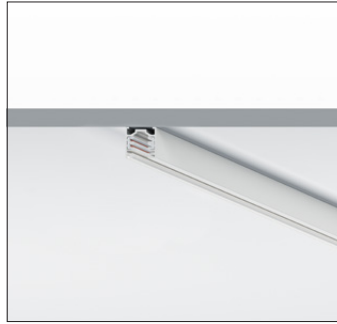


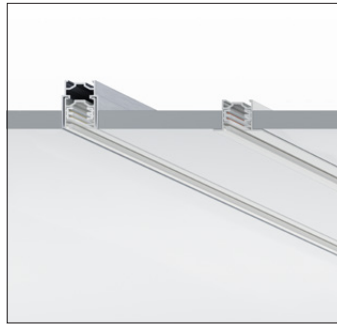


A guide for all lighting designers and technicians wanting to discover the possibilities of ERCO track



Surface mounting

7



Recessed mounting

10



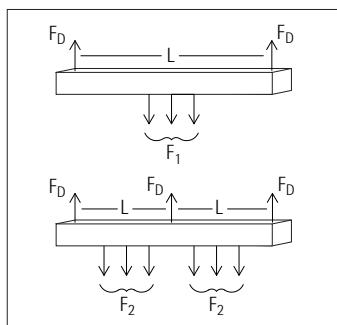
Pendant mounting

15



Electrical installation

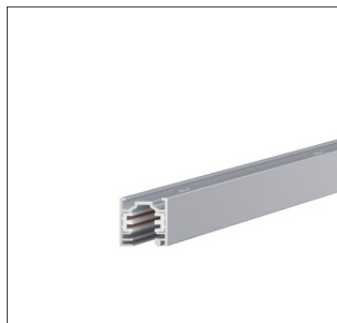
20



Static load

28

An overview of our tracks



ERCO track, flanged track and singlet

Classic application

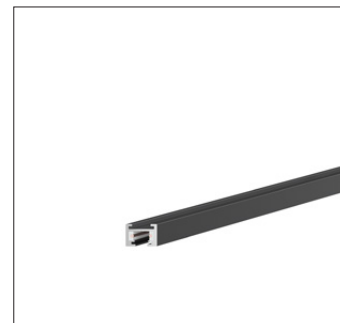
ERCO track is the flexible and sustainable infrastructure for spotlights, downlights, wallwashers and pendant luminaires. The track can be fixed to ceilings and walls and luminaires can be moved or replaced with ease. Luminaires from other manufacturers can also be used in ERCO track – appropriate adapters as OEM components are available from ERCO.



ERCO Hi-trac and light structure

For higher loads

Hi-trac and light structures are a heavy-duty track infrastructure for suspending spotlights, downlights, wallwashers and pendant luminaires. The Hi-trac profiles with wide spans of up to 4m are particularly recommended in rooms with just a few available suspension points. Two variants of the Hi-trac profile are available: either with an empty upper profile for further cable routing or with indirect luminaires for illuminating ceilings.



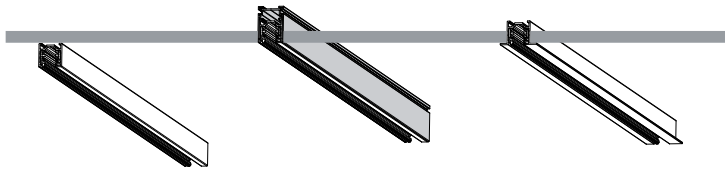
ERCO Minirail 48V track and singlet

Miniaturised infrastructure

With Minirail 48V, ERCO offers a miniaturised alternative to the classic ERCO track as the basis for flexible, space-saving lighting installations. Minirail 48V with a profile width of just 22 mm is ideal for all situations requiring the smallest possible system dimensions, whether for aesthetic or technical reasons.

	Track and flanged track	Hi-trac	Minirail 48V
Versions	Track Flanged track Singlets	Track Track with indirect distribution luminaire	Track Singlets
Types of mounting	Recessed Surface-mounted Pendant	Pendant	Recessed Surface-mounted Pendant
Control options for luminaires	Switchable Phase dimmable Push Dim DALI Multi-Dim Casambi Bluetooth Zigbee	Switchable Phase dimmable DALI Push Dim Multi-Dim Casambi Bluetooth Zigbee	Switchable DALI (via gateway) Casambi Bluetooth Zigbee
Width x height	33.5 x 34mm	38 x 72mm	22 x 16mm
Length	1m 2m 3m 4m (can be shortened on site)	2m 3m 4m (can be shortened on site)	1m 2m 3m (can be shortened on site)
Accessories	Suspension equipment Plaster trim profile Connectors Adapters Adapters for safety sockets Mounting components Display hooks	Suspension equipment Connectors Adapters Adapters for safety sockets Mounting components Display hooks	Suspension equipment Plaster trim profile Connectors Adapters Mounting components

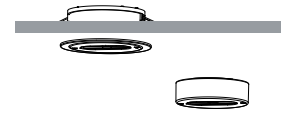
ERCO track system and accessories –
a manufacturer-independent global standard.



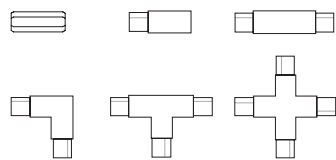
ERCO track can be mounted directly on ceilings, walls or even on cornices.

A plaster trim profile (accessory) turns surface-mounted track into flush-mounted track.

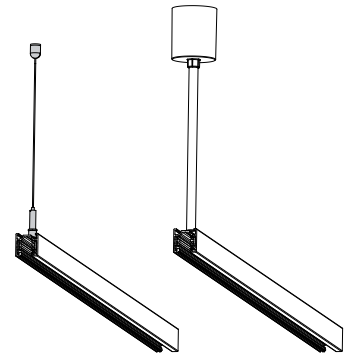
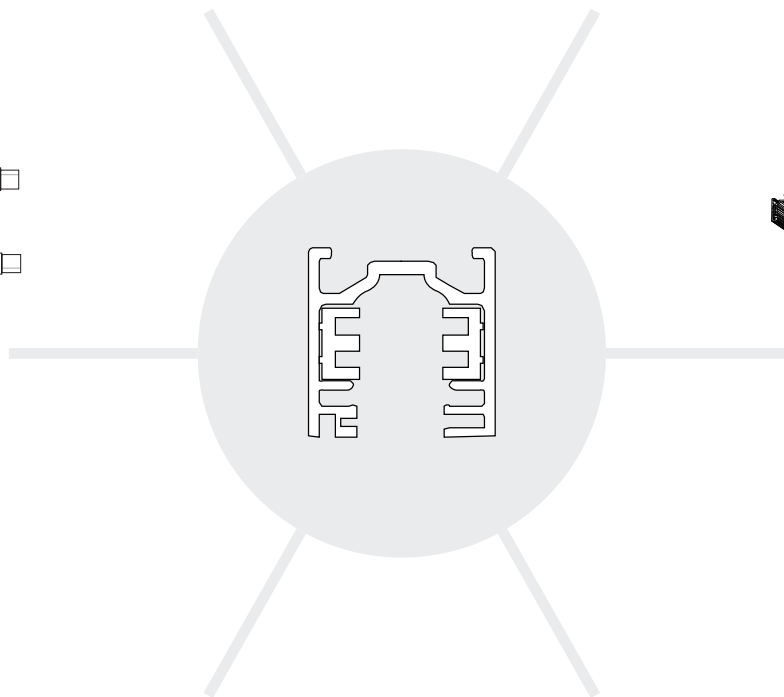
In the flanged track variant you can use the track as a support for ceiling elements.



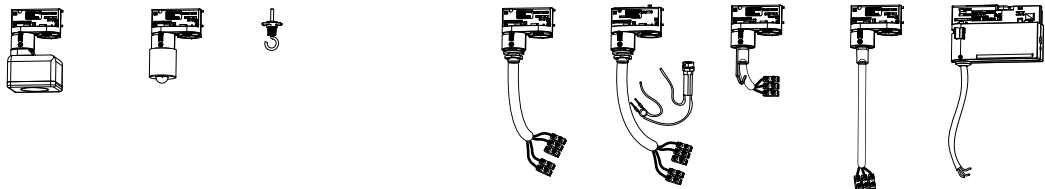
The track for a spotlight: the ERCO singlet.



ERCO connectors
Provide power and enable all types of control.



Wire suspension or pendant tube (both available as accessories) transforms ERCO track into a suspended structure.



ERCO accessories
Electrical and mechanical accessories such as sensors, sockets and display hooks extend the range of applications.

OEM adapter for all luminaires
Use our track as a high quality infrastructure, and not only for ERCO luminaires. We supply matching adapters, for example for spotlights and pendant luminaires, as OEM components to other luminaire manufacturers.

Benefit from a long-term investment



Proven, future-proof and manufacturer-independent
Track from ERCO has been used around the globe for decades. An important plus: new spotlights mechanically fit into existing systems and luminaires put in operation years ago can be used in new systems. ERCO also offers adapters as OEM components for any other luminaire manufacturer.

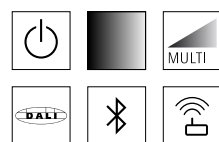


Very extensive accessories
Use your ERCO track infrastructure for your individual needs. Accessories such as display hooks allow you to suspend paintings from the track, safety sockets can be used to operate AV equipment, and adapters for pendant luminaires allow you to install decorative luminaires.



Extremely stable and durable
ERCO track is manufactured from high quality aluminium in the ERCO light factory in Germany. Simply install lengths up to 4 m in a single piece. The spotlight adapters are similarly robust: designed for continuous use, they are not damaged by frequent insertion and removal.

Gain planning security



DALI, Zigbee, Casambi Bluetooth, phase dimming, Push Dim or simply switch on and off?
ERCO track can be used to implement all common types of control. The DALI Casambi Gateway even allows DALI control of luminaires in an existing 3-circuit system.

HCL



Support of Human Centric Lighting concepts
Thanks to automated dimming and individual operation, the lighting can be flexibly controlled via the track. Motion sensors and control via Casambi Bluetooth make it possible to adjust the lighting according to personal preferences.

Straight ahead, around the corner or as a geometric shape?
Design your track system without restrictions: L, X, T and flexible connectors enable diverse geometries. Suitable components are specified as accessories on the data sheet of the track.

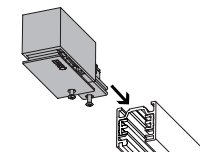
Save time and effort through simple mounting



Simply cut to size and install on site
ERCO track is easily cut to size to the nearest millimetre on site using a mitre saw. There is no danger of damaging the conductor paths in the process.



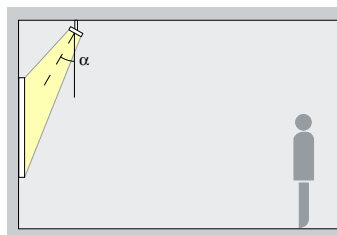
No special protective measures required for DALI track
ERCO track also route the DALI conductors within the profile so that they cannot be touched. Normative requirements are thus fulfilled and no further measures are required.



Simple mounting
Pre-wired connectors allow quick and easy installation on site. The mechanical coding prevents components from being incorrectly fitted together.

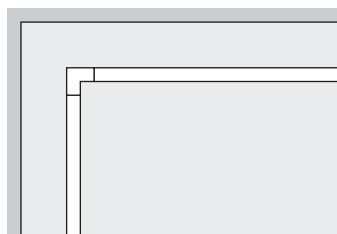
Seven steps to your track project

Step 1: The right arrangement



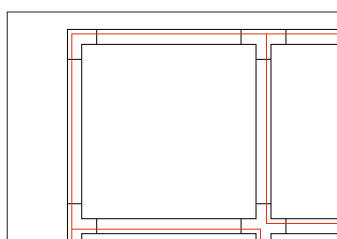
In museums and galleries, track usually runs parallel to the walls. For uniform wallwashing, you can apply approx. one third of the wall height as wall spacing; for accent lighting, the 30° museum angle helps with positioning. In offices, track often runs parallel to the alignment of the desks.

Step 2: Plan the layout and determine the type of track



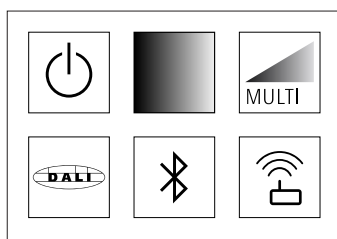
Draw the track layout in the reflected ceiling plan of the room. Give the track a visible width so that you can draw in the protective conductor routing later. If the track has to be integrated into a ceiling system, you can also use ERCO flanged track as an alternative to the track.

Step 3: Draw in the protective conductor



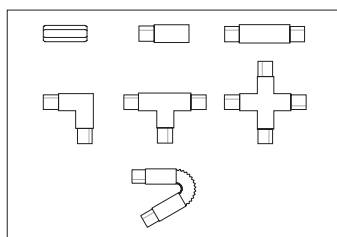
ERCO track has a groove on one side. The protective conductor is located on this. All live ends and connectors are mechanically coded so that routing of the protective conductor is always ensured. Draw in the protective conductor in your plan, e.g. as a red line, in order to select the correct live ends and connectors later.

Step 4: Determine the control



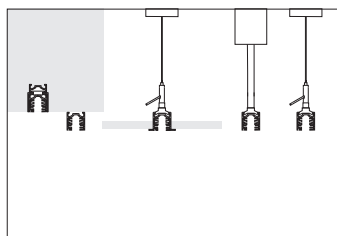
With the control type (3-circuit or DALI) you define the type of live ends and connectors as well as the required number of cores and thickness of the supply lines and control lines. The track itself is the same for all control types.

Step 5: Plan the live ends and connectors



Divide the track into segments depending on length and geometry. Please also observe the maximum electrical load (see p. 23). Live ends and connectors are available with right and left or internal and external protective conductor routing (see p. 21) and as DALI and 3-circuit versions.

Step 6: Select accessories for the type of mounting



Determine the mounting method of the track and thus also the necessary accessories. Using accessories, such as plaster trim profiles or pendant suspensions, allows various mounting solutions to be implemented. Take into account the mechanical load on the system (see p. 28).

Step 7: Specify the components

Parts list for flush rectangular geometry in a drywall ceiling

Number	Quantity	Description
1	4	Track
3	4	L-connector outside
4	4	Plaster trim profile
5	8	Suspension
6	8	Toggle

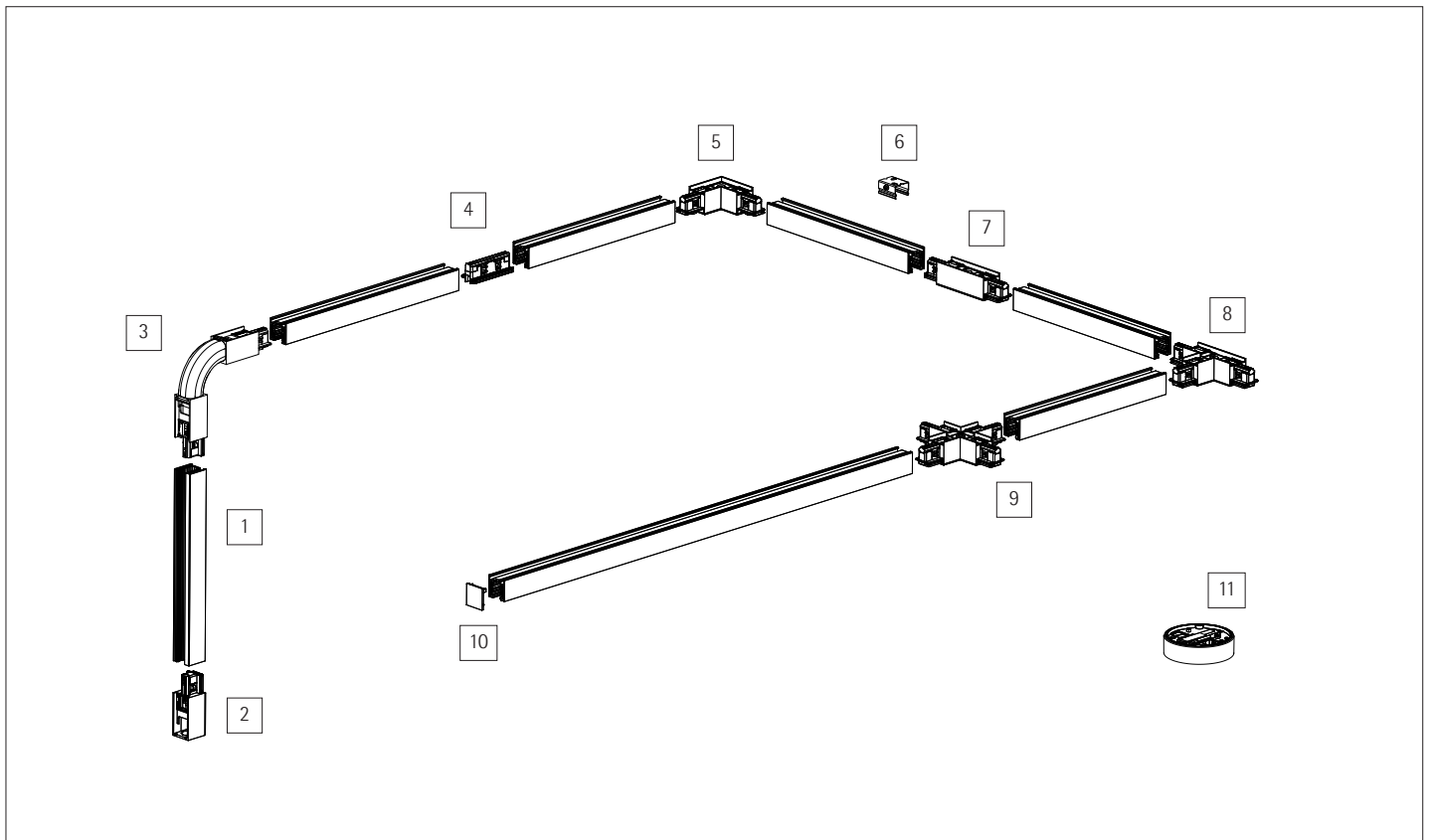
Enter the selected parts into a parts list. The accessories matching the track are specified on the data sheet of the track. The parts list and the planned track layout are an important basis for the later installation!

Surface mounting

Surface mounting is the most common mounting method and is suitable for most surfaces. Special colour coatings are also possible to integrate the track perfectly into the ceiling design. The planning aid for surface mounting supports you in the planning and installation of a surface mounted system and provides valuable tips. Many hints also apply for the other mounting methods! Please also note the information on selection and connection of the connectors.



Overview of available components for surface mounting



- | | |
|---------------------|------------------------|
| 1 Track | 7 Coupler, centre feed |
| 2 Live end | 8 T-connector |
| 3 Multiflex coupler | 9 X-connector |
| 4 Flush coupler | 10 End plate |
| 5 L-connector | 11 Singlet |
| 6 Fastening clip | |

Surface mounting

Sample installations

As examples, we have put together three common sample installations for you. In simple linear systems, routing of the protective conductor only plays a subordinate role and only influences the mounting direction of the luminaire. As soon as you use several connectors, you need to coordinate these with regard to the red marked protective conductor routing.



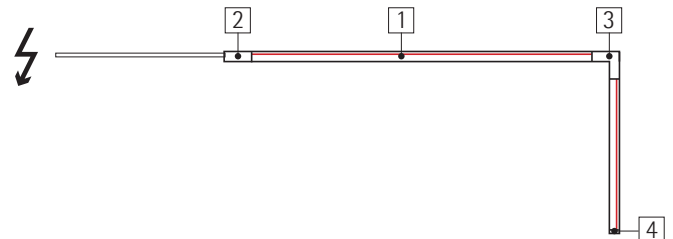
Parts list for linear design

Number	Quantity	Description
1	1	Track
2	1	Live end right
4	1	End plate



Parts list for L-design

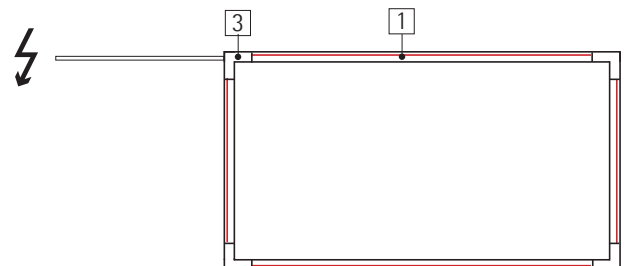
Number	Quantity	Description
1	2	Track
2	1	Live end right
3	1	L-connector outside
4	1	End plate



Parts list for rectangular design*

Position	Quantity	Description
1	4	Track
3	4	L-connector outside

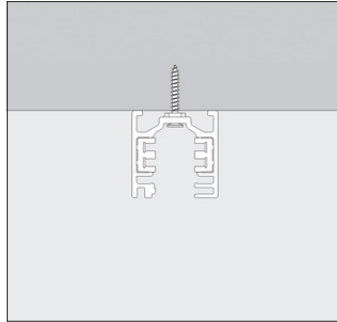
* In DALI operation, the DALI conductors must not form an electrically closed circuit, therefore interrupt the DALI conductors at a suitable point.



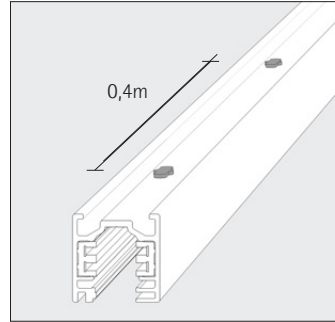
Surface mounting

Tips for planning and installation

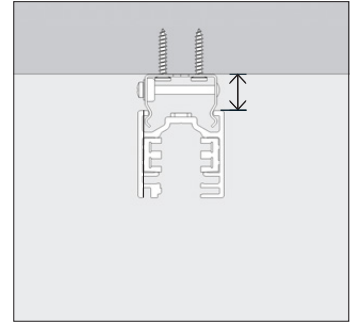
Installation planning for direct mounting and fixing clip



Surface mounting
To avoid mechanical stress on track connectors, fasten the track at its ends. Further fixing points may be necessary depending on the load and length. For this purpose, slotted holes are pre-punched at intervals of 0.4 m. In the case of screw fastening, a distance of 5 cm from the track ends must be maintained so that the connector can still be assembled.



Tip for installation: the shape of the pre-punched holes in the track allows the screw to be screw-fastened halfway into the ceiling and the track to then be placed on top. This is especially helpful if the track is installed by one person. The screw head should have a diameter of max. 8mm. Only plan with cylinder head screws or half round head screws.

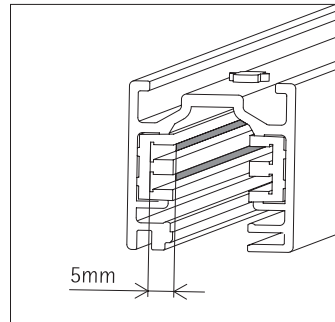


Mounting with fixing clips
The optional fixing clip (accessory) enables fixing on uneven surfaces, e.g. raw concrete ceilings. You can use it to compensate for unevenness of up to 14 mm in height. Position the fixing clips at the track ends and, depending on the load, between the connectors.

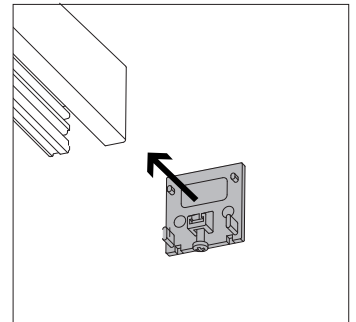
General planning and installation information



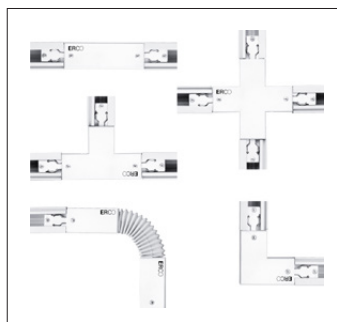
Shortening the track
You can order track cut to size. In many cases however it is advisable to shorten standard lengths directly on site, e.g. with a mitre saw. Make the cut square and clean so that there are no unsightly gaps at the joints.



Shortening the conductors
After cutting the track, always shorten all four conductors in the track by 5 mm for safety reasons. The appropriate tool for this is available as an accessory.



Using end plates
Always fit an end plate to the open end of a track for both safety and visual reasons.



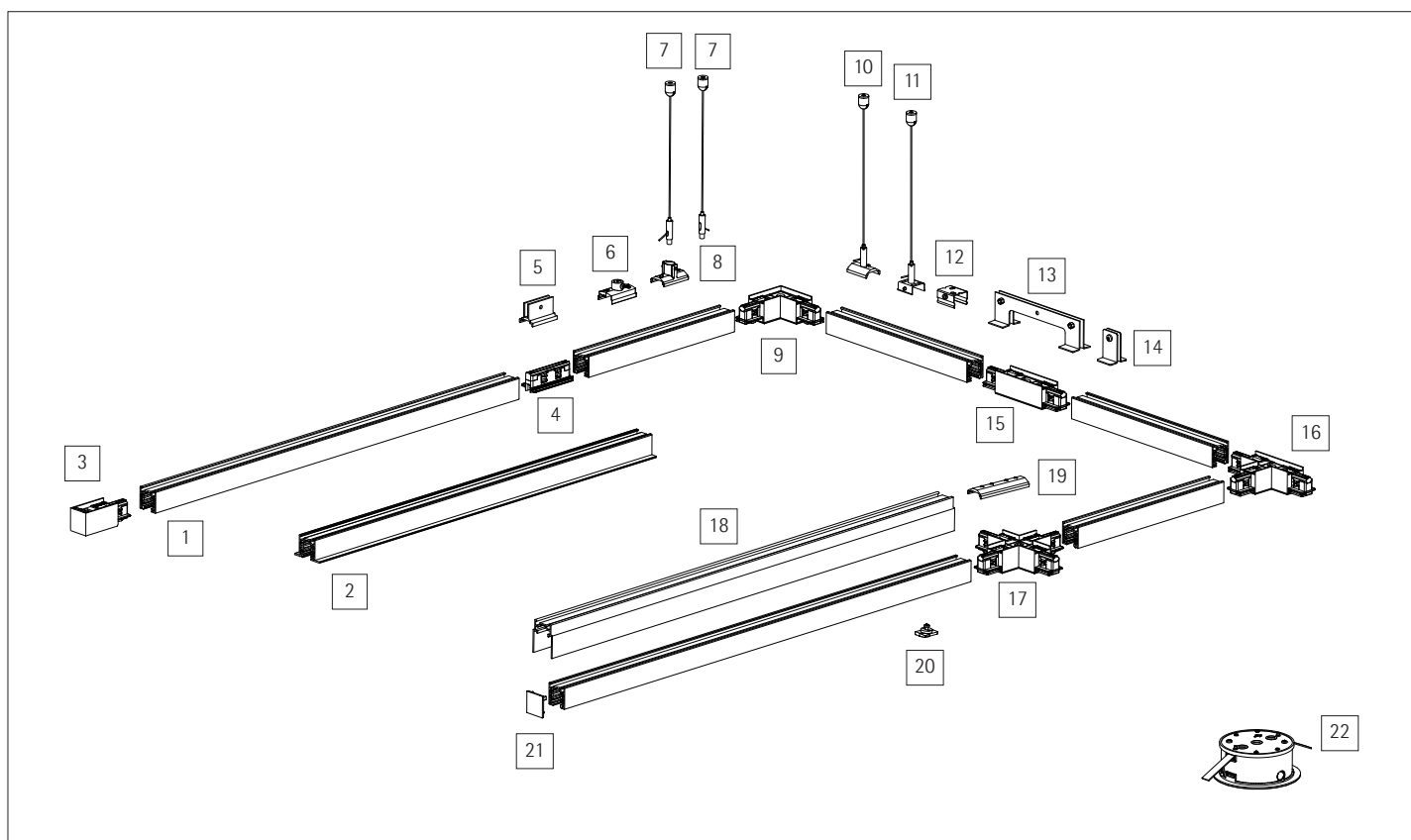
Using connectors
Connectors must not bear any mechanical load. For this reason always provide fixing points in front of and behind couplers, connectors or at track ends. Depending on the length and planned weight load, provide additional fixing points. The load diagrams contain indications for this (see p. 28)

Recessed mounting

Recessed mounting allows elegant installation of the track in the ceiling or wall. This is usually carried out using a plaster trim profile (accessory). This and other recessed mounting variants can be found in the corresponding sections. The flanged track is designed for recessed mounting. Their flanges serve as support surfaces for ceiling tiles and, as a covering edge, can also conceal the ceiling cut-out. When planning, always coordinate with the trades involved, such as drywall or concrete construction.



Overview of available components for recessed mounting



- | | | | | | | | |
|---|---|----|---|----|----------------------|----|-----------------|
| 1 | Track | 7 | Wire rope suspension with / without cable gland | 13 | Suspension bridge | 19 | Mounting bridge |
| 2 | Flanged track | 8 | Mounting device for wire rope suspension (direct) | 14 | Suspension | 20 | Toggle |
| 3 | Live end | 9 | L-connector | 15 | Coupler, centre feed | 21 | End plate |
| 4 | Coupler | 10 | Wire rope suspension (direct) | 16 | T-connector | 22 | Singlet |
| 5 | Joint connector | 11 | Wire rope suspension (retroactive) | 17 | X-connector | | |
| 6 | Mounting device for wire rope (retroactive) | 12 | Fixing clip | 18 | Plaster trim profile | | |

Recessed mounting

Sample installations

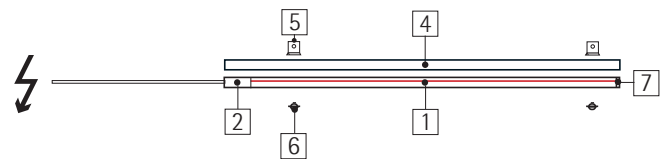
As examples, we have put together three common sample installations for you. In simple linear systems, routing of the protective conductor only plays a subordinate role and only influences the mounting direction of the luminaire. As soon as you use several connectors, you need to coordinate these with regard to the red marked protective conductor routing.

The number of fixing points depends on the specific size and load of the system. The information below shows a minimum configuration.



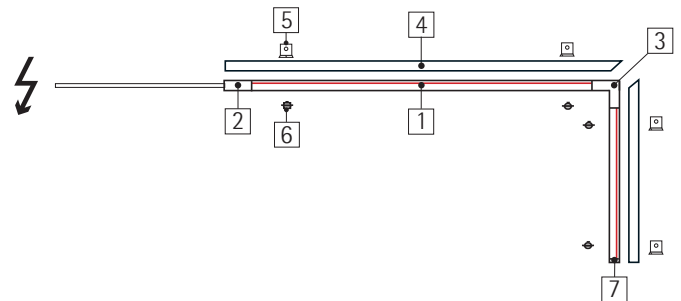
Parts list for flush linear recessing in a drywall ceiling

Number	Quantity	Description
1	1	Track
2	1	Live end right
4	1	Plaster trim profile
5	2	Suspension
6	2	Toggle
7	1	End plate



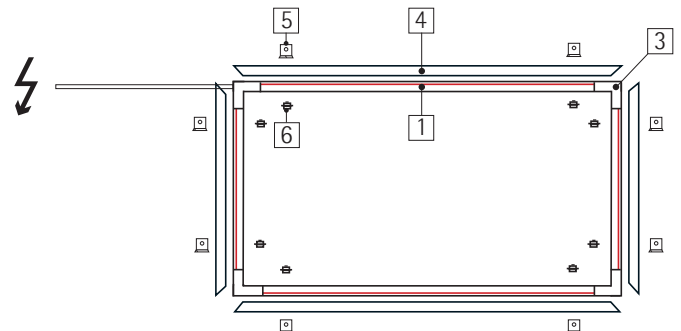
Parts list for flush L-installation in a drywall ceiling

Number	Quantity	Description
1	2	Track
2	1	Live end right
3	1	L-connector outside
4	2	Plaster trim profile
5	4	Suspension
6	4	Toggle
7	1	End plate



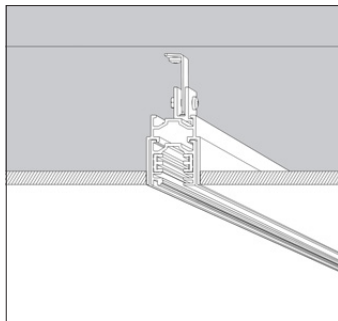
Parts list for flush rectangular geometry in a drywall ceiling*

Number	Quantity	Description
1	4	Track
3	4	L-connector outside
4	4	Plaster trim profile
5	8	Suspension
6	8	Toggle



* In DALI operation, the DALI conductors must not form an electrically closed circuit, therefore interrupt the DALI conductors at a suitable point.

Drywall ceiling suspended

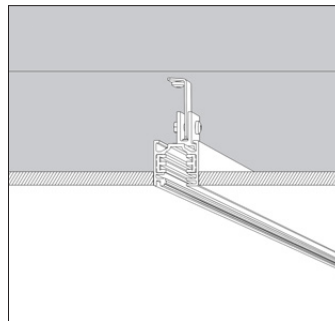


Flush installation with plaster trim profile and slotted iron

The plaster trim profile (accessory) is suitable for flush mounting. In terms of separating the trades, the plaster trim profiles can be installed by the drywall contractors whilst the electrical contractor only has to install the power cable beforehand. In this way, the track is protected from soiling caused by cleaning and grinding work.

For a secure hold, you should attach the plaster trim profile with slotted irons or similar fastening material that is available and approved on site. Suspensions (accessories) are available for the mounting, and the track is fastened in the plaster trim profile with toggles (accessories).

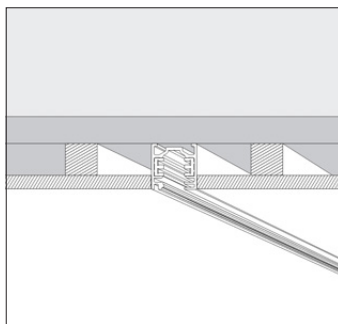
The mechanical bridge (accessory) is available for lengthening plaster trim profiles.



Mounting with slotted iron

You can also install the track directly in a drywall ceiling. Here as well, use sturdy slotted irons or similar material for mounting. The plaster trim profile and track have the same mechanical interface – this means that fastening accessories can in principle be used for both the track and the plaster trim profile.

Wooden ceilings, panelled ceilings, metal ceilings, drywall ceilings on substructure



Mounting on substructure

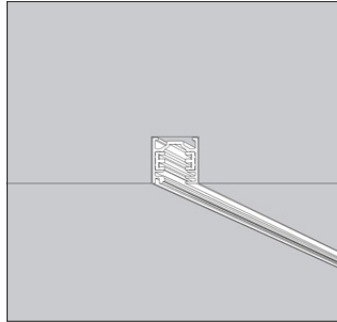
For these ceiling types it is recommended to mount the track directly on the substructure. Suspensions are not needed in this case. In this case, mounting is the same as for surface mounting. You can also use the plaster trim profile. In this way you avoid soiling of the track. Please also note the information for installation in drywall ceilings.

Tip: the fixing clips are also suitable for fastening the plaster trim profiles as well as the track.

Recessed mounting

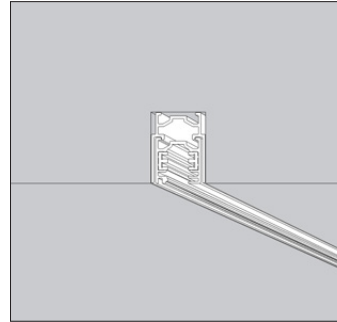
What should be considered during planning and installation

Concrete ceilings (exposed concrete) and plastered ceilings



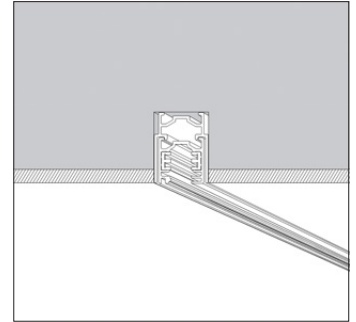
Direct mounting

Before pouring the concrete, attach straight and dimensionally stable wooden strips to the formwork. The dimensions should be at least the width and height of the track plus tolerance measurement. Tip: provide a shadow gap, the width of which depends on the type of concrete. To avoid sharp edges that break quickly, you can insert a smoothed silicone bead in the groove between the formwork and wooden strip.



Mounting in plaster trim profile

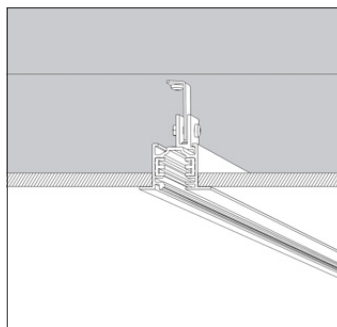
For mounting in a plaster trim profile, fixing a dimensionally stable wooden strip to the formwork is recommended. The plaster trim profile is fastened above this, e.g. with perforated tape. The dimensions of the strip are based on the internal dimensions of the plaster trim profile. The strip thus prevents the penetration of liquid concrete, holds the profile in position and prevents the sides of the profile from being pressed together by the pressure of the liquid concrete. A special accessory is available for this mounting method – please contact ERCO Service.



Mounting in plastered concrete ceiling

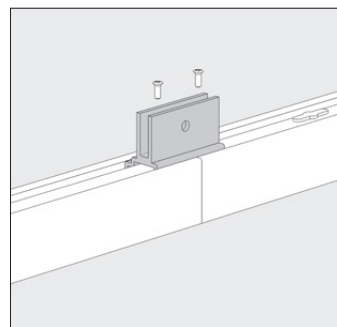
Attach dimensionally stable wooden strips to the formwork. The width of the strip corresponds to the width of the plaster trim profile plus a small addition. For the height of the strip, subtract the planned thickness of the plaster from the height of the plaster trim profile. The plaster trim profile is installed after pouring the concrete and before plastering the ceiling.

Grid ceiling, system ceiling



Flexible use of the ERCO flanged track

The flanged track is a special version of the ERCO track. The two flanges serve as a support surface for ceiling tiles. You can fasten the flanged track with on-site suspensions of the grid ceiling system or also with slotted irons. Alternatively, you can also use ERCO wire rope suspensions. However, bear in mind that the track must be held in place by a raised ceiling plate when inserting a luminaire.

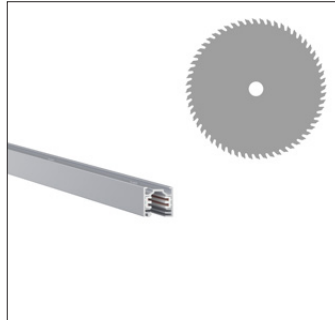


Extending suspended track

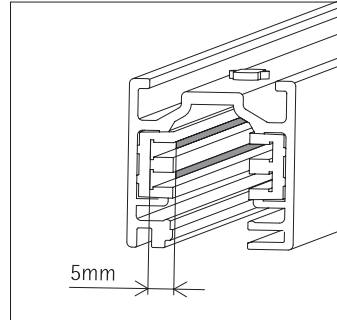
If you need to lengthen a track, use the coupler for flush mounting and place the joint connector 79504 over the joint. This ensures that the coupler is not mechanically stressed, and at the same time you still have a fixing point to which you can attach on-site suspensions. Alternatively, you can use the suspension bridge 79501 or the mounting devices 78670 / 78671 with a suitable suspension.

What should be considered during planning and installation

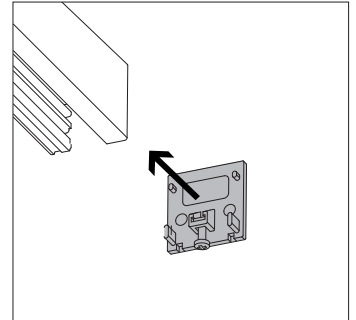
General planning and installation information



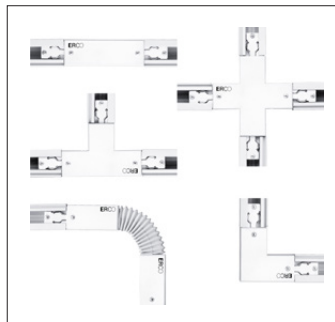
Shortening the track
You can order track cut to size. In many cases however it is advisable to shorten standard lengths directly on site, e.g. with a mitre saw. Make the cut square and clean so that there are no unsightly gaps at the joints.



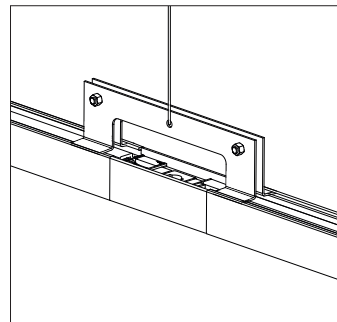
Shortening the conductors
After shortening the track, always shorten all four conductors in the track by 5 mm for safety reasons. The appropriate tool for this is available as an accessory.



Using end plates
Always fit an end plate to the open end of a track for both safety and visual reasons.



Using connectors
Connectors must not bear any mechanical load. For this reason always provide fixing points in front of and behind live ends, connectors or the track ends. Depending on the length and planned weight load, provide additional fixing points.



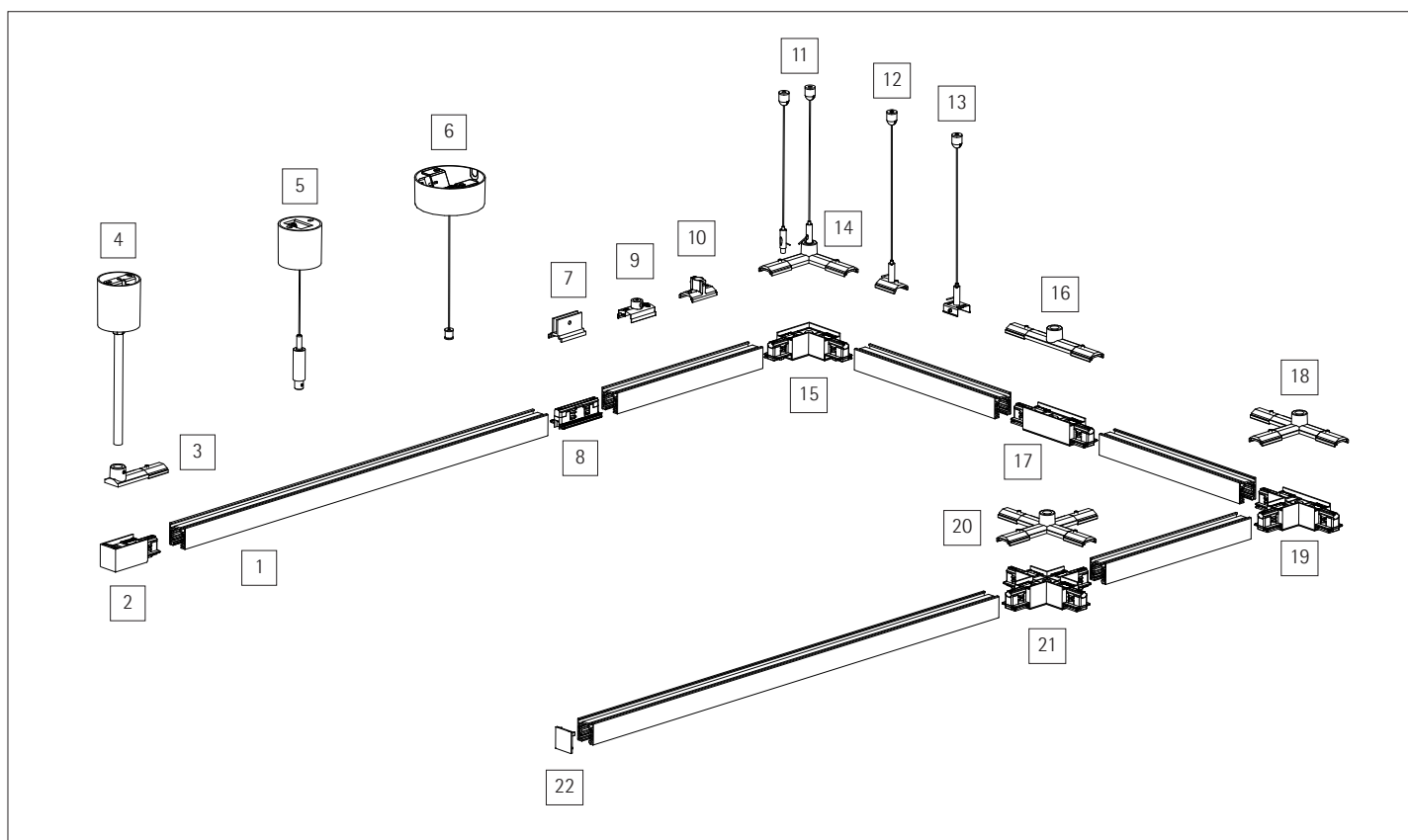
Using suspension bridges
The suspension bridge with a span of 10cm for mounting over couplers (also called 'centre feed') is suitable.

Pendant mounting

Pendant mounting is a good solution for high rooms or for rooms with irregular ceiling heights, e.g. vaulted ceilings. Several options are available, which you can read about in this section.



Overview of available components for pendant mounting



- | | | | |
|--------------------------------|--|---|------------------------------------|
| 1 Track | 7 Junction | 13 Wire rope suspension (retroactive) | 19 T-connector |
| 2 Live end | 8 Coupler | 14 Mounting device for L-connector | 20 Mounting device for X-connector |
| 3 Mounting device for Live end | 9 Mounting device for wire rope (retroactive) | 15 L-connector | 21 X-connector |
| 4 Pendant tube suspension | 10 Mounting device for wire rope suspension (direct) | 16 Mounting device for coupler, centre feed | 22 End plate |
| 5 Wire rope suspension | 11 Wire rope suspension with/without cable gland | 17 Coupler for centre feed | |
| 6 Wire rope suspension | 12 Wire rope suspension (direct) | 18 Mounting device for T-connector | |

Pendant mounting

Sample installations

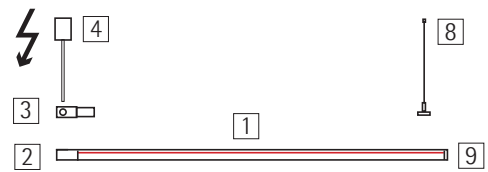
As examples, we have put together three common sample installations for you. In simple linear systems, routing of the protective conductor only plays a subordinate role and only influences the mounting direction of the luminaire. As soon as you use several connectors, you need to coordinate these with regard to the red marked protective conductor routing.

The number of fixing points depends on the specific size and load of the system. The information below shows a minimum configuration.



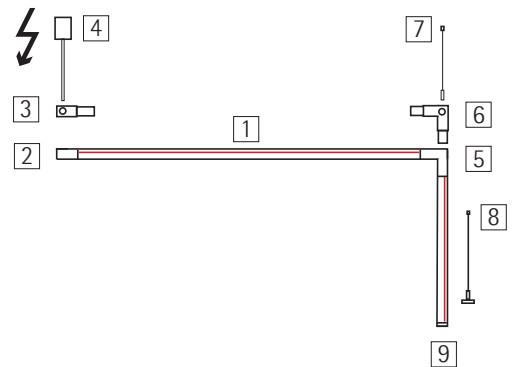
Parts list for linear pendant mounting

Number	Quantity	Description
1	1	Track
2	1	Live end right
3	1	Mounting device for Live end
4	1	Pendant tube suspension
8	1	Wire suspension with mounting device
9	1	End plate



Parts list for angled pendant mounting

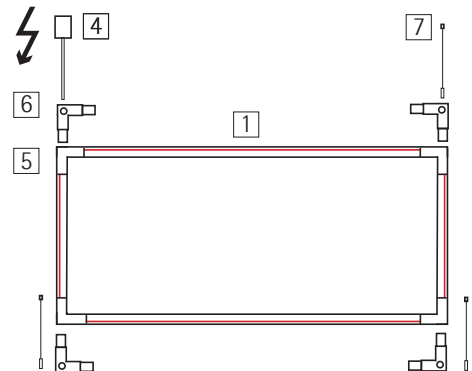
Number	Quantity	Description
1	2	Track
2	1	Live end right
3	1	Mounting device for Live end
4	1	Pendant tube suspension
5	1	L-connector outside
6	1	Mounting device for L-connector
7	1	Wire rope suspension
8	1	Wire rope suspension with mounting device
9	1	End plate



Parts list for rectangular pendant mounting*

Number	Quantity	Description
1	4	Track
4	1	Pendant tube suspension
5	4	L-connector outside
6	4	Mounting device for L-connector
7	3	Wire rope suspension

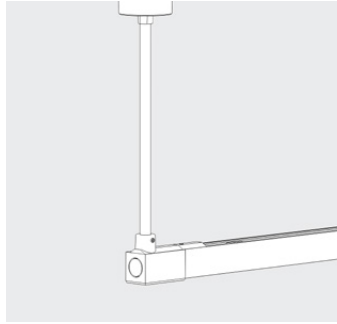
* In DALI operation, the DALI conductors must not form an electrically closed circuit, therefore interrupt the DALI conductors at a suitable point.



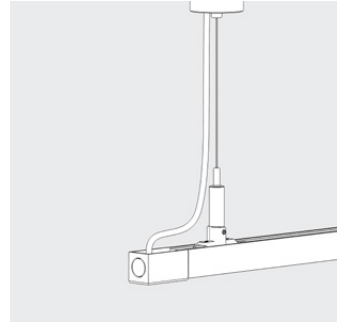
Pendant mounting

Pendant tube or wire?

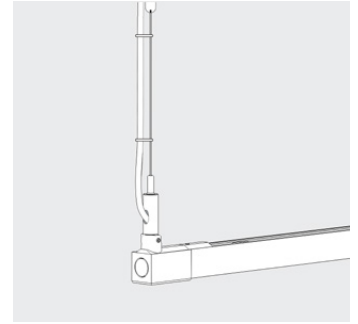
With suspended track installations, a dynamic load must be taken into account in addition to the static load. A draft for example can move the system. Asymmetric loads, e.g. caused by spotlights aligned to one side, can cause the track to tilt slightly, especially with linear systems. With a pendant tube suspension you bring stiffness into the system and prevent such effects.



Live end with pendant tube
Pendant tube suspensions enable power supply of the track system without visible cables. They are suitable for both 3-pole and 5-pole connection.



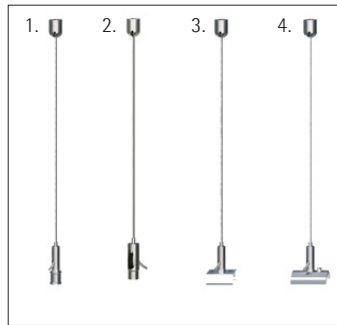
Feed with wire rope suspension and canopy
With wire rope suspensions, the connection is made via the canopy. The opening in the base of the canopy allows the connection cable to be fed through to the track. Two versions are available, one for the 3-pole and one for the 5-pole connection.



Feed with wire rope suspension and cable gland
These wire rope suspensions allow the connection cable to be inserted into the connector via the rapid connector. You can attach the cable to the wire rope using the clips provided.

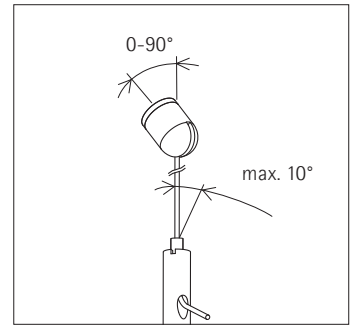
Wire rope suspensions with point fixing

These suspensions are characterised by a discreet visual appearance.



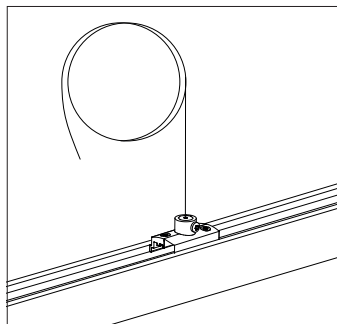
Wire rope suspensions
Wire ropes are hardly noticeable from a distance. The following versions are available:

1. Version with rapid connector for fixing to mounting devices.
2. Version with rapid connector and cable gland for cables up to d 9.3mm. Supplied with 6 fixing clips
3. Version with pre-assembled fixing clip for retrofitting on the track
4. Version with mounting device for direct mounting on the track



Mounting on sloping ceiling
All single-point suspensions are suitable for sloping ceilings up to 10°. Rapid connectors ensure tool-free and particularly simple height adjustment.

Special room- and mounting situations



Using an additional wire
For special room situations, the ERCO accessories range includes the wire and turnbuckle. You can mount these on the track with the mounting device for retroactive suspension. This mounting device is specially designed for mounting a wire rope. The turnbuckle allows fine adjustment of the suspension.

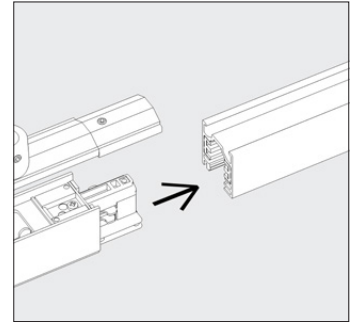
Pendant mounting

Fixing pendant accessories to the connector



Using mounting devices for connectors

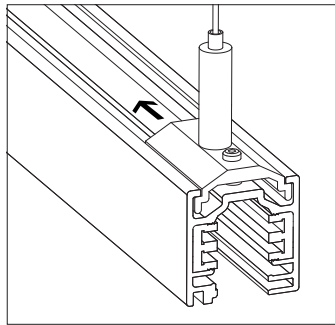
Track connectors must not bear any mechanical load. Mounting devices are available to support such loads. With the mounting devices, you reduce the number of fixing points required to one fixing point per connector.



Installation

Mounting device above the connectors must always be mounted together with the connectors.

Fixing pendant accessories to the track

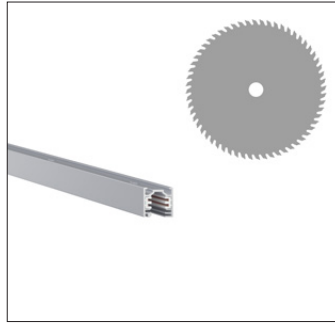


Using mounting devices for track

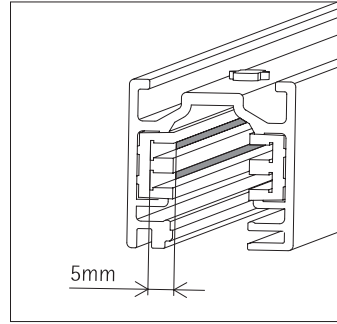
In addition to mounting devices for fastening to the connector, mounting devices for fastening to the track are also available. Use these mounting devices if, due to static reasons, fastening only to the connectors is not sufficient. Slide these mounting devices into the track profile before mounting the connector. For special architectural situations, you can use the mounting device for retrofitting with the wire and turnbuckle accessories.

Pendant mounting

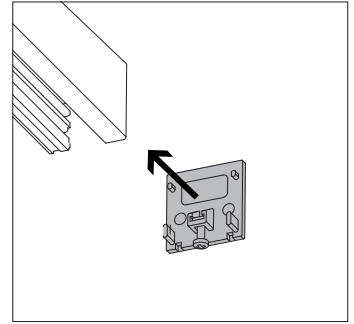
General planning and installation information



Shortening the track
You can order track cut to size. In many cases however it is advisable to shorten standard lengths directly on site, e.g. with a mitre saw. Make the cut square and clean so that there are no unsightly gaps at the joints.



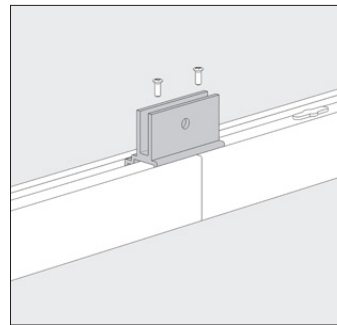
Shortening the conductors
After shortening the track, always shorten all four conductors in the track by 5 mm for safety reasons. The appropriate tool for this is available as an accessory.



Using end plates
Always fit an end plate to the open end of a track for both safety and visual reasons.



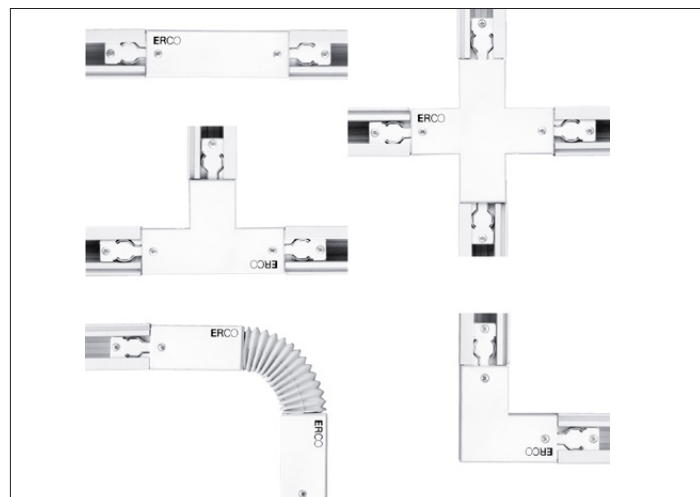
Using connectors
Connectors must not bear any mechanical load. Therefore, always provide fixings in front of, above or behind connectors and at the track ends. Depending on the length and planned weight load, plan additional fixing points. Indications for this are contained in the load diagrams in the "Static load" section of this document.



Extending the track
If you need to lengthen a track, use the coupler for flush mounting and place the joint connector 79504 over the joint. This ensures that the coupler is not mechanically stressed, and at the same time you still have a fixing point to which you can attach on-site suspensions. Alternatively, instead of the joint connector you can also use the mounting devices 78670 / 78671 with a suitable suspension.

Electrical installation

The track profile of ERCO track, ERCO flanged track and ERCO track used in Hi-trac are all identical. The decisive factor for the control options is the selection and connection of the connectors in combination with the appropriate adapters and luminaires. ERCO track is suitable for both 1-circuit and 3-circuit operation in the 250/440V power grid. This section contains information on protective conductor routing, the electrical connection and adapter types.



Good to know:
In addition to the Live ends, connectors and couplers also offer the option to feed your ERCO track system.

Operating mode	Circuits	Control
3-circuit	3	Switchable Phase dimmable On-board Dim Casambi Zigbee
DALI	64 (DALI bus)	DALI
Multi-Dim (only ERCO luminaires with Intrack adapter)	2	Phase dimmable Push Dim On-board Dim Casambi Zigbee

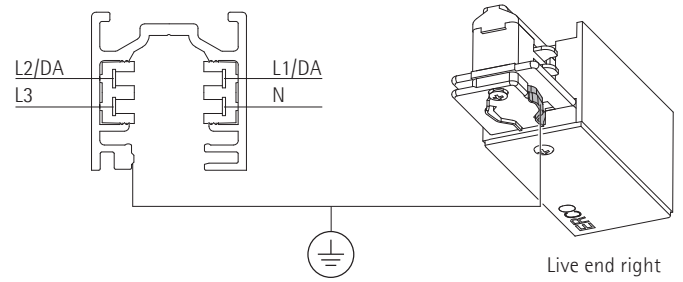
Electrical installation

Protective conductor routing and alignment of the track

For simple, safe mounting, ERCO track is coded via the routing of the protective conductor and a groove, i.e. luminaires, with the exception of the InTrack adapter, can only be mounted in one position. This also applies to the L and T-connectors as well as the live end, which are available in a left-hand and a right-hand version according to their geometry. Take into account the position of the slot and the protective conductor during planning and installation.

The L2/DA and L3 conductors are always on the side of the protective conductor. This means a connector cannot be plugged on incorrectly and no short circuit can occur.

Tip: in the case of simple, linear track only, plug the live end onto the track during mounting. This will ensure that the live end is on the correct side of the track later.

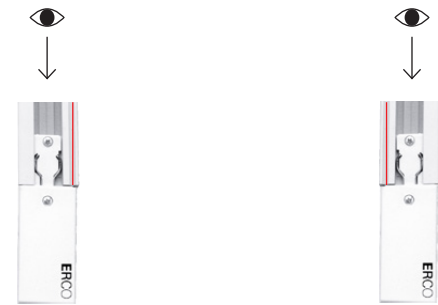


Right or left?

How to clearly identify the required connector.

Live end

The definition 'right' or 'left' is made looking from the track to the live end.



Live end right

Live end left

T-connector

In the case of the T-connector, the definition 'right' or 'left' is made by looking from the continuous side of the T-connector to the track. For T-connectors directly opposite each other, always plan a left and a right connector.

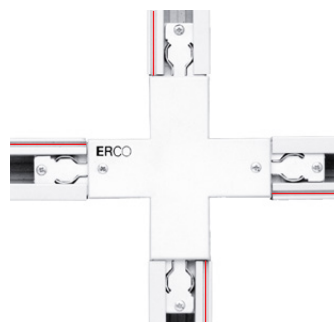


T-connector right

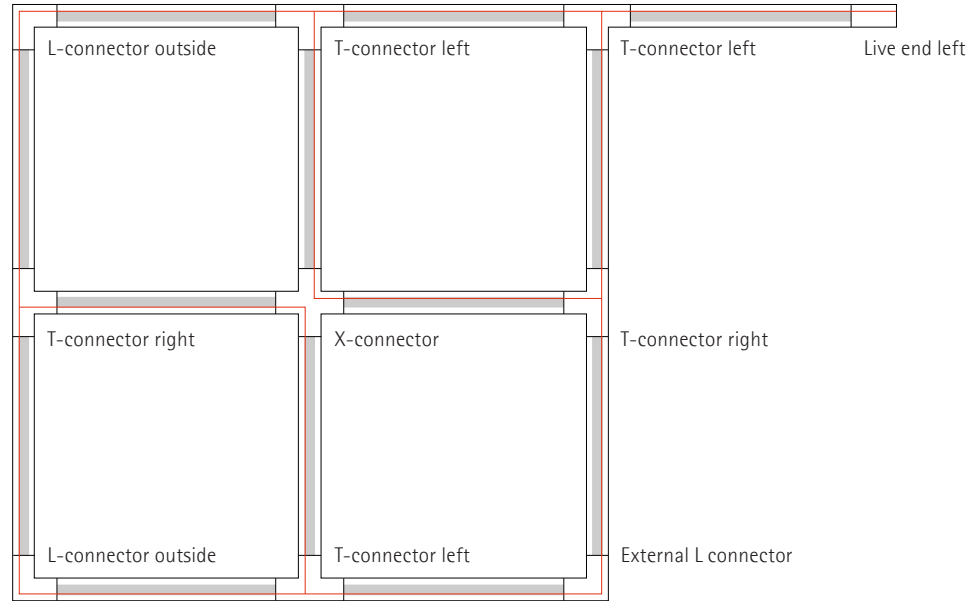
T-connector left

X-connector

When using the X-connector, note that this reverses the protective conductor routing.



Planning connectors



Reflected ceiling plan (RCP)

1. First sketch the track system in top view with all track and connecting parts and without protective conductors. Give the track and connectors a width that allows you to add the protective conductor routing in the next step.

Tip: if there is a preferred viewing position, the groove should be on the side of the viewer.

2. Now draw in the protective conductor (side of the slot), e.g. as a red line. Start on the long side of a T-connector (if used) and draw the protective conductor as a continuous connection.

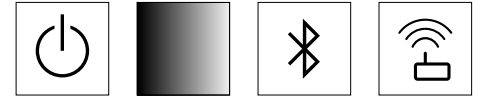
3. Note the specific protective conductor routing with the X-connector.

4. Now define all necessary connectors.

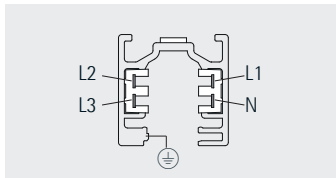
Electrical installation

Electrical connection of the track and flanged track

This section contains basic information for connection to a 1/3-circuit 250/440V mains supply. If you wish to install luminaires with Intrack adapter and Multi Dim in the track, please refer to the following pages.



1/3-circuit operation



Connection

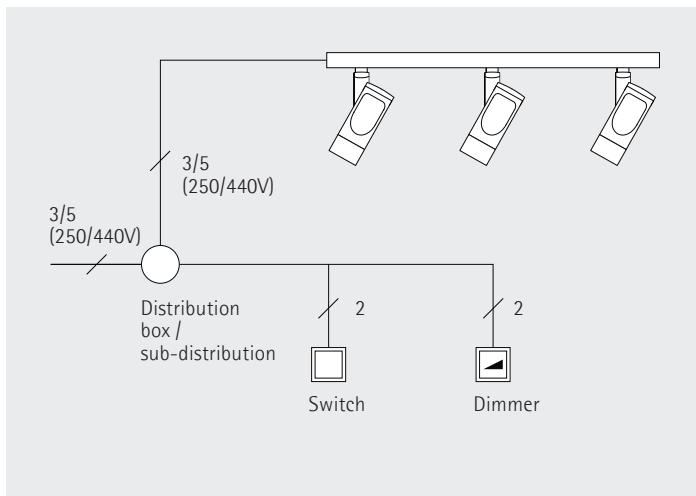
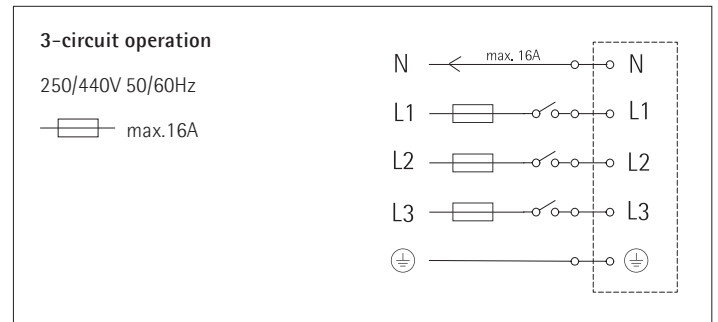
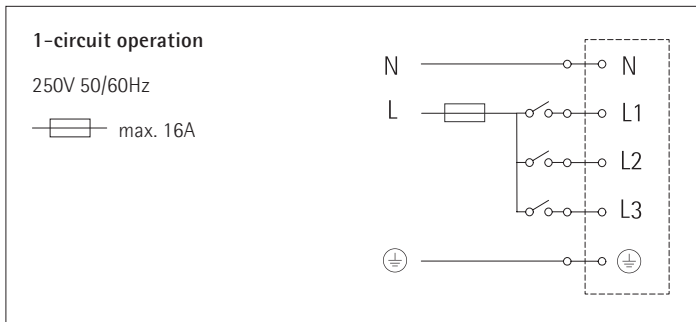
- L1 load circuit / control circuit 1
- L2 load circuit / control circuit 2
- L3 load circuit / control circuit 3
- N neutral conductor
- ⊕ protective conductor

Supported control types

- Switchable
- Phase dimmable
- Casambi Bluetooth
- Zigbee
- On-board Dim

Suitable adapters

- 3-circuit adapter
- Transadapter
- Intrack adapter
- OEM 3-circuit adapter



Notes on installation:

- Take into account conductors of the track with a cross-section of approx 4 mm².
- The connection terminals of the live ends or connectors can each accept two conductors with a cross-section of up to 2.5 mm². Through-wiring is thus possible.
- The connectors do not have strain relief. If required, this should be provided on site with e.g. a suitable screw connection.
- The live end has a cable entry from the side and an entry from the top. The connectors can only be fed from above.
- When planning, take into account the number of luminaires per circuit breaker. See the data sheet of the luminaire for details.

For 3-circuit operation please note:

- The maximum current of the neutral conductor must not exceed 16A.
- The neutral conductor must not be switched or routed via a separate fuse.

Electrical installation

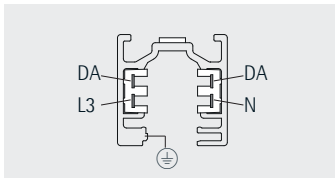
Electrical connection of the track and flanged track for DALI operation

This section contains basic information on connecting to a 1-circuit 240 V mains supply and a DALI light control system.

The notes on this page also apply to luminaires with Intrack adapter with Multi Dim control type in the DALI setting.



DALI operation



Connection

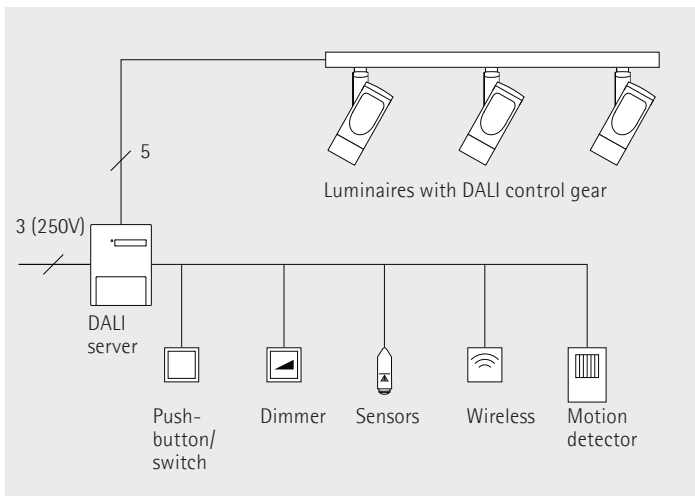
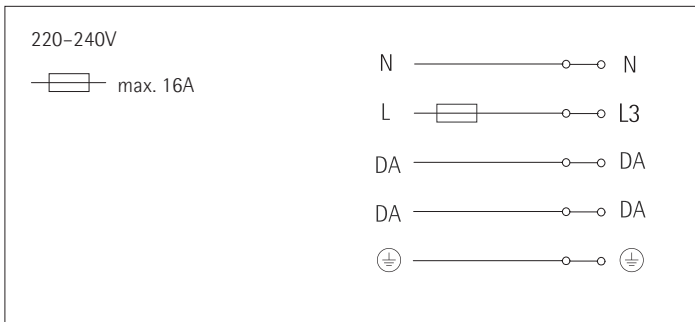
- DA DALI
- DA DALI
- L3 load circuit / control circuit 3
- N neutral conductor
- ⊕ protective conductor

Supported control types

- DALI
- On-board Dim

Suitable adapters

- DALI adapter
- DALI transadapter
- Intrack adapter Multi Dim (DALI operation)
- OEM DALI adapter



Notes on installation:

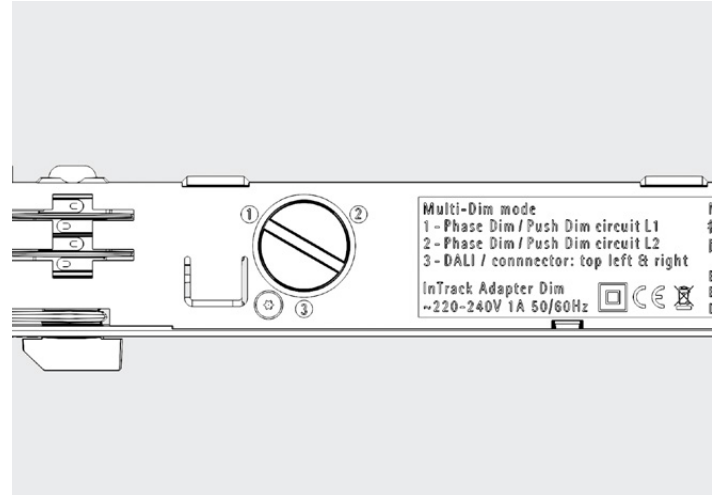
- The DALI signal is not SELV, i.e. the DALI conductors must be handled in the same way as a mains line.
- Unlike systems from other manufacturers, the DALI conductors in the ERCO track are integrated in such a way that no special measures must be taken to protect against accidental contact.
- Take into account conductors of the track with a cross-section of approx 4 mm².
- The connection terminals of the live ends or connectors can each accept two conductors with a cross-section of up to 2.5 mm². Through-wiring is thus possible.
- The connectors do not have strain relief. If required, this should be provided on site with e.g. a suitable screw connection.
- The live end has a cable entry from the side and an entry from the top. The connectors can only be fed from above.

- When planning, take into account the number of luminaires per circuit breaker. See the data sheet of the luminaire for details.
- For trouble-free operation, only route DALI conductors in a tree structure and avoid electrically closed rings on the DALI conductors.
- The distance between the DALI server and the most distant luminaire should not exceed 300 m.

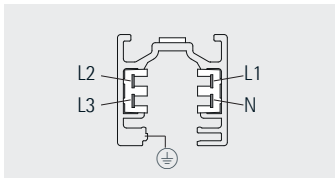
Electrical installation

Electrical connection of the track and flanged track for operation with ERCO Multi Dim

This section contains basic information on connection to a 1/3-circuit 220/440V mains supply for using ERCO luminaires with Multi Dim control gear.



Multi Dim (phase dimming / Push Dim)



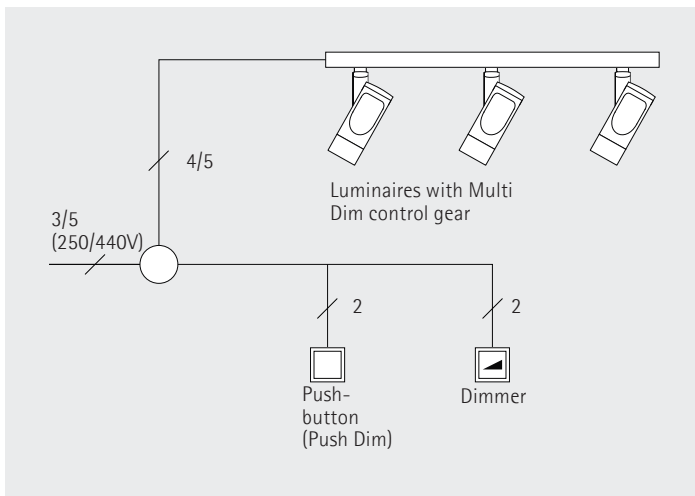
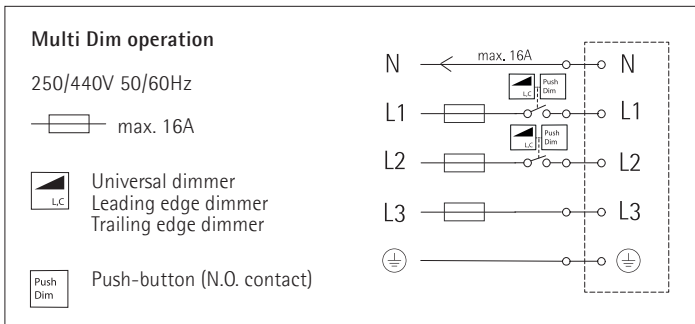
- Connection**
- L1 control circuit 1
 - L2 control circuit 2
 - L3 load circuit
 - N neutral conductor
 - ⊕ protective conductor

Supported control types

- Multi Dim
- Multi Dim + On-board Dim
- DALI

Suitable adapters

- Intrack adapter Multi Dim with setting: phase dimming or Push Dim operation



Installation instructions

Please observe the installation instructions for the 1/3-circuit connection. Luminaires with ERCO Multi Dim control gear, as with DALI control gear, require a permanent phase to be connected to L3. Either push-buttons or dimmers are connected to L1 and L2.

Notes on ERCO Intrack adapters:

The operating mode switch of an Intrack adapter of the Multi Dim control type allows 3 operating modes:

- Position 1 or 2: phase dimming or Push Dim
- Position 3: DALI (connection as described above)

For operating modes 1 and 2 observe the following:

- Multi Dim control gear automatically detects whether the signal is a phase dimming signal or Push Dim signal.

- Push-button lines or dimmed switch lines are connected to L1 and L2. This means that 2 Multi Dim control circuits are available.
- Observe the dimmer requirements of the luminaire. An ERCO luminaire operated with Multi Dim does not absorb any significant base load in phase dimming mode!

Minimum number of cores for installation

4 or 5 cores to the track depending on whether 1 or 2 control circuits are required

ERCO phase dimming

2 cores to the dimmer

Push Dim

2 cores to the push-button

Electrical

Adapters for ERCO track and flanged track used on ERCO luminaires

All ERCO adapters are mounted in the track without tools. The necessary electrical connection of the track differs according to the control type of the luminaire.



Adapter types



3-circuit adapter

3-circuit adapters establish the electrical and mechanical connection to the luminaire, and enable selection of the switching/load circuits of which a maximum of three are available. Phase selection is possible with the installed luminaire.

You can only insert the adapter into the track in one direction. The adapter is suitable for mounting in the ERCO singlet.

DALI adapter

DALI adapters can be operated in a track for DALI installations. One load circuit is available.

These adapters can only be inserted in the track in one direction. The adapter is suitable for mounting in the ERCO DALI singlet.

ERCO transadapter

ERCO transadapters contain the control gear of the luminaire. For phase dimmable luminaires, the adapter also includes the controller for On-board Dim. Unlike the 3-circuit adapters, phase selection is carried out before insertion into the track.

Three switching circuits/load circuits are available to choose from.

You can only insert the adapter into the track in one direction. Due to its size, the adapter is not suitable for mounting in the ERCO singlet.

DALI transadapter

DALI transadapters contain the control gear of the luminaire and can be operated in a track for DALI installations. One load circuit is available.

You can only insert this adapter into the track in one direction. Due to its size, the adapter is not suitable for mounting in the ERCO DALI singlet.

Intrack adapter

ERCO Intrack adapters contain the power supply for the luminaire and disappear completely into the track. They enable the operation of 3 control/switching circuits.

You can insert the adapter into the track in any direction. Due to its size, the adapter is not suitable for mounting in the ERCO singlet.

Intrack adapter Multi Dim

ERCO Intrack adapters with Multi Dim provide one load circuit that requires a permanent phase on L3, analogous to the DALI application.

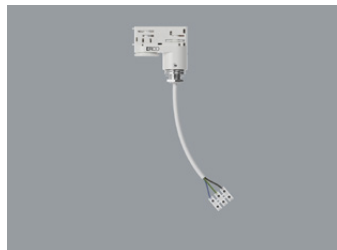
Depending on the operating mode, this adapter enables the control modes DALI and Push Dim or phase dimmable with 2 control circuits. You can insert this adapter into the track in any direction. Due to its size, the adapter is not suitable for mounting in the ERCO singlet.

Electrical

OEM adapters for ERCO track

ERCO track is a global standard across all manufacturers. ERCO provides matching adapters as OEM components for spotlights and pendant luminaires from other luminaire manufacturers. All adapters on this page can only be inserted into the track in one direction.

OEM adapter types



OEM 3-circuit adapter
Phase selection is already possible with the installed luminaire. The mechanical interface consists of an M16x1 thread with a length of 15 mm. The load for ceiling mounting is 5 kg. For wall mounting please refer to the mounting instructions of the adapter and installed luminaire. The cable that is led out has strain relief. Connection with maximum 250V/10A. The adapter is suitable for mounting in the ERCO singlet.



OEM DALI adapter
This adapter enables operation of a DALI luminaire of another manufacturer in an ERCO DALI track in 1/3-circuit operation. The OEM adapters are supplied with a protective circuit that prevents the LED DALI control gear of the luminaire from being damaged by accidental insertion into a 3-circuit track. The load for ceiling mounting is 5 kg. For wall mounting please refer to the instructions of the adapter and luminaire. The cable that is led out has strain relief. Connection with max. 240V/1A. The adapter is suitable for mounting in the ERCO DALI singlet.



OEM ERCO 3-circuit adapter for pendant luminaires
This adapter enables operation of an on-site pendant luminaire in an ERCO track in 1/3-circuit operation. Phase selection is already possible with the installed luminaire. The mechanical interface consists of a fixed hook to which a pendant luminaire can be connected. The mechanical load capacity is max. 10 kg. Connection with maximum 250V/10A. The adapter is suitable for mounting in the ERCO singlet.



OEM 3-circuit adapter kit
This adapter enables operation of an on-site pendant luminaire in an ERCO track in 1/3-circuit operation. Phase selection is already possible with the installed luminaire. The connection cable of the adapter has a length of 1500 mm and has strain relief. The mechanical load capacity is max. 3.3 kg. Connection with maximum 250V/10A. The adapter is suitable for mounting in the ERCO singlet.



OEM ERCO DALI adapter for pendant luminaires
This adapter enables operation of an on-site pendant luminaire in an ERCO DALI track. The connection cable has a length of approx. 1500 mm and has strain relief. Connection with max. 250V/1A. Due to its size, the adapter is not suitable for mounting in the ERCO DALI singlet.

Static load

When planning a track system, determination of the static load is important. It has a direct influence on the fixing points and on the subsequent equipping with luminaires. To avoid re-working, you should also take into account any planned future changes.



The maximum permissible weight load of the track results from the maximum permissible deflection of the profiles and the maximum permissible load of the suspensions. The load distribution is composed of the system's own weight and evenly distributed individual loads (point loads). You can determine the maximum permissible weights using the adjacent illustration and the associated table.

Here are the necessary parameters

L	(mm)	Length
f_e	(mm)	Deflection due to weight of profile
F_D	(kg)	Max. load of one suspension
F_e	(kg)	Weight of profile
F_1	(kg)	Max. permissible load with two-point suspension and permissible deflection (L/250) of 4 mm per metre length
F_2	(kg)	Max. permissible load with multi-point suspension and permissible deflection (L/250) of 4 mm per metre length

Notes

The values given apply to horizontal mounting below the ceiling. All luminaires approved for the ERCO track system can be used.

For wall mounting, which is possible in principle, only luminaires with a limited weight may be used. Observe the installation instructions of the luminaire.

ERCO track				
L (mm)	1000	2000	3000	4000
F_e (kg)	1.1	2.2	3.3	4.4
f_e (mm)	0.07	1.09	5.50	17.40

$F_D = 20$ kg				
F_1 (kg)	39	11	3	—
F_2 (kg)	19	11	3	—

Sample calculation

See below how to apply the load tables.

Example Determination of the maximum number of luminaires for an already installed track

A track of 4 m length suspended at 3 points is to be equipped with Eclipse size M.

What is the maximum number of luminaires that can be mounted on this track? Proceed as follows:

1. Determine the weights

Weight of 1 luminaire	1.2kg
Weight of track (F_e)	4.4kg

2. Number of suspensions and distances

Number of suspensions	3
Distance between suspensions (L)	2000mm

3. Maximum weight between 2 suspensions with L=2000mm

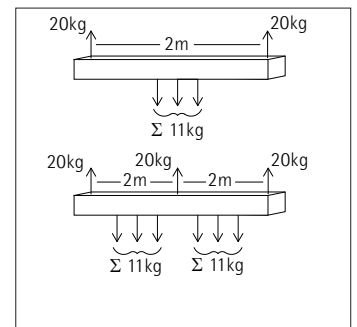
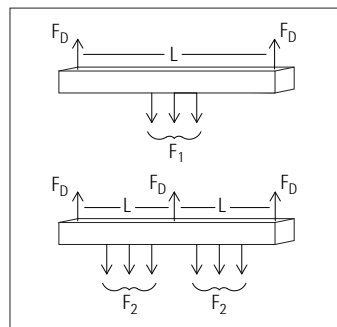
According to load table (F_2):	11.0kg
less track	
(F_e : 2000mm)	2.2kg
Remaining for luminaires	8.8kg

4. Determine the maximum number of luminaires

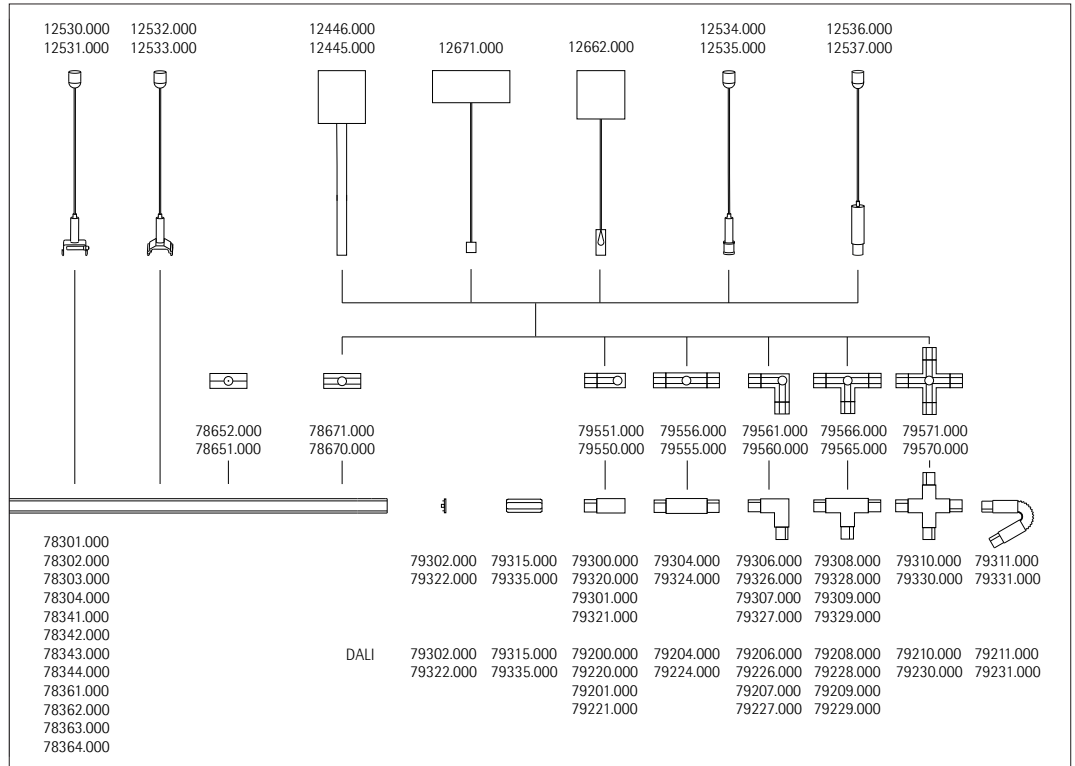
At 1.2kg/luminaire	7 luminaires
For the complete track	14 luminaires

Result:

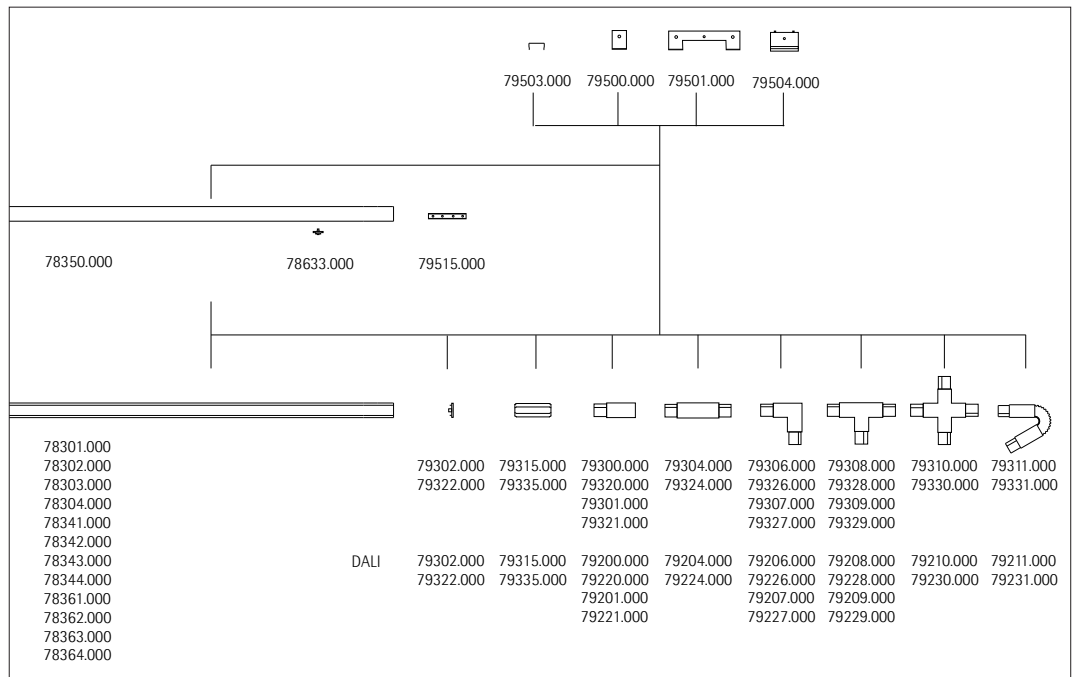
A maximum of 14 luminaires can be installed here.



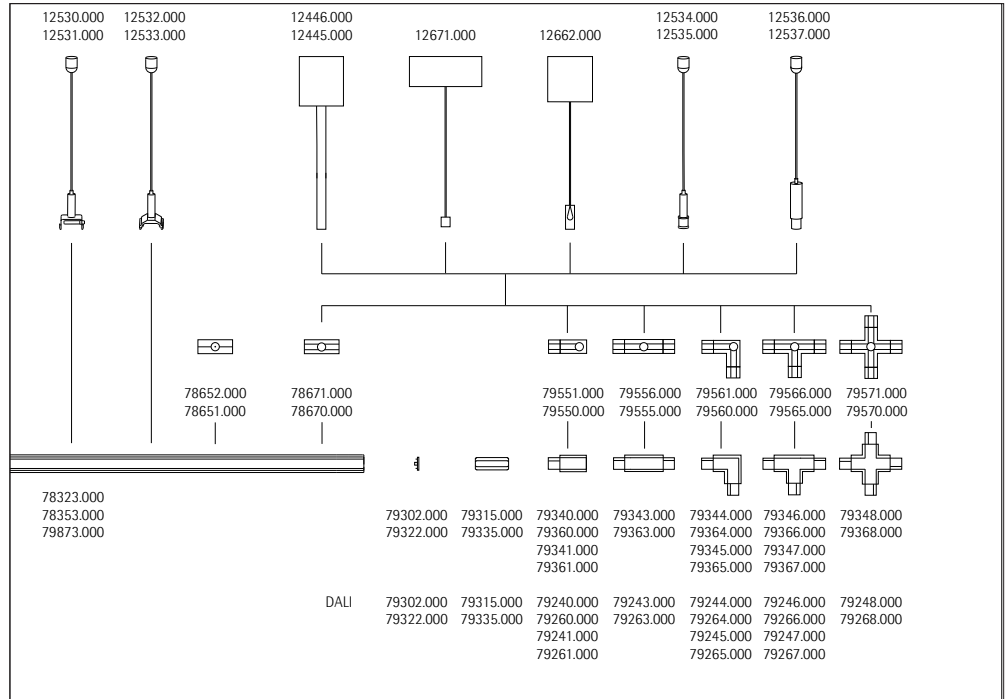
Check the possible combinations of the track accessories for pendant suspension in the adjacent diagram.



Check the possible combinations of the track accessories for recessed mounting in the adjacent diagram. ERCO wire rope suspensions are also suitable for recessed mounting.



Check the possible combinations of the flanged track accessories for pendant suspension in the adjacent diagram.



Check the possible combinations of the flanged track accessories for recessed mounting in the adjacent diagram. ERCO wire rope suspensions are also suitable for recessed mounting.

