remove cover. Tuck any loose wires out of the way when closing the cover. Never interfere with wire connections.
	<ul style="list-style-type: none"> Check that end feeds are correct and able to transfer data 	<ul style="list-style-type: none"> If tripped, reset breaker.
	<ul style="list-style-type: none"> Check track to be data bus equipped 	<ul style="list-style-type: none"> If incorrect end feeds are installed, reorder correct ones.
Uncertainty if current limiter is T24 compliant	<ul style="list-style-type: none"> Check that the breaker is the correct amperage for the track installed 	<ul style="list-style-type: none"> Order correct track if not equipped with data.
	<ul style="list-style-type: none"> 12 in (30.48 cm) track section is secured to limiter on end feed with theft-resistant fastener 	<ul style="list-style-type: none"> Change breaker to correct amperage required.
Uncertainty if NT24 can be converted to T24 in the field	<ul style="list-style-type: none"> Cannot be converted in field 	<ul style="list-style-type: none"> Order correct limiter if not correct.
Uncertainty if NT24 can be converted to T24 in the field	<ul style="list-style-type: none"> Cannot be converted in field 	<ul style="list-style-type: none"> Order correct limiter model if not correct.

Appendix A

Parts and Accessories

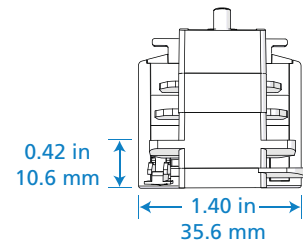
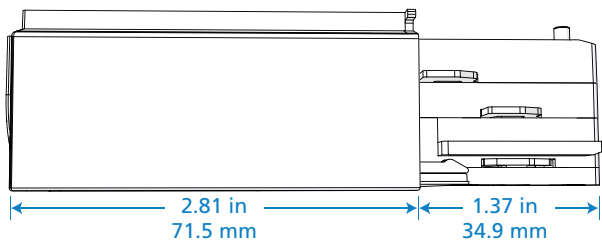
Two-circuit DataTrack Accessories

End Feed

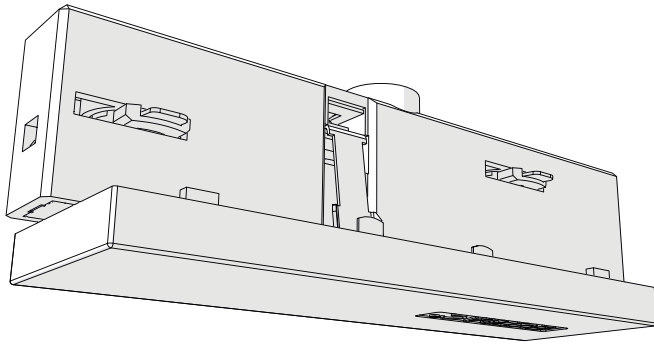


- Feeds power and/or data into the DataTrack system
- Mounts to the end of a linear section of DataTrack
- Top feed or end feed

Ground	Color	Model Number
Right	Black	EDTREF-GR
	White	EDTREF-GR-1
	Silver	EDTREF-GR-5
Left	Black	EDTREF-GL
	White	EDTREF-GL-1
	Silver	EDTREF-GL5

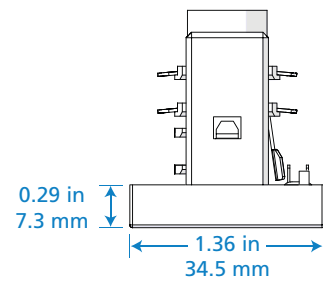
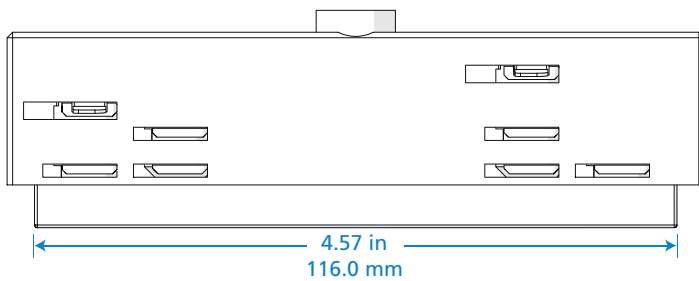


Mid Feed

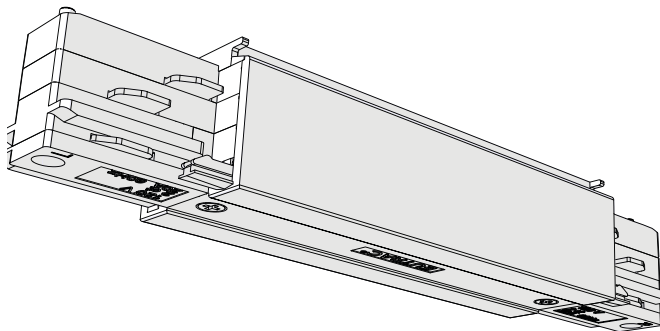


- Feeds power and/or data into the DataTrack system
- Mounts anywhere inside the track
- Top feed only

Color	Model Number
Black	EDTRMF
White	EDTRMF-1
Silver	EDTRMF-5

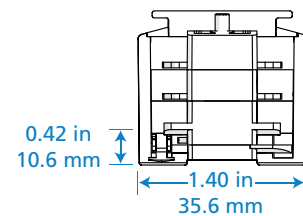
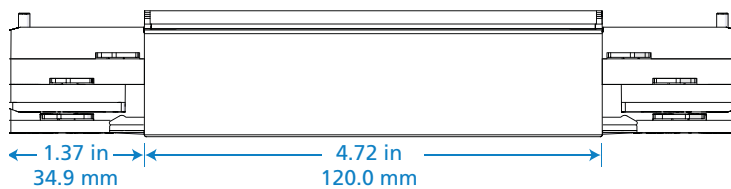


I-coupler

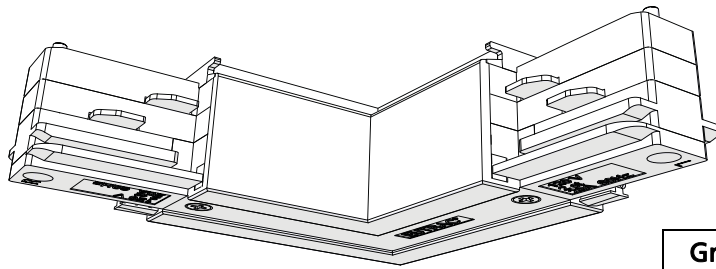


- Splices two pieces of DataTrack in line
- Supports power and/or data feed
- Top feed only

Color	Model Number
Black	EDTRIC
White	EDTRIC-1
Silver	EDTRIC-5

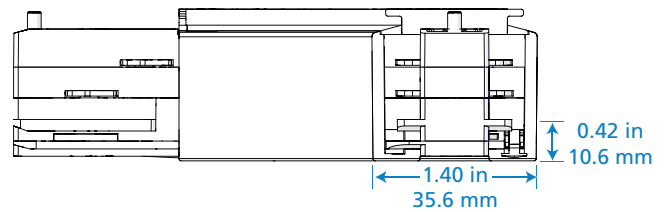
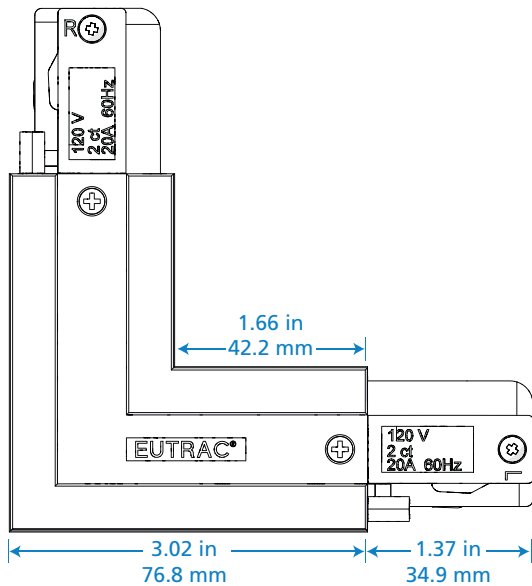


L-coupler

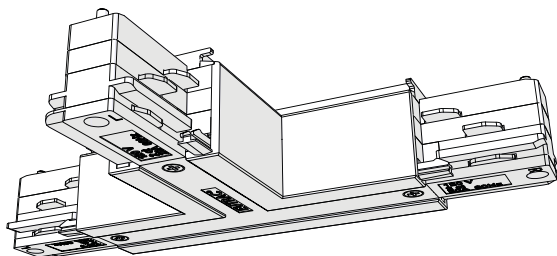


- Splices two pieces of DataTrack at a 90° angle
- Supports power and/or data feed
- Top feed only
- Either ground outside or ground inside

Ground	Color	Model Number
Inside	Black	EDTRLC-GI
	White	EDTRLC-GI-1
	Silver	EDTRLC-GI-5
Outside	Black	EDTRLC-GO
	White	EDTRLC-GO-1
	Silver	EDTRLC-GO-5

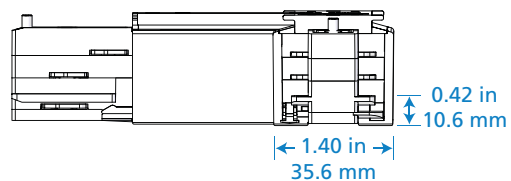
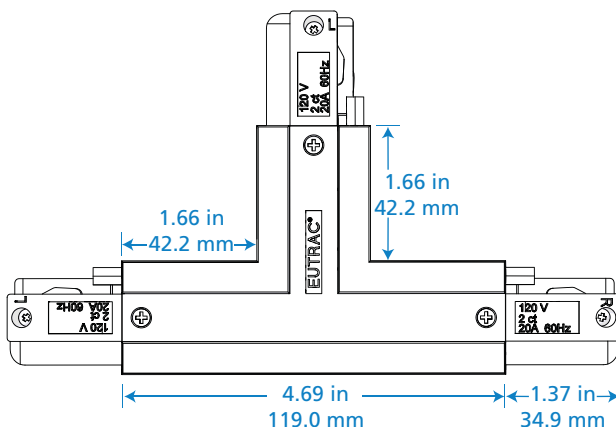


T-coupler

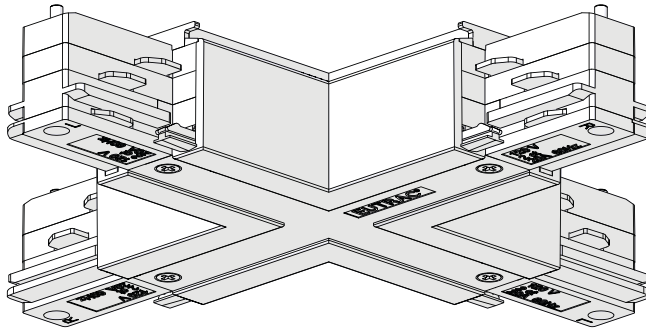


- Splices three pieces of DataTrack at a 90° angle
- Support power and/or data feed
- Top feed only
- Either ground outside or ground inside, left or right

Ground	Color	Model Number
Inside Right	Black	EDTRTC-GIR
	White	EDTRTC-GIR-1
	Silver	EDTRTC-GIR-5
Inside Left	Black	EDTRTC-GIL
	White	EDTRTC-GIL-1
	Silver	EDTRTC-GIL-5
Outside Right	Black	EDTRTC-GOR
	White	EDTRTC-GOR-1
	Silver	EDTRTC-GOR-5
Outside Left	Black	EDTRTC-GOL
	White	EDTRTC-GOL-1
	Silver	EDTRTC-GOL-5

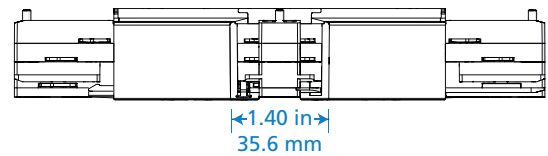
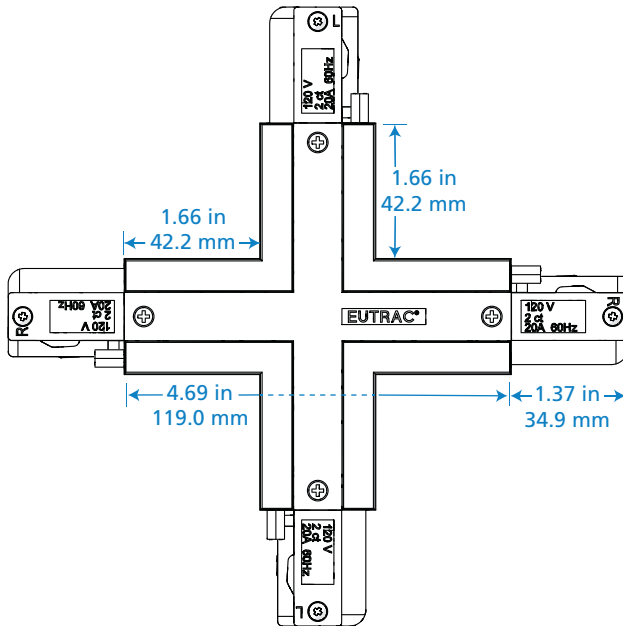


X-coupler

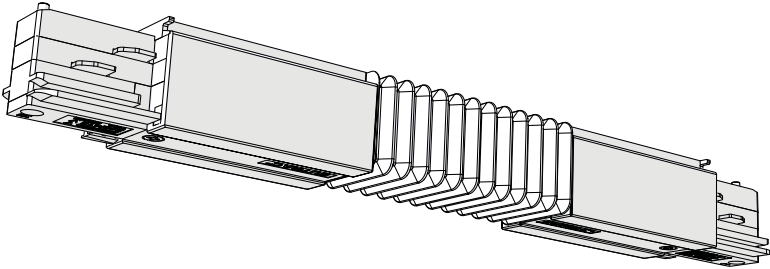


- Splices four pieces of DataTrack at a 90° angle
- Supports power and/or data feed
- Top feed only
- Data can be routed to either pair of interior corners, field-configurable

Color	Model Number
Black	EDTRXC
White	EDTRXC-1
Silver	EDTRXC-5

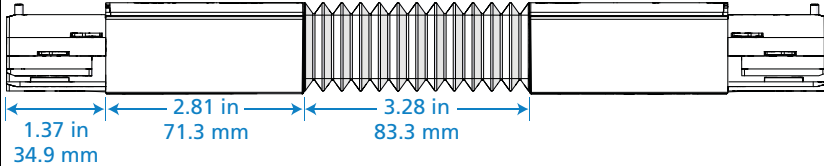


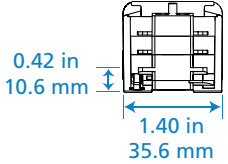
Flex-coupler



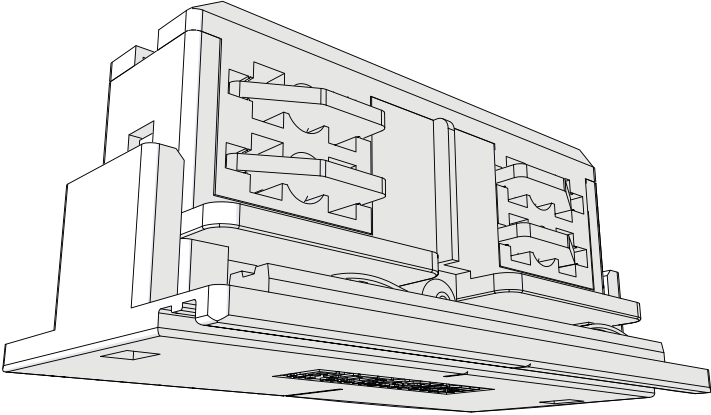
- Splices two pieces of DataTrack at a flexible angle between 30°–330°
- Supports power and/or data feed
- Top feed only

Color	Model Number
Black	EDTRFC
White	EDTRFC-1
Silver	EDTRFC-5



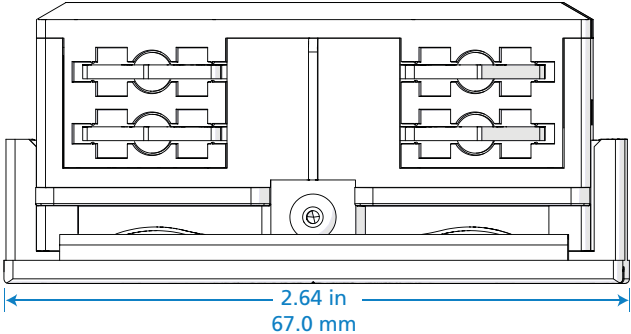


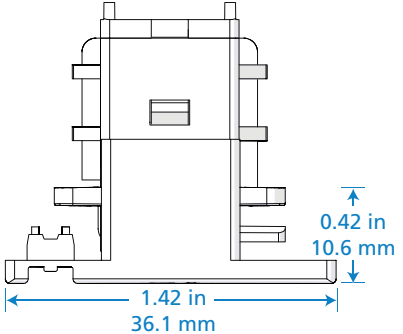
Electrical Straight Coupler



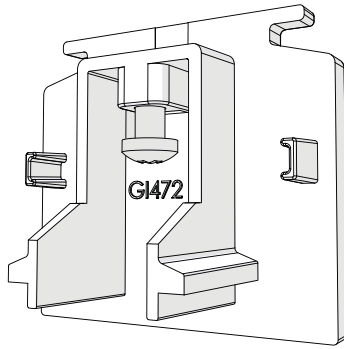
- Used for splicing two pieces of DataTrack in line
- Requires 4 in (10.16 cm) pendant clip to stabilize joint (see [Four-inch Pendant Clip](#) on [page 37](#))

Color	Model Number
Black	EDTRSC
White	EDTRSC-1
Silver	EDTRSC-5



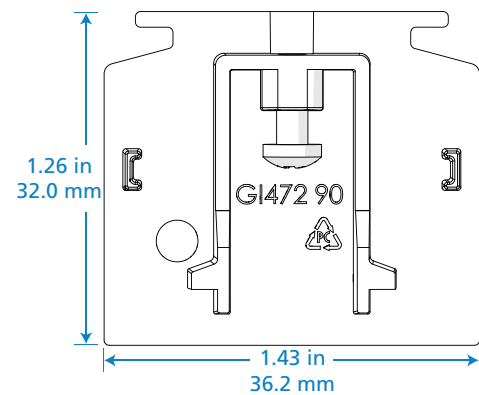
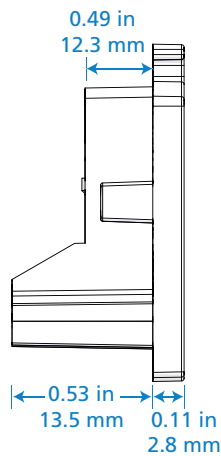


End Cap

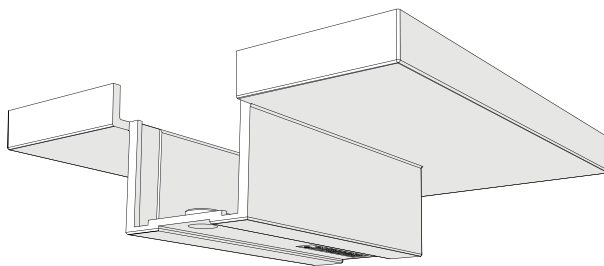


- Provides cover to the end of all non-spliced sections of DataTrack

Color	Model Number
Black	EDTREC
White	EDTREC-1
Silver	EDTREC-5

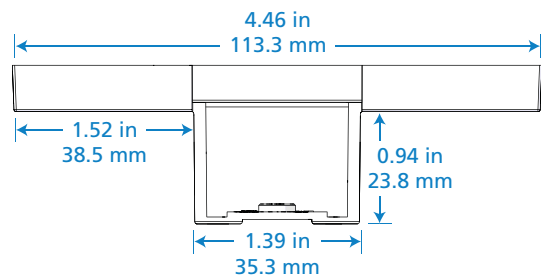
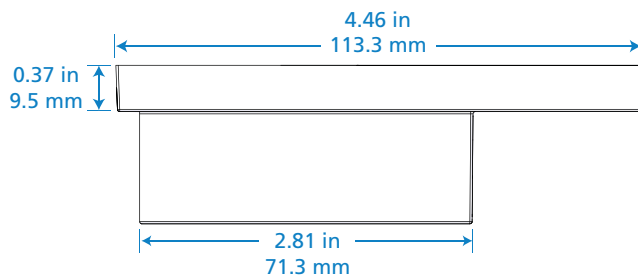


End-feed Canopy Cover

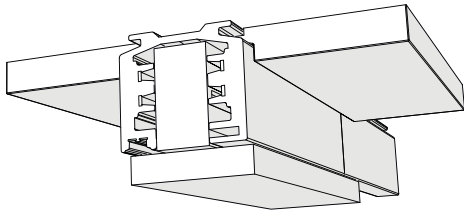


- Covers holes in ceiling surface created for feed wires from junction boxes

Color	Model Number
Black	EDTRCC
White	EDTRCC-1
Silver	EDTRCC-5

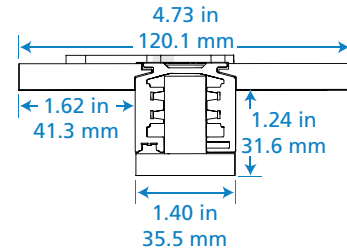
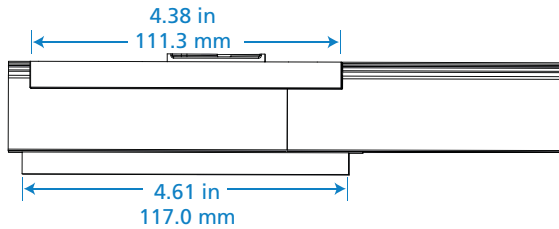


Mid-feed Canopy Cover

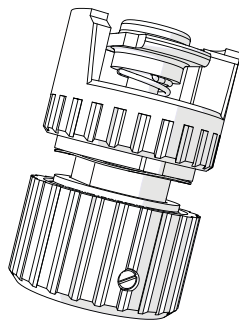


- Covers holes in ceiling surface created for feed wires from junction boxes

Color	Model Number
Black	EDTRMCC
White	EDTRMCC-1
Silver	EDTRMCC-5

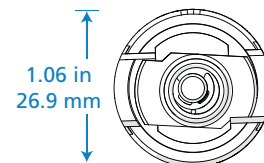
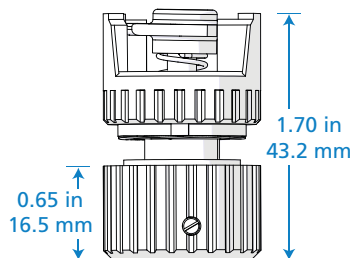


Universal Adapter

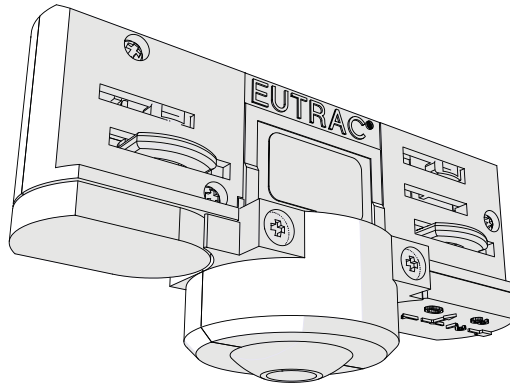


- Secures heavy fixtures and other fittings to track with 1/2 in (1.27 cm) mounting bolt
- Mechanical rotation stop with spring prevents fixtures from falling when adapter is unfastened
- Maximum load: 22 lb (9.97 kg)

Color	Model Number
Black	EDTRUA
White	EDTRUA-1

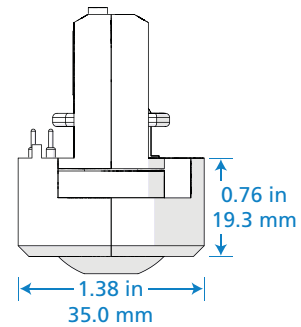
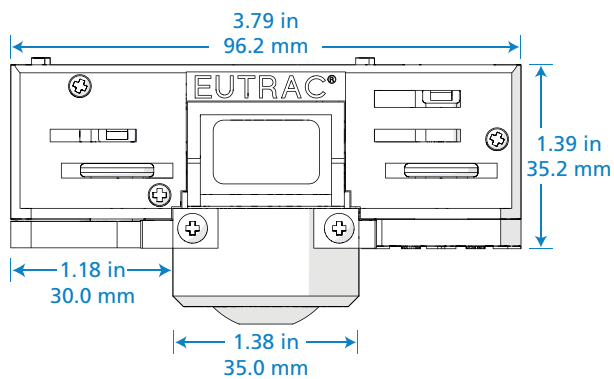


DMX Terminator



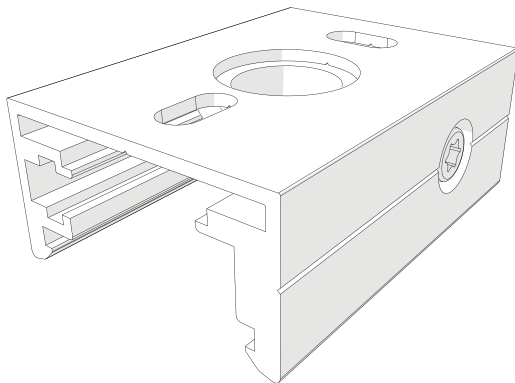
- Terminates DMX data run
- One terminator required per data feed, positioned at the end of the DMX data run
- Multiple data feeds and terminations may be required in a single DataTrack system

Color	Model Number
Black	EDTRDMXT
White	EDTRDMXT-1
Silver	EDTRDMXT-5



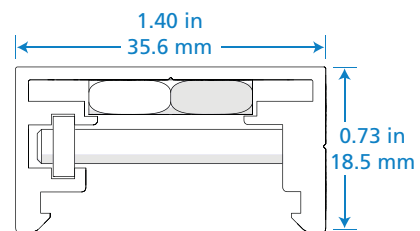
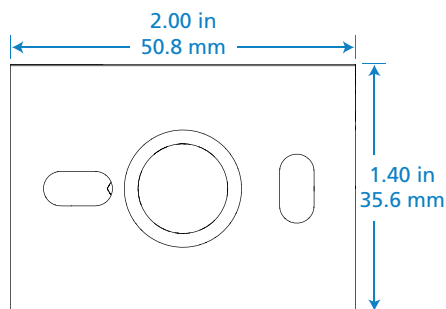
DataTrack Mounting Accessories

Two-inch Pendant Clip

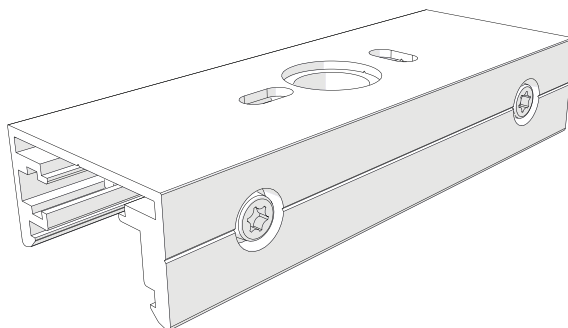


- For pendant-mounting with 1/16 in (1.6 mm) aircraft cables (4 ft [1.22 m] length) or 3/8 in (9.52 mm) threaded rod (standard mounting kits with 24 in or 36 in [0.60 m or 0.91 m] lengths are available)

Color	Model Number
Black	EDTR2PC
White	EDTR2PC-1
Silver	EDTR2PC-5

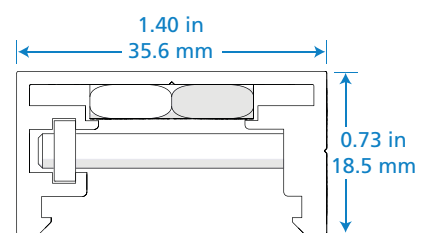
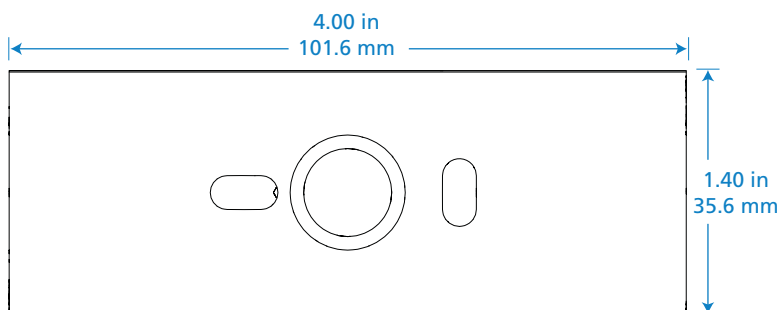


Four-inch Pendant Clip

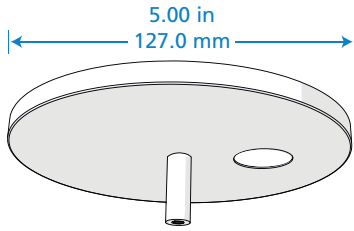


- Required for joints of pendant-mounted tracks

Color	Model Number
Black	EDTR4PC
White	EDTR4PC-1
Silver	EDTR4PC-5



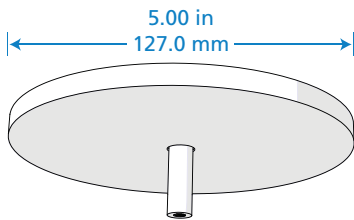
Five-inch Support/Feed Canopy Kit



- For attaching top of aircraft cable to building in support locations with power and/or data feed
- Pendant-cable kit includes:
 - 4 ft (1.22 m) length of 1/16 in (1.6 mm) aircraft cable
 - Canopy
 - Cable gripper
 - Coupler
- The diameter of the hole for running cable through the support/feed canopy kit is 7/8 in (22.22 mm)

Color	Model Number
White	EDTR5SF-1

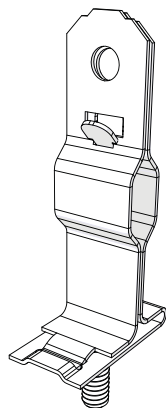
Five-inch Support Canopy Kit



- For attaching top of aircraft cable to building in support locations with no power and/or data feed
- Pendant-cable kit includes:
 - 4 ft length of 1/16 in (1.6 mm) aircraft cable
 - Canopy
 - Cable gripper
 - Coupler

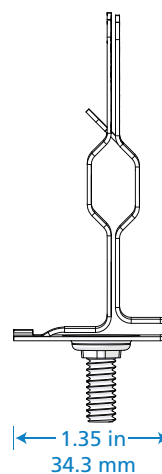
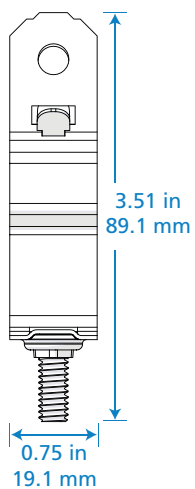
Color	Model Number
White	EDTR5SC-1

T-bar Mounting Clip



- For use with 15/16 in (23.81 mm) T-grid system
- Support independent of ceiling
- Kit from ETC includes mounting nut

Color	Model Number
White	EDTRTB

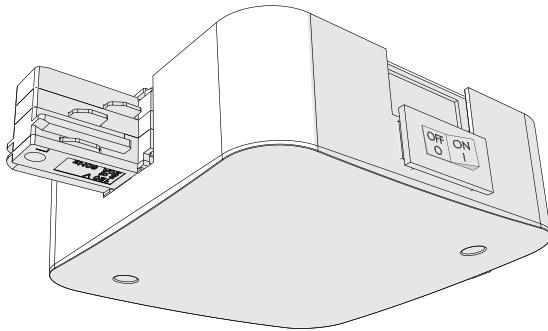


Current Limiters



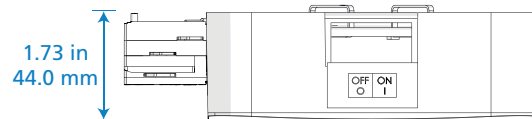
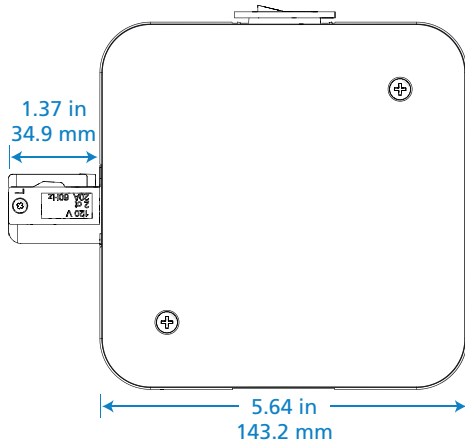
Note: Title 24 compliant limiters are also available and include a 12 in (30.48 cm) permanently attached track section in compliance with California Title 20/24 requirements.

End-feed: Ground Left or Right

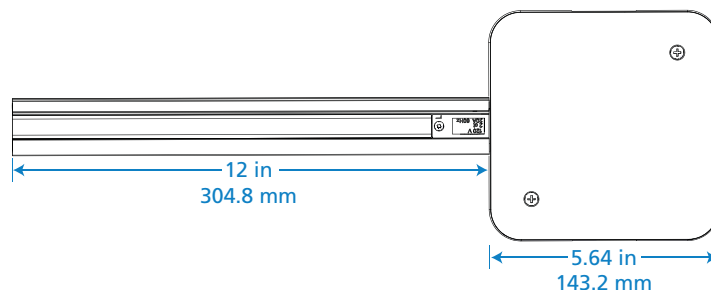


- End power feed with current limiting circuit breakers
- Circuit breakers must be ordered separately (see [Circuit Breaker](#) on [page 42](#) for options)

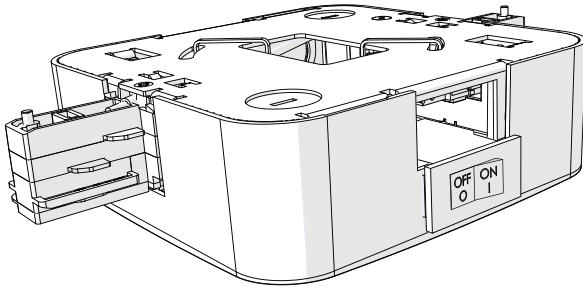
Ground	Color	Model Number
Right	Black	EDTREFCL-GR
	White	EDTREFCL-GR-1
	Silver	EDTREFCL-GR-5
Left	Black	EDTREFCL-GL
	White	EDTREFCL-GL-1
	Silver	EDTREFCL-GL-5
Right (Title 24 compliant)	Black	EDTREFCLT24-GR
	White	EDTREFCLT24-GR-1
	Silver	EDTREFCLT24-GR-5
Left (Title 24 compliant)	Black	EDTREFCLT24-GL
	White	EDTREFCLT24-GL-1
	Silver	EDTREFCLT24-GL-5



Title 24 Compliant

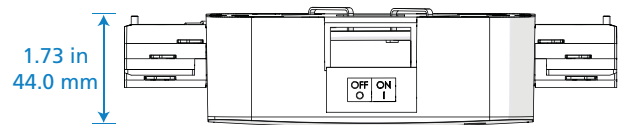
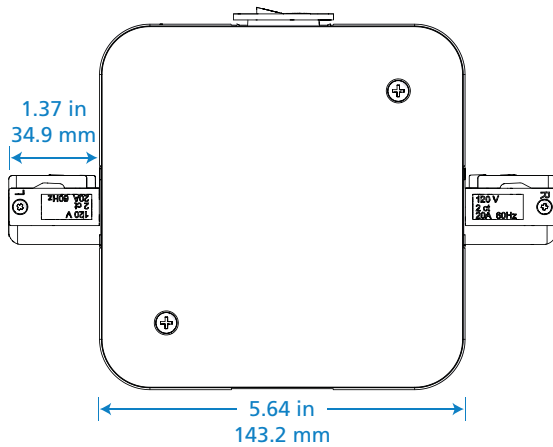


I-coupler

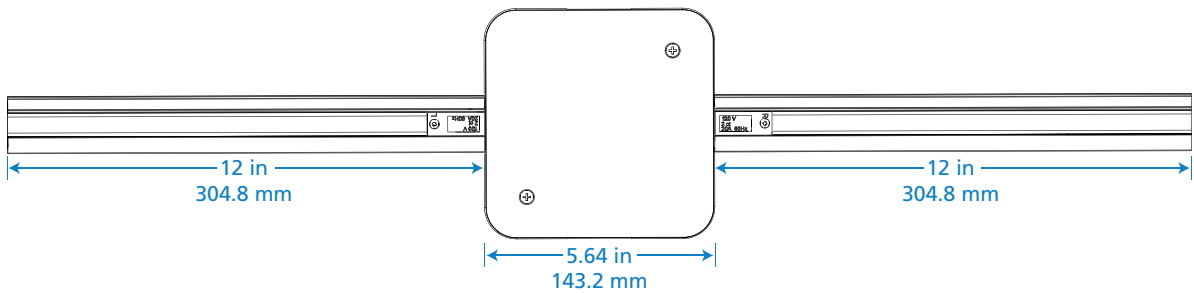


- Splices two pieces of DataTrack with power feed and current limiting circuit breakers
- Circuit breakers must be ordered separately (see [Circuit Breaker](#) on [page 42](#) for options)

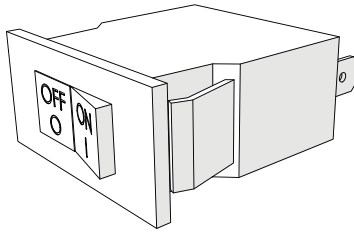
Color	Model Number
Black	EDTRICCL
White	EDTRICCL-1
Silver	EDTRICCL-5
Black (Title 24 Compliant)	EDTRICCLT24
White (Title 24 Compliant)	EDTRICCLT24-1
Silver (Title 24 Compliant)	EDTRICCLT24-5



Title 24 Compliant

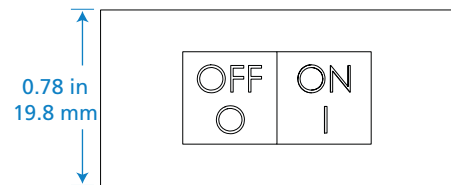
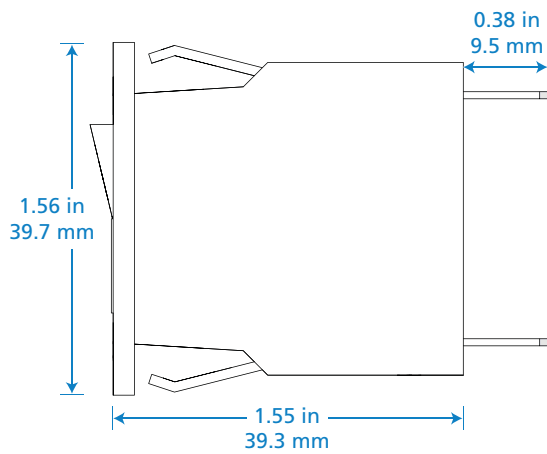


Circuit Breaker



- 3A, 5A, 8A, or 12A current limiting breakers
- One per circuit

Amp	Color	Model Number
3A	Black	EDTRCL-3A
	White	EDTRCL-3A-1
5A	Black	EDTRCL-5A
	White	EDTRCL-5A-1
8A	Black	EDTRCL-8A
	White	EDTRCL-8A-1
12A	Black	EDTRCL-12A
	White	EDTRCL-12A-1



Appendix B

Reconfiguring DMX Data Lines

Based on your system layout, you may need to reposition data lines. For this, you will need a small flat-blade screwdriver and a small Phillips-head screwdriver. This example demonstrates repositioning data lines for the X-coupler, but the same information applies to T-couplers, too.

- 1: Using a Phillips-head screwdriver, remove the screws that secure the cover to the coupler.
- 2: Using a flat-blade screwdriver, loosen the two screws securing the red and black data wires.

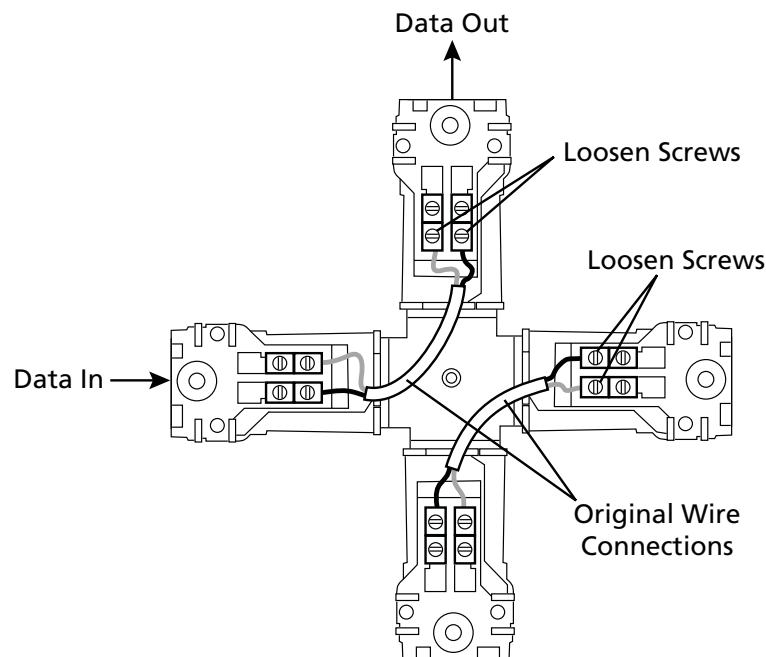


Figure 1: Original wire connection

- 3: Gently pull the wires from the connector and out from under the black bridge restraint. Be careful not to remove the clear shielding.
- 4: Repeat steps 2 and 3 for remaining connections that need to be repositioned.

- 5: Route the wires under the black bridge restraints at the new locations.
- 6: Insert the red and black wires into their new location. Tighten the wire-retaining screws. Gently pull on the wires to verify that they are properly connected.

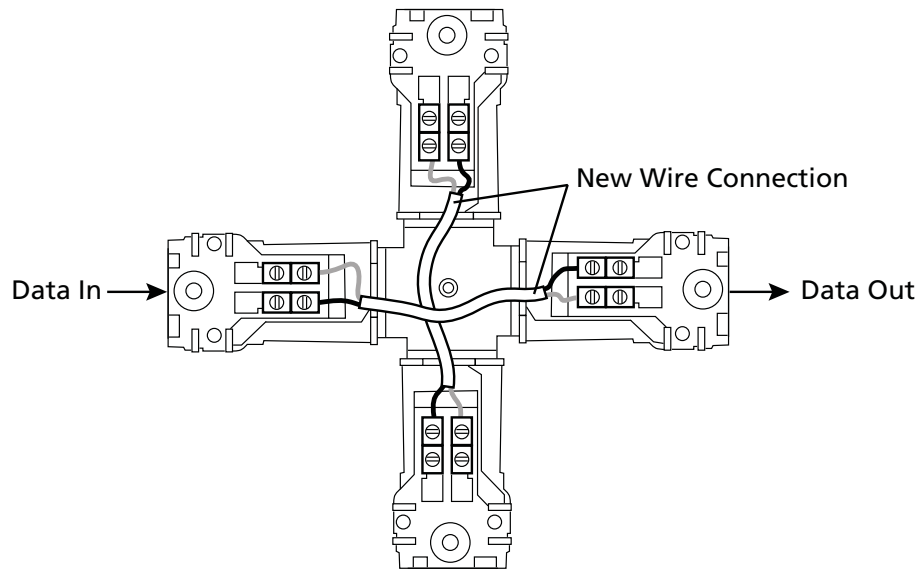


Figure 2: New wire connection

- 7: Repeat steps 5 and 6 for all remaining connections.
- 8: Replace the coupler cover and secure in place.



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