

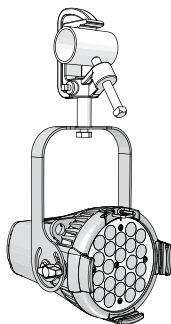
# ETC Installation Guide

## Desire<sup>®</sup> Series D22

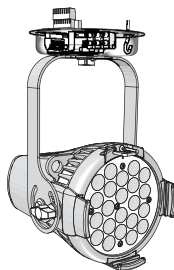
### Introduction

ETC's Desire D22 is designed for indoor installations and has a rugged die-cast enclosure, steel mounting yoke, and noise-free, fan-less operation.

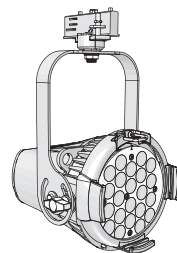
The D22 can be pipe mounted with a C-clamp, canopy mounted, or track mounted. Mounting accessories are available. Contact ETC Customer Service for assistance; contact information is located at the bottom of this page.



Portable



Canopy Mount



Track Mount

For information about the operation of the D22 Desire Series, refer to *Desire Series by ETC D22, D40, D40XT, D60 User Manual*. ETC manuals are available for download at <http://www.etconnect.com/downloads.aspx>.

#### CAUTION:

*Do not attempt to install or use a fixture until you read and understand the installation instructions and safety labels.*

#### WARNING:

*This fixture must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.*

## Specifications

### Environment

Operates in ambient temperatures of 0°C to +40°C (32°F to 104°F).

#### CAUTION:

*Risk of eye injury. Do not stare directly into the light. Do not operate in proximity to flammable materials.*

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7411M2100 ■ Rev C ■ Released 2013-11 ■ ETC intends this document to be provided in its entirety.

## Control

### Portable

The Portable D22 is provided with 5-pin XLR connectors on the back for in and thru connection to a DMX/RDM control network.

### Canopy Mount

The D22 Canopy Mount fixture is provided with one cable, which provides power and data into the canopy.

A termination board is incorporated into the mounting plate for installation onto a voltage-separated junction box (junction box provided by others, voltage barrier provided by ETC) and provides termination for control wiring.

- Connection of the D22 data cable to a provided screw-down connector, which is pre-wired at the factory. The connector is plugged into the termination board. The braided shield is connected inside the fixture and should not be connected in the canopy.
- Connection of DMX/RDM input from the control source. This connection can be cable type Belden 9729 (or equivalent) to the provided screw terminal. When using Cat5 (or equivalent) cable type for DMX/RDM input, order a Cat5 termination kit from ETC (part number 4100A1013). Cat5 termination instructions and an IDC connector are provided with the termination kit.
- Connection of DMX/RDM thru to the next DMX device. This connection may also be either Belden 9729 or Cat5. The connector is not provided. Order the appropriate DMX termination kit for the cable type used from ETC (Belden 9729 use 4100A1012 or Cat5 use 4100A1013). Termination instructions and the appropriate connector is provided with the termination kit. Up to 32 DMX/RDM devices can be daisy-chained together per data run.

### Track Mount

The Track Mount fixture's power and data connections are made through the Eutrac MultiAdaptor mounting adapter. No further wiring to the fixture is required. Refer to the track installation instructions for more information.

## Electrical



**WARNING:** *Ensure the main power supply is off before installing or wiring a fixture.*

The Desire D22 Portable is provided with a permanently installed power cord with 3-prong Edison connector. Region specific connectors are available. Contact ETC for available options. The Canopy fixture is provided with power and data wired to the canopy and should be terminated in a voltage-separated junction box (provided by others). The Track mount receives power through its MultiAdaptor, which connects to one of two circuits.

### Power Requirements

The universal power supply accepts 100-240 VAC 50/60Hz.



**CAUTION:** *Do not use a fixture for any voltage for which it is not rated. Do not exceed the specified voltage and current input for any fixture. Connecting the fixture to a voltage outside the acceptable range may damage the unit and will void the factory warranty.*



**Note:** *The fixture must be grounded.*  
*Application appropriate electrical junction box with cord grips are required. A voltage-separated junction box is required. A RACO 232 series 4 x 2-1/8 inch deep junction box is recommended. The junction box must not interfere with fixture focusing.*  
*The fixture is factory pre-wired. Opening the housing is not required.*  
*The fixture must be connected to a non-dimmable power source. Dimming the unit will damage the fixture and void the factory warranty.*

### Power Connections

Mains	Europe	North America
Line	Brown	Black
Neutral	Blue	White
Ground	Green/Yellow	Green

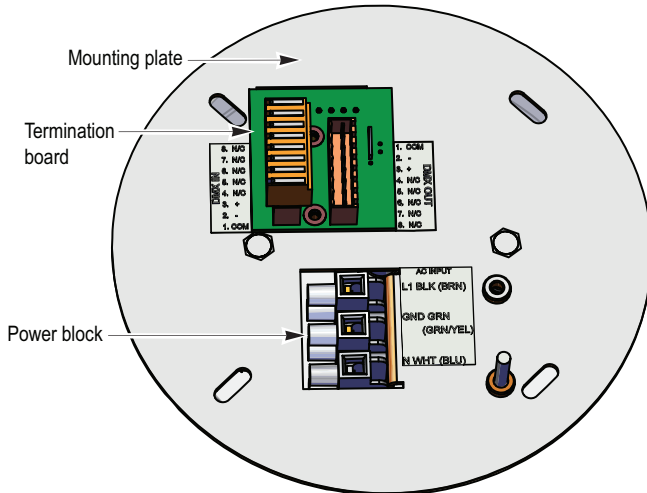
# Installation

## Termination

The D22 Desire Series requires termination at the last fixture on a DMX/RDM line with a 120 ohm resistor.

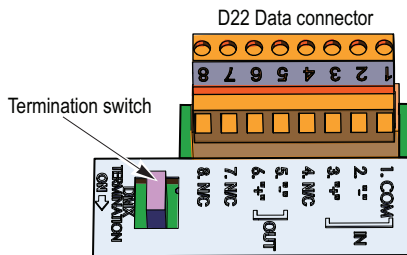
- The Portable fixture is self terminated.
- The Track fixture is terminated with a DataTrack DMX Term Block, ETC Part # 7066A1030.
- The Canopy fixture is terminated on the Termination board inside the canopy.

## Canopy Fixture Mounting Plate and Termination Board



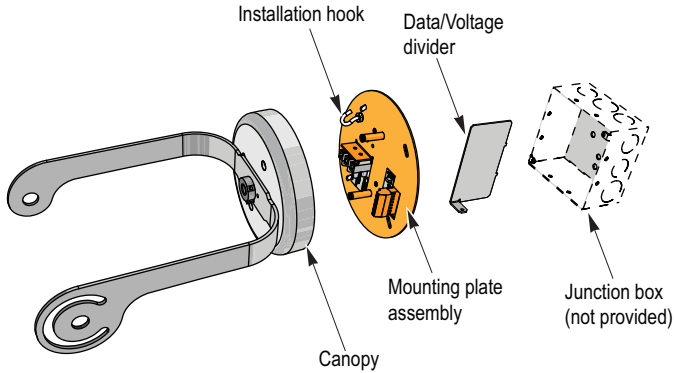
## Termination

The Canopy fixture is terminated with the S1 switch on the Termination board. Set the switch to the ON position to terminate the last fixture. All others on the DMX/RDM line must be set to OFF.



# Installing the Canopy Fixture

The Canopy D22 Desire Series is installed on to a RACO 232 series 4 x 2-1/8 inch deep double junction box. The fixture is supplied with a divider to separate the data network from the line voltage inside the junction box.



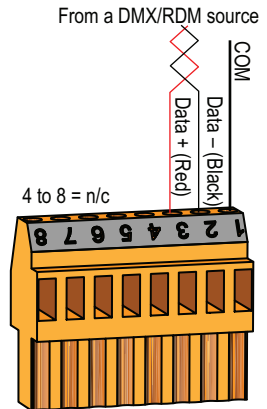
**CAUTION:** *Separate the line voltage from the data side in the junction box. Install the voltage barrier provided by ETC.*

## DMX/RDM Cable Installation

Step 1: Terminate DMX/RDM input from the control source to the junction box. This connection could be Belden 9729 or Category 5.

### If using Belden 9729 for DMX/RDM input:

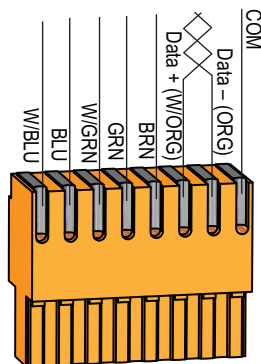
- a: Reference the *DMX Cable Preparation for Screw Termination Setup Guide* for instructions to prepare and terminate Belden 9729 for DMX input cable to the screw terminal connector.
- b: Install the screw terminal connector with wires terminated to the DMX/RDM Input receptacle on the termination board.



Belden 9729 (or equivalent) wire termination to screw connector

### If using **Category 5** for DMX/RDM input:

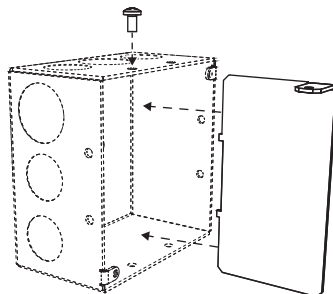
- a: Reference the *Cat5 Cable Preparation for IDC Termination Setup Guide* for instructions to prepare and terminate Category 5 for DMX/RDM input cable to the insulation displacement connector.
  - b: Install the IDC connector with wires terminated to the DMX/RDM Input receptacle on the termination board.
- Step 2: Optionally, terminate DMX/RDM thru to the next device in the DMX data run. Up to 32 DMX/RDM devices can be daisy-chained together per data run. Refer to [Control on page 2](#).
- a: Reference the specific termination setup guide for the type of cable used (either Belden 9729 or Category 5) in the installation. Termination kits are ordered separately.
  - b: Install the connector with wires terminated to the DMX/RDM Thru receptacle on the termination board.
- Step 3: Terminate DMX/RDM data signal for the last DMX/RDM device in the data run by setting the termination switch on the termination board to ON. All other devices in the data run maintain the factory default termination switch setting OFF. Refer to [Termination on page 4](#).



Cat5 (or equivalent) wire termination to IDC connector

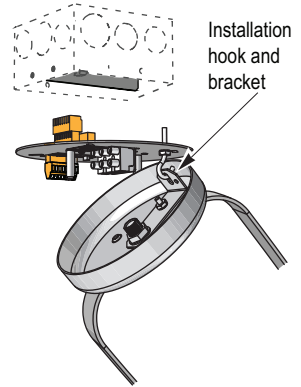
### Canopy Mounting Plate Installation

- Step 1: Install the divider in the junction box with the provided screw, separating the power side from the data side.
- Step 2: Strip the supply power wires back 1/2 inch (13mm).
- Step 3: Use a #2 Phillips screwdriver to remove the two screws retaining the Canopy to the mounting plate.
- Step 4: Following the label on the mounting plate, attach the supply power wires to the power block on the mounting plate. Refer to [Canopy Fixture Mounting Plate and Termination Board on page 4](#).
- Step 5: Attach the power supply ground wire to the mounting plate.
- Step 6: Plug in the input DMX/RDM connector (and thru DMX/RDM connector if used) to the appropriate location on the terminal board.
- Step 7: Attach the mounting plate to the junction box, ensuring the cables are properly routed inside the box.



## Canopy Fixture Installation

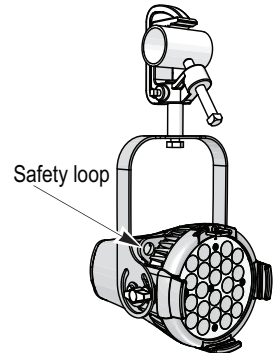
- Step 1: Strip the fixture's power wires back 1/2 inch (13mm).
- Step 2: Using the hole in the mounting bracket, hang the canopy on the Installation hook.
- Step 3: Following the label on the mounting plate, attach the power wires to the power block.
- Step 4: Secure the fixture ground wire to the mounting plate.
- Step 5: If the fixture is the last fixture on a DMX/RDM line, terminate the fixture. See [Termination on page 4](#).
- Step 6: Insert the DMX/RDM connector into the Terminal board.
- Step 7: To determine the alignment of the canopy, orientate the fixture to where it will need to be focused.
- Step 8: Align the holes in the canopy with the mounting posts on the mounting plate and using a #2 Phillips screwdriver, secure the canopy to the mounting plate with the canopy screws.
- Step 9: Focus the fixture.



## Installing the Portable Fixture

The C-clamp attaches the fixture to the mounting pipe. The position of the fixture can be adjusted once it is mounted. Tightly fasten the C-clamp to the yoke with the provided yoke bolt and lock washer.

- Step 1: Place the C-clamp on the mounting pipe, and then tighten the pipe bolt to secure it.
- Step 2: Loop a safety cable over the pipe and attach the ends to the safety cable loop on the body of the fixture.
- Step 3: Loosen the C-clamp yoke bolt and rotate the yoke to the desired position.
- Step 4: Tighten the bolt to lock the fixture.



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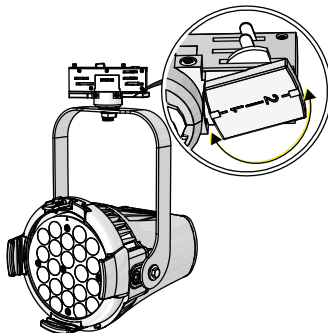
### CAUTION:

*Tighten the C-clamp pipe bolt to about 18 inch lbs. (Approximately finger tight plus up to one-quarter turn.) Do not use excessive force.*

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## Installing the Track Fixture

- Step 1: Insert the DataTrack adapter into the track. The adapter only fits into the track one way with the tabs nesting into the track's groove.
- Step 2: Rotate the locking mechanisms to lock the adapter into place.
- Step 3: Use the circuit selection lock to select circuit 1 or 2. The desired circuit number should point toward the center of the adaptor.



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**WARNING:** *When using the circuit selection lock, ensure the selected circuit is a **constant power** circuit. Dialing into a dimmable circuit may cause fixture damage that will void the ETC warranty.*

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- Step 4: Focus the fixture.

## Addressing

Fixture addresses must be set between 1 and 510.

- Each Desire fixture must be considered a separate DMX device for the purpose of DMX line-loading calculations.

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**Note:** No more than **32 DMX devices** can be daisy-chained together on a single run. For runs of fixtures totaling more than 32 DMX devices, a DMX splitter will need to be used to split the DMX runs.

*When using RDM with track fixtures, ETC recommends connecting no more than **20 fixtures** on a single run.*

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## Initial Power Up

Control and configuration of the Desire D22 can be achieved over a DMX/RDM control network, or directly from a connected computer running appropriate software. When controlling the D22 directly from a PC, a Gadget Interface or DMX/RDM gateway is required.