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Symbols, safety

- 
Warning! Failure to observe this safety instruction is likely to result in material damage, serious injury or death

- 
Attention! Failure to observe this safety instruction can result in material damage, serious injury or death

- 
Caution! Failure to observe this safety instruction can result in material damage or injury

- 
Note! Important information

- 
CE conformity marking

- 
Device corresponds to protection class III
(operates on protective extra low voltage)

- 
Functional earth

- 
Observe directions for disposal

- 
Observe directions for disposal

General safety information

The details and information in this user guide are provided for the purposes of describing the product and its assembly only. This information does not discharge users from the obligation to conduct their own assessments and checks. It is also important to bear in mind that our products are subject to a natural process of wear and ageing.

This guide contains important information that will enable you to use the product safely and appropriately. If this product is sold, rented out or otherwise passed on to another party, the user guide must be handed over with it. You must therefore read and follow the safety instructions set out below.

- All work on and with the LED Strip must be performed with “safety first” in mind.
- Observe the regulations pertaining to accident prevention and environmental protection that apply in the country and workplace where the product is being used.
- Use only item products that are in perfect working order.
- Failure to use original spare parts will invalidate the product warranty!
- Check the product for obvious defects.
- Use the product only within the performance range described in the technical data.
- Note the permissible voltage and ensure the power supply is correctly connected.

The LED Strips described here correspond to the state of the art and take into account the general principles of safety applicable at the time this user guide was published. Nevertheless, failure to observe the safety instructions and warning notices in this user guide may result in personal injury and damage to property. We will assume no liability for any resulting damage or injury. We reserve the right to make changes that represent technical advances. Keep this guide in a place where it can be accessed by all users at any time. The general safety information applies to the entire lifecycle of the LED Strip.

Correct use

The LED Strips must only be used in indoor areas in accordance with the technical data and safety requirements set out in this document. Multi-Segment RGB LED Strip complies with the EMC Directive (2014/30/EU) and Directive 2011/65/EC (RoHS), including the supplementary directive (EU 2015/863). The safety requirements of the Low Voltage Directive (2014/35/EU) are met. The declarations can be found alongside the product in the Online Shop.

Internal company requirements and the regulations that apply in the country where the product is being used must be observed. You must not make any design modifications to the LED Strip yourself. We will assume no liability for any resulting damage or injury. You may only install, operate and maintain the LED Strip if:

- The LED Strip has been integrated into its surroundings in a proper and safe manner.
- You have carefully read and understood the guide.
- You are appropriately qualified.
- You are authorised to do so by your company.
- You are using only original equipment from the manufacturer.

The LED Strip is exclusively suitable for connection to a 12VDC power supply.

The LED Strip is designed for indoor use.

The LED Strip is not suitable for use in environmental chambers. (For non-condensing use)

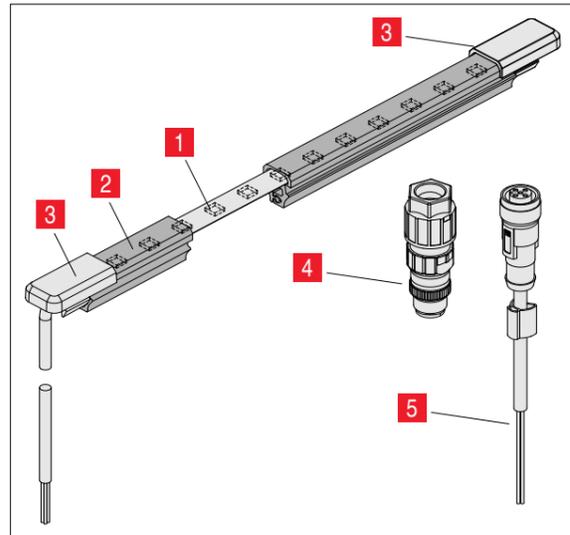
Improper use

Improper use is defined as any use of the product for purposes other than those authorised in the user guide and under the definition of correct use. We will assume no liability for any resulting damage or injury.

Reasonably foreseeable types of misuse could be:

- Use without Caps – contact between the end of the LED Strip and a metal surface can cause a short circuit.
- Installing the LED Strip in the groove using a heavy object. Doing so will destroy the LED Strip.
- Hard impacts, high forces and strong vibrations e.g. from fork lifts, transport vehicles, factory equipment or presses should be avoided.
- Excessive bending beyond the permitted extent will destroy the LED Strip.
- Temperatures outside those specified in the technical data will reduce the service life of the LED Strip.
- Sharp corners and edges in the cable conduits will destroy the cable.
- Failure to ensure sufficient strain relief
- Separating the LED Strip outside the separation markings.
- Exerting a load on the LED Strip. The LED Strip cannot be walked on.
- Use as a machine light fitting for functional safety
- Use of the product outdoors
- Direct connection of the 24V power supply to the 12V LED Strip
- Operation with a long cable (more than 3 metres)
- Wiring the NC connections with -30 ... +30 VDC

Technical data



LED RGB 12V configuration and accessories

No.	Article number	Product name	Comments
1	0.0.719.69 0.0.720.85 0.0.720.86 0.0.720.87	Multi-Segment RGB LED Strip 1m Multi-Segment RGB LED Strip 2m Multi-Segment RGB LED Strip 3m Multi-Segment RGB LED Strip 6m	Can be short-ened
2	0.0.715.74 0.0.718.15	LED Casing Profile 8 14x5 LED Casing Profile 8 14x5 (cut-off)	-
3	0.0.719.68	LED Casing Profile 8 14x5, Cap, grey similar to RAL 7042	
4	0.0.718.00	Connector M12 4P Male, A-coded, black	Accessory
5	0.0.714.52	Sensor/Actuator Connection Cable 5m M12 4P, Female Connector, A-coded, black	Accessory

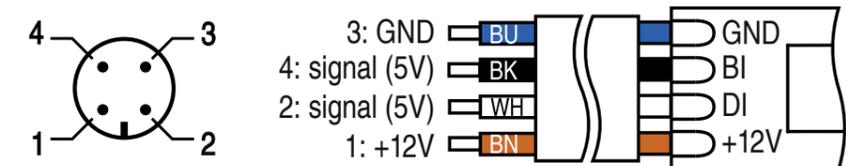
- 12V RGB LED strip
- Intuitive signalling in profile constructions
- Translucent LED Casing Profile
- Casing protects LED Strip from dirt
- Simple to secure in a Line 8 groove
- The flexible LED Strip is just 3 mm high and 1000 mm, 2000 mm, 3000 mm or 6000 mm long
- Can be shortened at 17 mm intervals
- LED Strip satisfies protection category IP65
- 12-Volt technology
- A-coded M12 connector as an accessory

IP class	IP65
Voltage	+9.5 VDC ... +13.5 VDC
LED power	7.5 W/m
Connection	Open cable end
Circuitry	Only to be used with item LED controller
Ambient temperature	-25°C ... +85°C
Width x height	10 x 3 mm
Colour	RGB
Separable	After every LED (16.67 mm)
Number of LEDs	60 per metre
Lighting angle	180° (light intensity decreases at the edges)
LED type	SMD RGB 3-in-1 LEDs
Luminous intensity (median per LED)	Red 300 mcd ... 600 mcd Green 1500 mcd ... 2500 mcd Blue 150 mcd ... 400 mcd
Wavelength	Red 620 nm ... 625 nm Green 515 nm ... 525 nm Blue 465 nm ... 475 nm



ATTENTION! The Casing Profile is designed exclusively for the performance range and heat generation of the item LED Strip. If item components are combined with a higher-performance LED Strip, the customer is responsible for ensuring safe usage. Particular attention should be paid to sufficient heat dissipation in this case.

Wiring of connecting cable



Installing Multi-Segment RGB LED Strip

Coordinated components can be used to create strong, highly visible signalling solutions in a very short space of time. The controllable LED Strips can be simply and safely integrated into profile frames with a Line 8 groove.



CAUTION! Always unplug the LED Strip from the power supply before carrying out installation, cleaning or maintenance work on it.

CAUTION! Risk associated with inadequate fixing: Installation must be carried out by trained personnel. The device must be installed only on a suitable, level surface. Check the reliability of any fastenings that have not been recommended by the manufacturer. The LED Strip may fall from its mounting if it is not installed properly.

CAUTION! Damage caused by using incorrect voltage: The product must be connected to the power supply in accordance with the applicable installation regulations of the country where it is being used. Before activating the device, check whether the voltage of the system power supply corresponds with the specified rated voltage of the consumer. The LED Strip could be damaged or destroyed if the rated voltage is incorrect.



ATTENTION! When working with long LED Strips, ensure that the surface beneath them exhibits good thermal conductivity and thermal capacity. Ideally, an aluminium profile construction should be used.

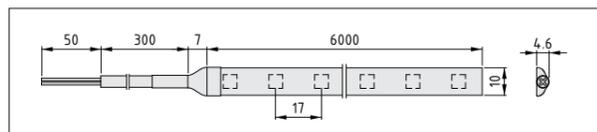
ATTENTION! The connecting cable of the LED Strip should not be extended and must be no longer than 3 metres. All other lines can be up to 20 metres in length.



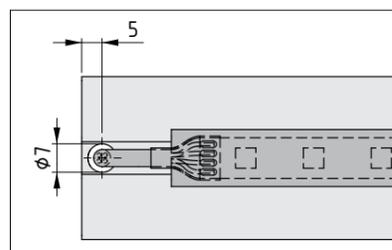
NOTE! When laying live cables along aluminium profiles, low-level, non-hazardous voltages can occur as a result of inductive coupling. To avoid this, it is advisable to connect the construction to the protective earth. An ideal solution is to use Multi-Socket Power Strip, 5 outlet, with system plug (0.0.627.44) or Distribution Strip (0.0.631.56) combined with Connecting Cable, Socket / Earthed Plug with earthing lead (0.0.677.54).

Preparation, assuming Caps are used on both ends:

- Lengths of aluminium profile L_p : $L_p = L + 60 \text{ mm}$
- Length of Casing Profile L_M : $L_M = L + 10 \text{ mm}$
- Length of the unshortened LED Strip L : 1000 mm or 2000 mm or 3000 mm or 6000 mm
The LED Strip can be shortened between each LED, at intervals of 17 mm



CAUTION! If the LED Strip is shortened, it loses its IP65 status. The cut end must be sealed to restore IP65 status.



We recommend feeding the cable through a through hole in the profile where possible. The hole must be cleanly deburred, and there must be no sharp edges.

Alternatively, the cable can be fed along the groove and protected with a Cover Profile.



The Casing Profile can be shortened using Multi-Purpose Pliers.



Place the LED Strip into the Casing Profile with the covered adhesive strip facing upwards. Remove the protective film in short sections and close the Casing Profile around the exposed adhesive strip until the entire LED Strip is enclosed.



The white protective covering of the cut-to-size LED Strip should protrude from both ends of the Casing Profile by approx. 5 mm. Then press and click together the two edges of the Casing Profile.



NOTE! If you remove the protective film from the adhesive tape after inserting the LED Strip and before clipping the Casing Profile together, this will have an additional stabilising effect on the ultimate complete unit of LED Strip and Casing Profile. However, this does make it more difficult to dismantle.



Feed the cable through the hole in the profile.



Before pressing in the Casing Profile with the LED Strip, dampen the Line 8 groove with a little soapy water.



Now press the Cap into place so that its clamping tabs are over the white protective cover of the protruding cable and pushed up against the Casing Profile.

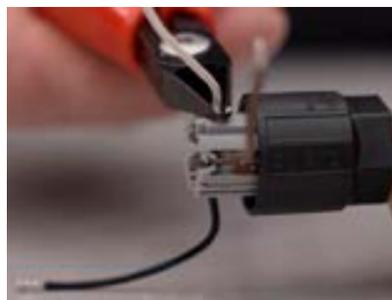


Working by hand, carefully press the Casing Profile containing the LED Strip and the Cap into the Line 8 profile groove. In doing so, the Cap should be aligned with the cut edge of the profile.

Be careful to ensure the LED Strip is only exposed to low forces during the installation process, since otherwise the soldered joints could quickly break.



Feed the cable through the connector until the outer insulation disappears into the connector and you hit a limit stop.



Now insert the strands according to their colour into the colour-coded, numbered clamps in the connector, press them down and fix them in place. Use a side cutter to trim the wires directly at the outer edge.



Working by hand, screw the second part of the connector firmly onto the lower part of the plug. To do so, align the arrows on each half of the connector.



CAUTION! The connector can only be screwed together in one alignment – when the arrows on the two halves match up.

Commissioning using Multi-Segment RGB LED Strip Controller IO-Link 24VDC



The LED Strip can be quickly commissioned and parametrised using Multi-Segment RGB LED Strip Controller IO-Link 24VDC (0.0.721.35).

Further connection options are described in the user guide for the Controller.

Removal

First disconnect the LED Strip from Multi-Segment RGB LED Strip Controller IO-Link 24VDC. Next, you can use a screwdriver to remove Multi-Segment RGB LED Strip.



CAUTION! The LED Strip is not suitable for being installed and removed multiple times. Doing so would constitute improper use.

However, if adjustments do need to be made, please follow the procedure below:



Use a screwdriver to lever out the cap on the cable.

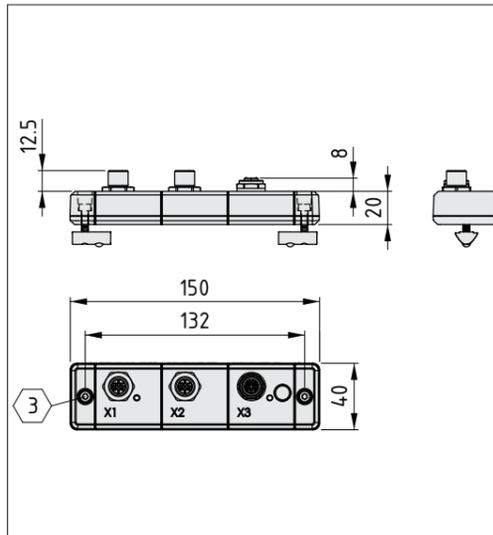


Slide out the cap at the free end and remove it from the profile.
Release the Casing Profile from its clamp fixing in the profile.



Carefully pull the Casing Profile containing the LED Strip out of the groove, pulling towards the connecting cable.
It is now possible to reposition the Casing Profile and LED Strip or rewire the system.

Accessories



Multi-Segment RGB LED Strip Controller IO-Link 24VDC - 0.0.721.35

Multi-Segment RGB LED Strip Controller IO-Link 24VDC is a device for controlling an item Multi-Segment RGB LED Strip that is to be used as an indicator light in non-safety-related applications in an industrial context (production, warehousing and logistics). It provides numerous operating and display modes that can be parametrised via IO-Link.

Maintenance



Only specialists with appropriate training should carry out repairs and maintenance on electrical devices
The LED Strip is a lighting element and should be installed so that it can be replaced at any time. As LEDs have a significantly longer service life than other types of lighting element (e.g. filament lamps), they only need to be replaced very rarely and/or in the event of mechanical damage.
Always disconnect the LED Strip from its power source before conducting any maintenance or repair work. Use only parts that have been approved by the manufacturer as spare parts. Inappropriate maintenance and repair work can result in injuries.

Care and cleaning



CAUTION! Risk of damage caused by incorrect cleaning:
To clean, use only a cloth and a standard domestic cleaning agent. Check that the substances you are using are suitable for use on paints and plastics. Inappropriate cleaning can destroy the device.

Disposal



The use of appropriate materials and easy dismantling ensure the product can be recycled. Improper disposal of the LED Strip can pollute the environment. Dispose of the LED Strip in accordance with the national regulations that apply in your country.



Environmental hazard:
Once it has reached the end of its service life, dispose of the product using the return and collection systems that are available to you. Inappropriate disposal poses a hazard to the environment.

Transport packaging:
Dispose of the packaging using the return and collection systems that are available to you.

Product development and documentation

A process of continuous product development ensures that products from item Industrietechnik GmbH always exhibit a high standard of innovation.

Consequently, there could be inconsistencies between this guide and the product you have acquired. item Industrietechnik GmbH can also not exclude the possibility of errors. We therefore ask for your understanding that the information, illustrations and descriptions provided here cannot constitute an entitlement to any claims.

You can find the latest version of this user guide at www.item24.com.

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