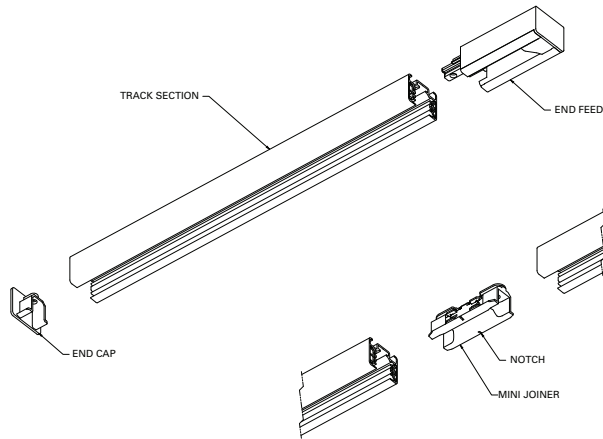


SURFACE CONTROLTrack • INSTALLATION INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS - For use with CONTROLTrack System Only

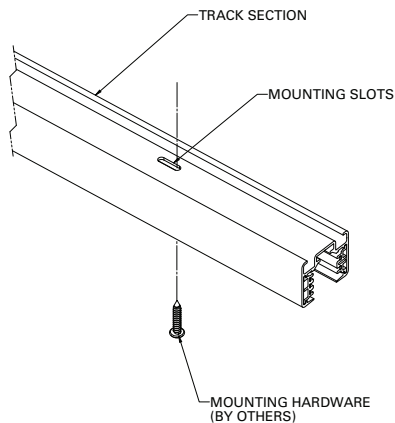
When installing or using this track system, basic safety precautions should always be followed, including the following: **Read all instructions.** Do not install this track in damp or wet locations. Do not install any part of the track system less than five feet from floor. Do not install any fixture assembly closer than six inches from any curtain or similar combustible material. Disconnect electrical power before adding to or changing the configuration of the track. Check with a qualified electrician. Do not attempt to energize anything other than lighting track fixtures on the track. To reduce the risk of fire and electric shock, do not attempt to connect power tools, extension cords, appliances and the like to the track. Do not connect a track to more than one branch circuit unless the track is constructed so it can be used with more than one branch circuit. Check with a qualified electrician. Although the track lighting system may seem to operate acceptably, a dangerous overload of the neutral may occur and result in a risk of fire. Install per NEC and local codes. **SAVE THESE INSTRUCTIONS**



Assembling

Insert End Cap, End Feed or any other Joiner/Feeder completely into Track Section and tighten the recessed Phillips head screw. Do not use excessive force when inserting components into Track Section.

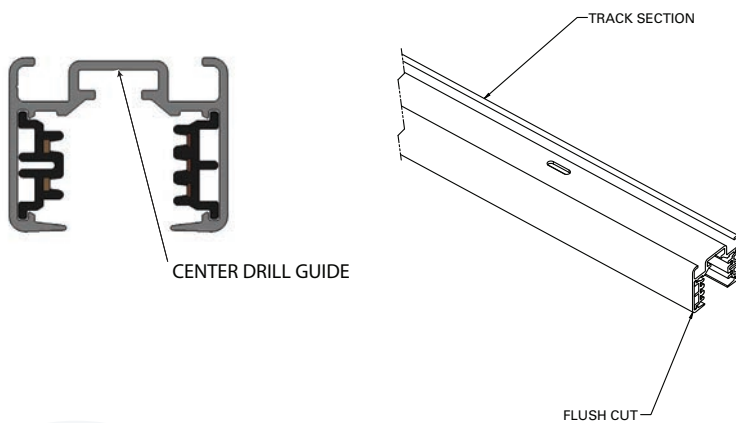
Note: Insert Mini Joiner into track up to centering notch.



Mounting

Fasten track directly to surface through pre-punched mounting slots with hardware (by others) capable of withstanding a 50 lb. pull. Mount track in compliance with NEC Lighting Track Article #410-101 (Installation), #410-104 (Fastening) and any other applicable codes. To prevent distortion of the track opening which may prevent insertion of fixture fittings, do not over tighten mounting screws. LSI recommends a minimum of two mounting points per section of track. LSI CONTROLTrack can be mounted on centers up to 6'-0".

LSI CONTROLTrack can also be mounted by surface hanger clips, stems, or cables on centers up to 6' 0". LSI recommends a minimum of two mounting points per section of track. Pendant mounted track intended to be installed by stems only are not to be mounted by cable.



Field Cutting

LSI CONTROLTrack can be easily field cut using a sharp hacksaw or a chop saw with a blade for non-ferrous metals, such as Oldham commercial carbide series metal blade. Together, cut the aluminum track, track liner, and copper with one straight cut. All pieces must be exactly the same length. Be sure to remove any burrs on the aluminum or the copper as this may affect the electrical and mechanical interconnection of components to track. Do not cut track to less than one foot in length.


LSI CONTROLTrack can easily be field drilled by using the drill guide and a 3/16" drill bit. Be sure to remove any burrs after drilling. A single section of track that is 4 feet (1.22 m) or less in length is to be provided with one mounting opening spaced a maximum of 6 inches (152.4 mm) from each end of a track section. Additional openings may be provided. A single section of track that is greater than 4 feet (1.22 m) in length is to be provided with a mounting opening spaced a maximum of 12 inches (300 mm) from each end of the track section with additional openings being provided a minimum of every 6 feet (1.83 m) along the length of the track section.

SURFACE CONTROLTrack • INSTALLATION

Electrical

Remove the Lexan™ cover from any End Feed or Joiner/Feeder, bring wires through the combination 1/2, 3/4 U.S. trade size knock-out (.875 diameter [22mm], 1.125 diameter, [29mm]) in conduit plate and attach conductors to identified terminals on connectors. Joiner/Feeders can be electrically field modified by switching connector location. #12 THHN wire for Power and #18 THHN wire for data is the suggested size of wire.

L = Line
N = Neutral

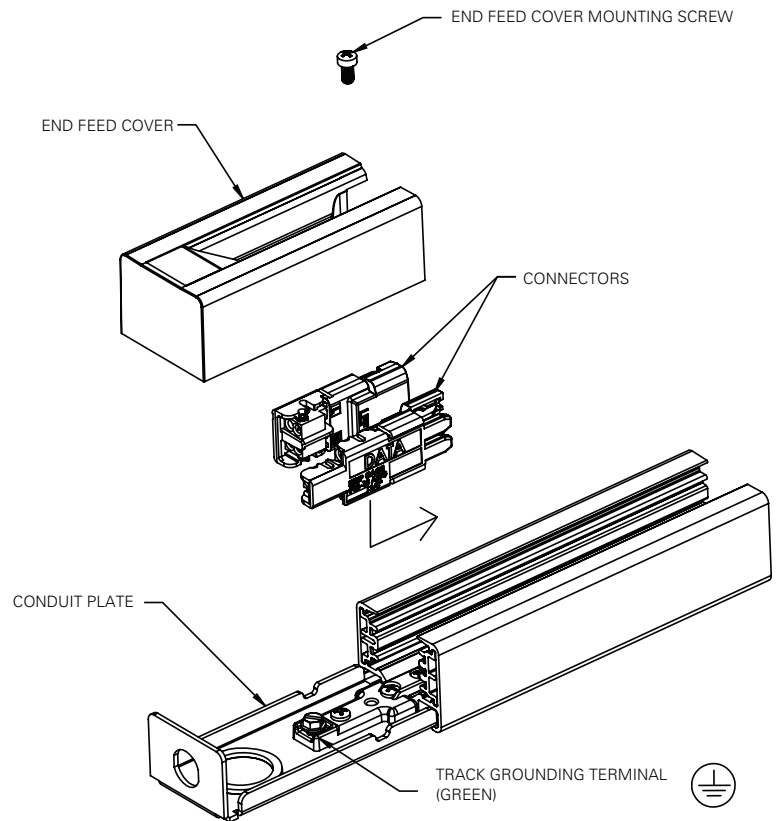
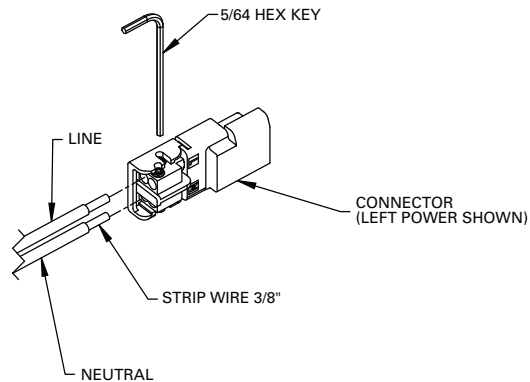
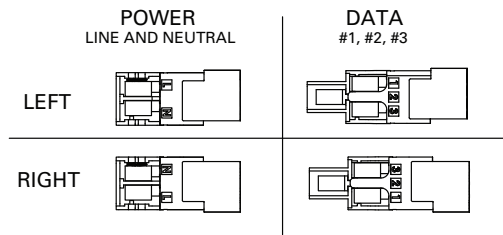
 = Ground

Data Connections

- #1 = DMX Common or 0-10V Common
- #2 = DMX -, or 0-10V + (zone 1)
- #3 = DMX +, or 0-10V + (zone 2)

NOTE:

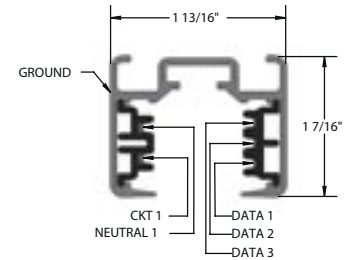
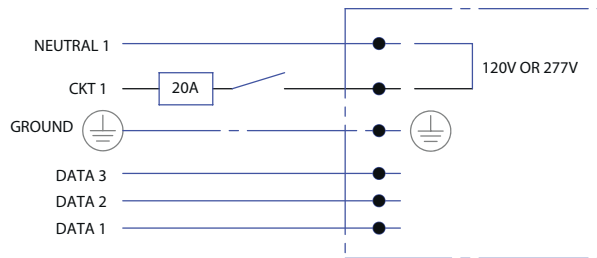
ALL SUPPLIED CONNECTORS MUST BE INSTALLED EVEN IF NOT BEING WIRED. ENGAGING FIXTURE POWER OR DATA ROTORS WILL CAUSE INNER LINER TO SHIFT IF ALL CONNECTORS ARE NOT INSTALLED.



SURFACE CONTROLTrack • INSTALLATION

Supply Connection Wiring Diagram

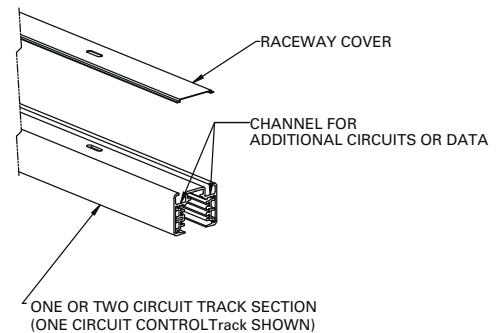
Voltage = Single Phase 120V or 277V AC
 Maximum Current = 20A per circuit Supply
 Cable = 5 x 12 Gage THHN wire
 CAUTION: Data MAX 30V, 2A



Additional Circuits

LSI Track has integral wiring channels for six additional #12 THHN wires to create three additional 20 amp circuits with separate neutrals or extra data wires. Place conductors in wiring channels and slide raceway covers into track prior to mounting.

DO NOT install power and data wires in the same raceway channel.



Installing LSI Fixtures

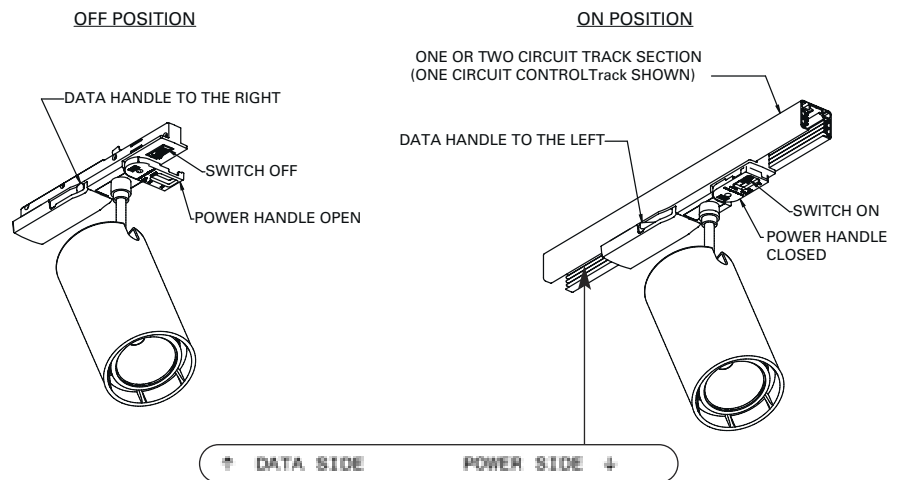
LSI CONTROLTrack is only to be used with LSI electrical fittings listed below:

- CT1
- CT2
- CT3
- CT4

CONTROLTrack is backwards compatible with -00 and -0E fittings

To insert a fixture fitting into the track, the switch must be in the "off" position, with the power handle open. Insert the fixture fitting straight up into the track until it seats evenly, close handle completely, switch on. If using CONTROLTrack, a second data handle will also need to be turned counterclockwise.

If using one circuit track or CONTROLTrack, make sure that the brass contacts which protrude from the side of the fixture fittings are inserted facing the copper busbars. CONTROLTrack handles will not engage if installed backwards. CONTROLTrack comes with a label inside track backbone to identify power and data.



SURFACE CONTROLTrack • WIRING DIAGRAM

Diagrams apply to 0-10V and Lutron Ecosystem

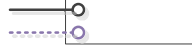
Left End Feed
TRK-SC-EF1L-YYYY



Straight Joiner/Feeder
TRK-SC-SJ1-YYYY



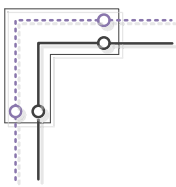
Right End Feed
TRK-SC-EF1R-YYYY



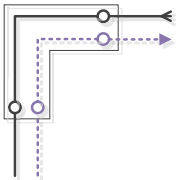
—○— POWER
- - -○- - - DATA

NOTE:
ALL DIAGRAMS SHOWN ARE INSTALLED VIEW, NOT RCP. EXCEPT AS NOTED, ALL MODIFICATIONS CAN BE DONE SIMPLY AND QUICKLY ON THE JOB BY REARRANGING THE SUPPLIED CONNECTORS.

L Joiner/Feeder
TRK-SC-LJ1-YYYY

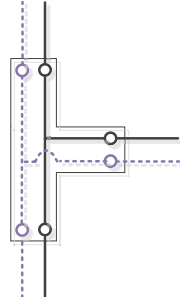


FACTORY WIRING

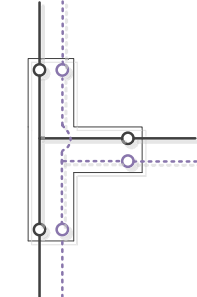


ALTERNATE FIELD WIRING

T Joiner/Feeder, LEFT
TRK-SC-TJ1L-YYYY

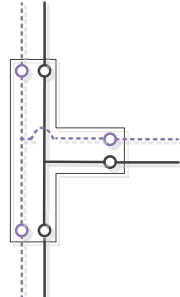


FACTORY WIRING

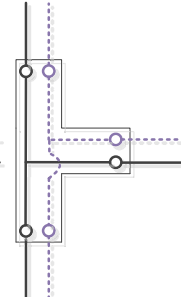


ALTERNATE FIELD WIRING

T Joiner/Feeder, RIGHT
TRK-SC-TJ1R-YYYY



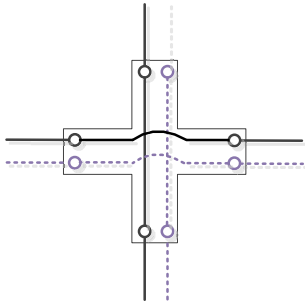
FACTORY WIRING



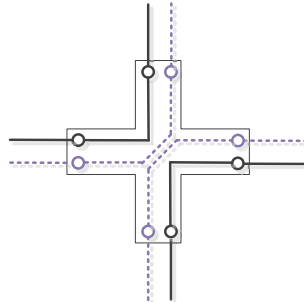
ALTERNATE FIELD WIRING

NOTE:
ALL JOINER/FEEDERS CAN BE FIELD MODIFIED TO SUIT INSTALLED REQUIREMENTS FOR MULTIPLE POWER CIRCUIT AND DIMMING ZONES. CONSULT FACTORY FOR MORE DETAILS.

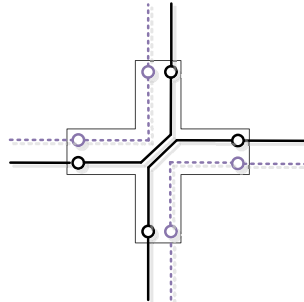
X Joiner/Feeder
TRK-SC-XJ1-YYYY



FACTORY WIRING



ALTERNATE FIELD WIRING



ALTERNATE FIELD WIRING



SURFACE CONTROLTrack • WIRING DIAGRAM

Diagrams apply to DMX

Left End Feed Terminator
TRK-SC-EFT1L-YYYY



Left End Feed
TRK-SC-EF1L-YYYY



Straight Joiner/Feeder
TRK-SC-SJ1-YYYY



Right End Feed
TRK-SC-EF1R-YYYY



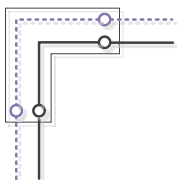
Right End Feed Terminator
TRK-SC-EFT1R-YYYY



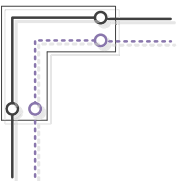
—○ POWER
- - -○ DATA
- - -■ DATA TERMINATION

NOTE:
ALL DIAGRAMS SHOWN ARE INSTALLED VIEW, NOT RCP. EXCEPT AS NOTED, ALL MODIFICATIONS CAN BE DONE SIMPLY AND QUICKLY ON THE JOB BY REARRANGING THE SUPPLIED CONNECTORS.

L Joiner/Feeder
TRK-SC-LJ1-YYYY

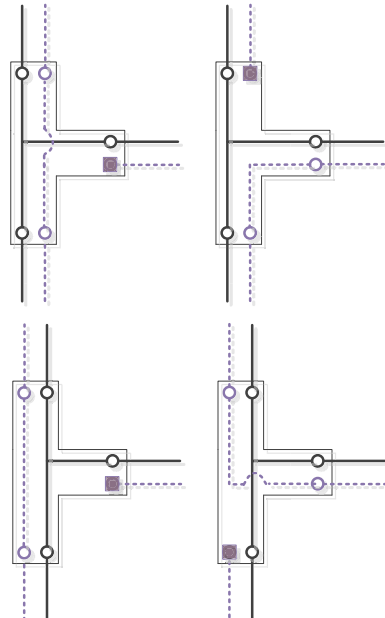


FACTORY WIRING



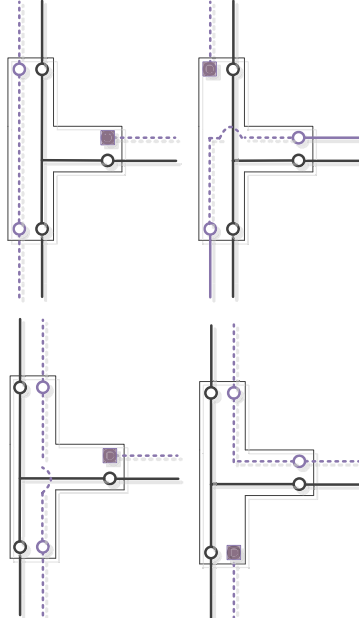
ALTERNATE FIELD WIRING

T Joiner/Feeder, LEFT
TRK-SC-TJ1L-YYYY



DMX CONTROL REQUIRES MODIFICATION TO THE FACTORY WIRING. RIGHT DMX TERMINATOR IS REQUIRED, ORDERED SEPARATELY
TRK-AC-CT1R

T Joiner/Feeder, RIGHT
TRK-SC-TJ1R-YYYY

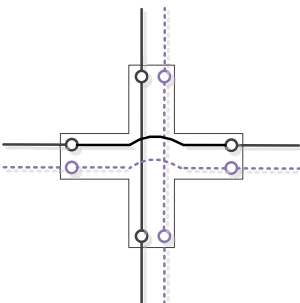


DMX CONTROL REQUIRES MODIFICATION TO THE FACTORY WIRING. LEFT DMX TERMINATOR IS REQUIRED, ORDERED SEPARATELY
TRK-AC-CT1L

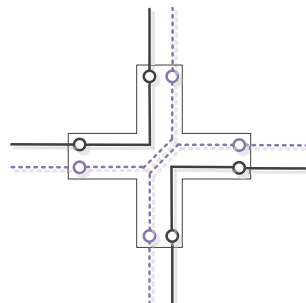
NOTE:
ALL DMX RUNS MUST BE TERMINATED. A DMX TERMINATOR CAN BE ADDED TO ANY JOINER/FEEDER. MUST BE ORDERED SEPARATELY
TRK-AC-CT1L (LEFT)
TRK-AC-CT1R (RIGHT)

NOTE:
ALL JOINER/FEEDERS CAN BE FIELD MODIFIED TO SUIT INSTALLED REQUIREMENTS FOR MULTIPLE POWER CIRCUIT AND DMX RUNS. CONSULT FACTORY FOR MORE DETAILS.

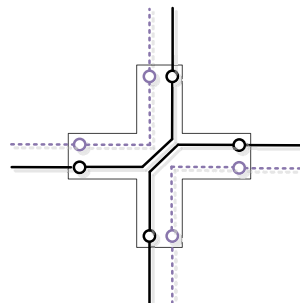
X Joiner/Feeder
TRK-SC-XJ1-YYYY



FACTORY WIRING



ALTERNATE FIELD WIRING

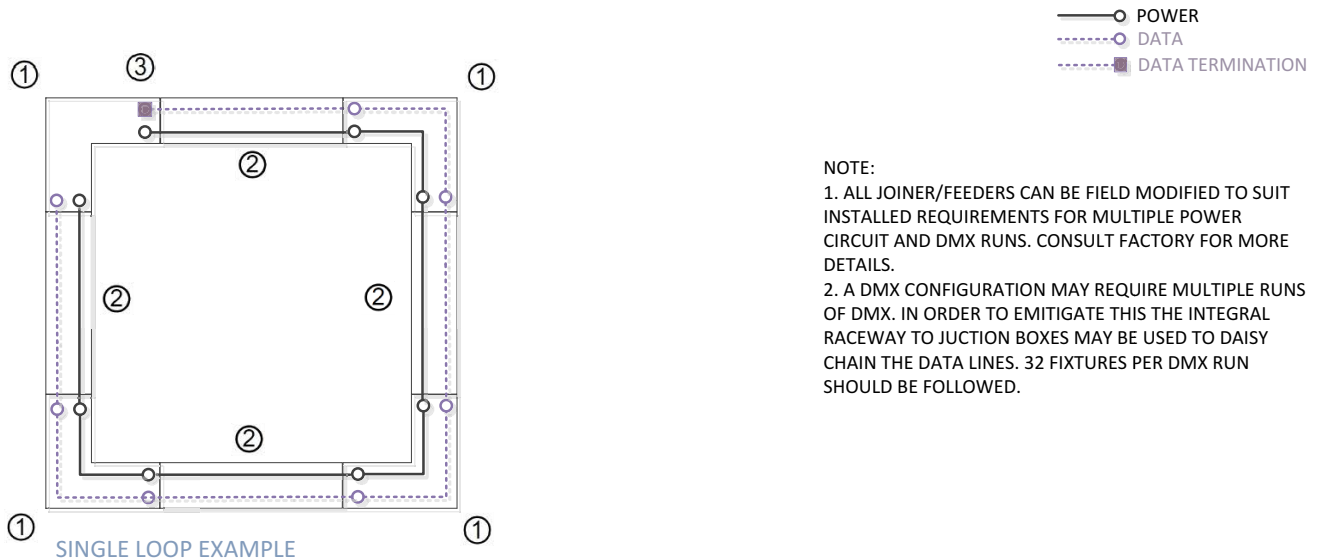


ALTERNATE FIELD WIRING



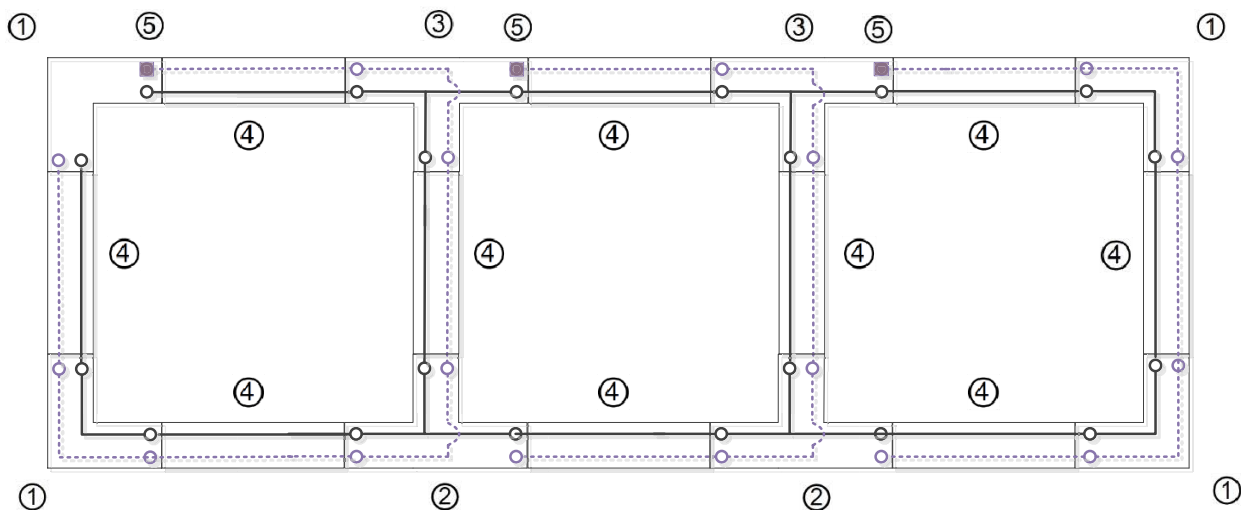
SURFACE CONTROLTrack • WIRING DIAGRAM

Diagrams apply to DMX



PARTS LIST

1. TRK-SC-LJ1-YYYY – L JOINER, 4X (1 IS FIELD MODIFIED TO ACT AS FEEDER/TERMINATOR)
2. TRK-SC-XX1-YYYY – SURFACE CONTROLTrack SECTION, 4X
3. TRK-AC-CT1L – CONNECTOR TERMINATOR, 1X



PARTS LIST

1. TRK-SC-LJ1-YYYY – L JOINER, 4X (1 IS FIELD MODIFIED TO ACT AS FEEDER/TERMINATOR)
2. TRK-SC-TJ1L-YYYY – T JOINER LEFT, 2X (BOTH ARE FIELD MODIFIED TO REMOVE THE "Y" IN DMX DATA)
3. TRK-SC-TJ1R-YYYY – T JOINER RIGHT, 2X (BOTH ARE FIELD MODIFIED TO ACT AS TERMINATOR)
4. TRK-SC-XX1-YYYY – SURFACE CONTROLTrack SECTION, 10X
5. TRK-AC-CT1L – CONNECTOR TERMINATOR, 3X

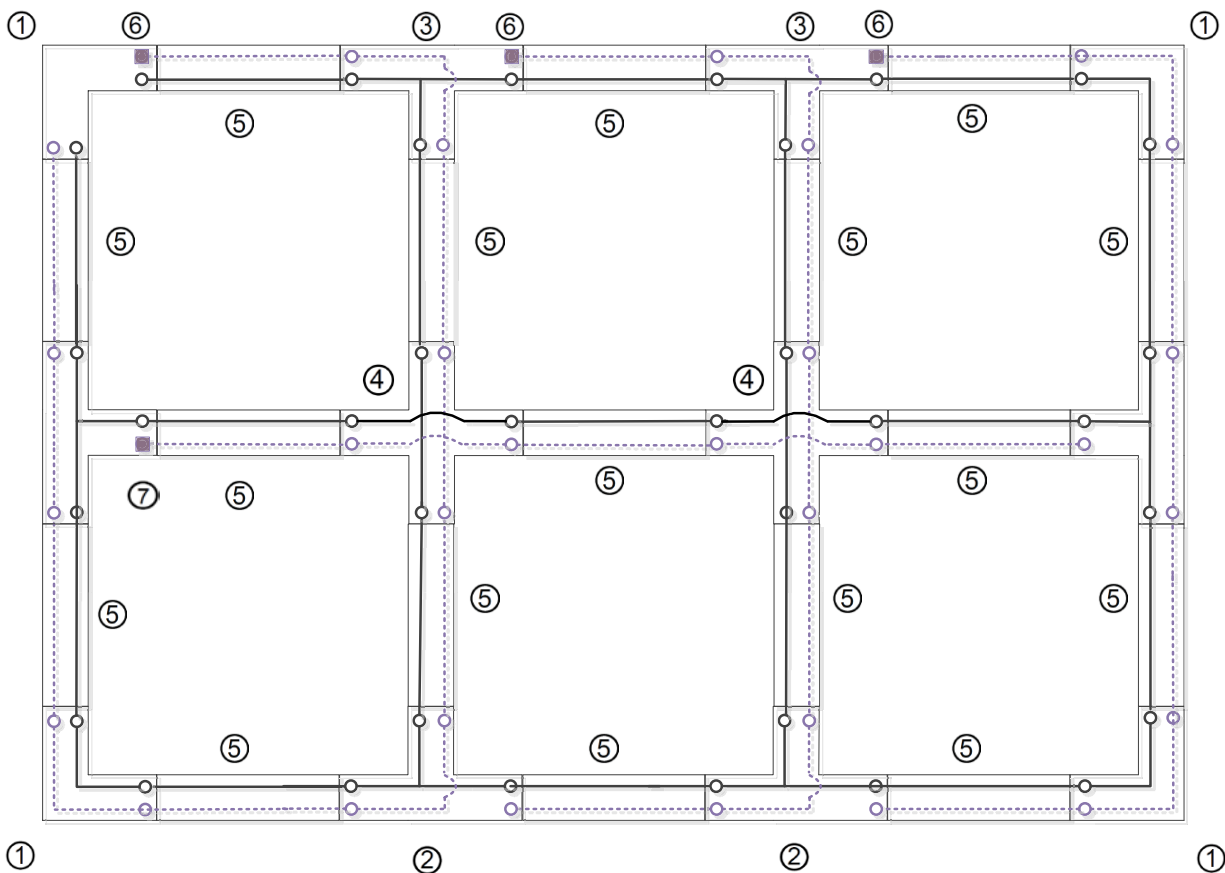
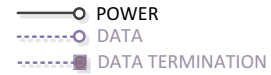
SURFACE CONTROLTrack • WIRING DIAGRAM

Diagrams apply to DMX

NOTE:

1. ALL JOINER/FEEDERS CAN BE FIELD MODIFIED TO SUIT INSTALLED REQUIREMENTS FOR MULTIPLE POWER CIRCUIT AND DMX RUNS. CONSULT FACTORY FOR MORE DETAILS.

2. A DMX CONFIGURATION MAY REQUIRE MULTIPLE RUNS OF DMX. IN ORDER TO EMITIGATE THIS THE INTEGRAL RACEWAY OR JUCTION BOXES MAY BE USED TO DAISY CHAIN THE DATA LINES. 32 FIXTURES PER DMX RUN IS THE MAXIMUM.



2 X 3 GRID EXAMPLE

PARTS LIST

1. TRK-SC-LJ1-YYYZ – L JOINER, 4X (1 IS FIELD MODIFIED TO ACT AS FEEDER/TERMINATOR)
2. TRK-SC-TJ1L-YYYZ – T JOINER LEFT, 3X (BOTH ARE FIELD MODIFIED TO REMOVE THE “Y” IN DMX DATA)
3. TRK-SC-TJ1R-YYYZ – T JOINER RIGHT, 3X (BOTH ARE FIELD MODIFIED TO ACT AS TERMINATOR)
4. TRK-SC-XJ1-YYYZ – X JOINER, 2X
5. TRK-SC-XX1-YYYZ – SURFACE CONTROLTrack SECTION, 17X
6. TRK-AC-CT1L – CONNECTOR TERMINATOR, 3X (left)
7. TRK-AC-CT1R – CONNECTOR TERMINATOR, 1X (right)

SURFACE CONTROLTrack • DATA GUIDELINES

GENERAL

- CAUTION: Data lines only for low voltage, 30V 2A
- CAUTION: Data and Power should to be installed into separate feeds to prevent unstable data transmission. AC voltages may induce interference on low voltage wiring when run in the same conduit. Analog (0-10V) is more susceptible than digital communication (DMX, etc.). Shielded pair cable is suggested for data runs with shielding grounded to earth at the controller.

0-10V

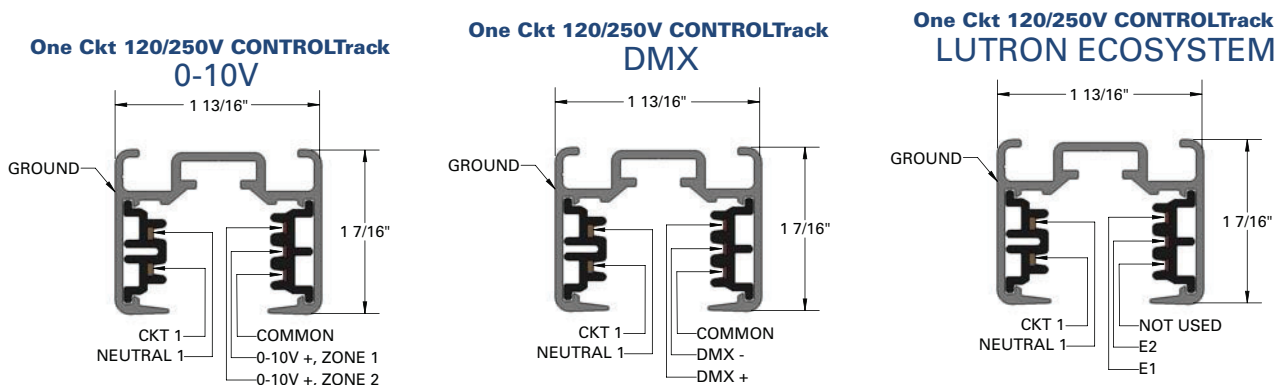
- One or Two 0-10V control zones may be installed in single track run. Common wires can be connected together at feed. Maximum fixture quantity is dependent on the capacity of the controller. The length of 0-10V (analog) wiring on 18ga wire is 300ft.

DMX

- DMX wiring must be installed to standard protocols (DMX-512A (ANSI E.1.11) or data transmission may become unstable. Maximum number of DMX fixtures on a single data run is 32. Maximum number of RDM fixtures on a single data run is 20. No loops, 'Y's, or stars in the DMX data path that would disrupt data transmission. Each DMX data run needs be terminated with a 120-ohm resistor or the use of a mini terminator
- Each DMX run should not exceed 1000ft. DMX cable should meet RS485 standard.

Lutron EcoSystem

- Maximum number of Lutron EcoSystem fixtures on a single data run is 64. Loops in the Lutron EcoSystem data path are NOT allowed. Y's and branches are allowed.
- Lutron EcoSystem data run should not exceed 570ft on 18ga wire.



Data Terminal	0-10V	DMX	Lutron EcoSystem
1	Common	Common	N/A
2	+, Control Zone 1	-	-
3	+, Control Zone 2	+	+