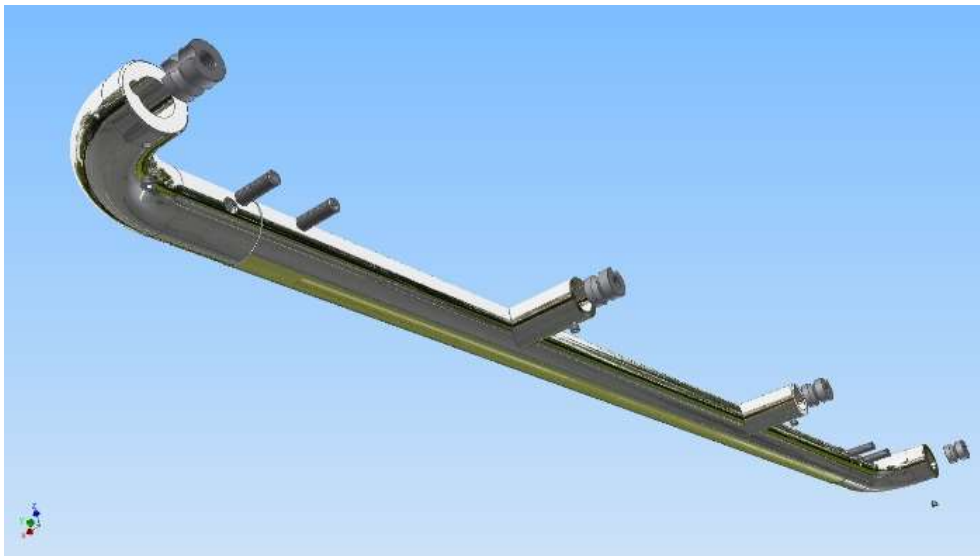


MOUNTING AND OPERATING INSTRUCTIONS

LED handrail



1 General information

1.1 About these mounting and operating instructions

1.1.1 Revision status of these mounting and operating instructions

Revision date: 16/03/2018
Revision index: 00

1.2 Presentations used in these mounting and operating instructions

1.2.1 Instructions for action and results

Instructions for action are identified by triangles in the order in which they are to be carried out.

The results of the actions carried out are check-marked.

Example:

- ▶ Connect power supply unit to power source
- ✓ LED handrail is ready to operate

1.2.2 Presentation of safety indications



Safety precautions are always marked with a signal word and in part also with a danger-specific symbol (see chapter 1.2.4 Symbols used).

The following signal words or danger levels are used:

⚠ DANGER!
Imminent danger! Non-observance of the safety precautions results in serious or even fatal injuries!
⚠ WARNING!
Potentially dangerous situation! Non-observance of the safety precautions can result in serious or even fatal injuries!
⚠ CAUTION!
Potentially dangerous situation! Non-observance of the safety precautions can result in medium or minor injuries!
ATTENTION!
Potentially dangerous situation! Non-observance of the safety precautions can result in material damage or environmental pollution!

1.2.4 Symbols used

The following symbols are used in these mounting and operating instructions and on the product:

	General warning!
	Note Describes general notes and recommendations.

Tab. 1 Symbols used


1.3 Name and address of the manufacturer

STRUKTURMETALL GmbH & Co. KG, Moosbachstrasse 22,
D-74626 Bretzfeld-Schwabbach
Phone +49 (7946) 9250-0, Fax +49 (7946) 9250-50
info@strukturmetall.de, www.strukturmetall.de

1.4 Warranty and liability

"General Terms of Sale and Delivery" of the manufacturer always apply.

1.5 Complementary documents

	Safety precautions and instructions for action included in the mounting instructions issued by the components manufacturers are not rendered ineffective by the present mounting and operating instructions! <ul style="list-style-type: none"> ▶ Prior to any work on the components, also observe these mounting instructions! ▶ Make these mounting instructions available to all persons working on the components.
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The following documents are enclosed with these mounting and operating instructions:

- Mounting and drilling instructions
- Declaration of Conformity for LED strips
- Declaration of Conformity for the power supply unit

1.6 Product observation

Inform manufacturer about

- Accidents
- Potential sources of danger on the product
- Incomprehensibilities in these mounting and operating instructions

2 Product description

2.1 Proper use

The LED handrail should exclusively be used as a handrail in lifts.

- The LED handrail should only be operated within the specified performance limits (see technical data).
- Observing the mounting and operating instructions and complying with the maintenance and repair regulations are prerequisites for proper use.

2.2 Reasonably foreseeable misuse

⚠ WARNING!

Risk of injury arising from misuse!

- ▶ Read the operating instructions prior to operation and keep it available at all times.
- ▶ Rule out any other usage or misuse. Always observe specifications.

Any other usage or a usage beyond proper use is considered as improper. The manufacturer shall not assume any liability for resulting damage. The manufacturer shall not assume any liability in case of modifications or incorrect mounting, installation, operational start-up, operation, maintenance or repair. Only original parts of the manufacturer are approved as spare parts and accessories. Spare parts and accessories not delivered by the manufacturer are not tested for operation and can affect operational reliability. The manufacturer shall not assume any liability for damages resulting from usage of non-approved spare parts and accessories.

Reasonably foreseeable misuse is in particular:

- Operation in explosive surroundings
- Operation in flammable surroundings
- Operation beyond manufacturer specification
- Conversions or modifications to the product without written approval by the manufacturer!

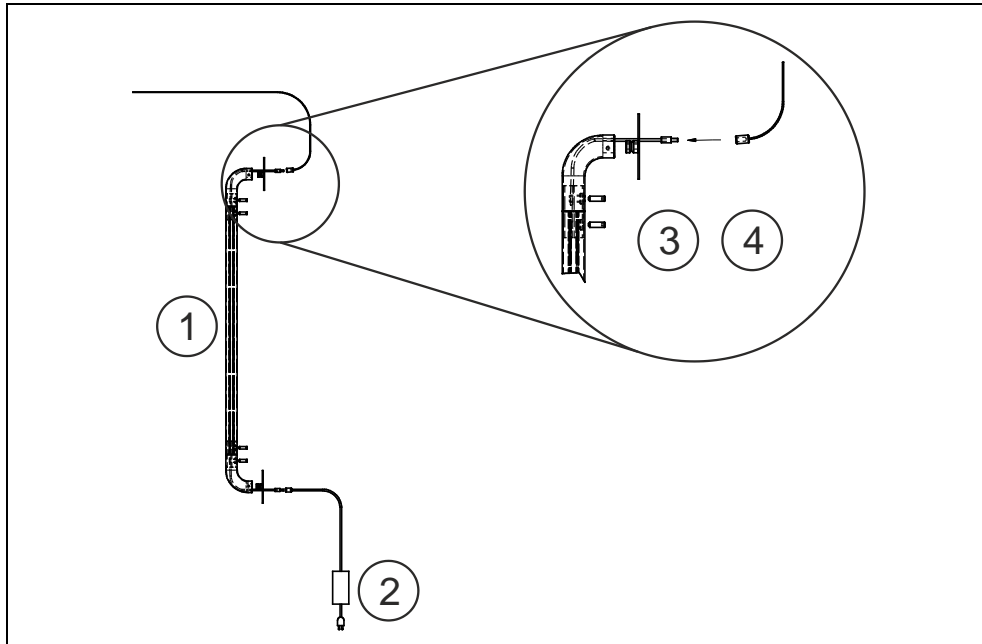
2.2.1 Conversions or modifications executed by the user

Conversions or modifications to the LED handrail executed by the user are not allowed and will result in the loss of the manufacturer's liability!

2.2.2 Residual risks

In normal operation, there are no residual risks arising from the LED handrail.

2.3 Main components



Pos.	Component	Function
1	LED handrail	Handrail with LED object
2	Power supply unit	Power supply for the LED handrail
3	Cinch-plug	Power connection between power supply unit or the LED handrails between each other
4	Cinch-socket	Power connection between power supply unit or the LED handrails between each other

Tab. 2 Main components and their functions

2.4 Technical data

2.4.1 Dimensions and weights

Dimension of handrail profile	Ø 35 mm,
Weight of handrail profile	2 kg/m
Dimension of LED strip (WxH)	8 mm x 2 mm
Dimension of power supply unit (LxWxH)	181.5 mm x 62 mm x 35 mm
Weight of power supply unit	0.4 kg

2.4.2 Specifications for power supply

Voltage supply	90 ... 264 V AC
Back-up fuse (to be provided by the operating company)	24 V depositing device
Power consumption	60 W

2.4.3 Environmental conditions for operation and storage

Ambient temperature	-30 °C ... +50 °C
Installation site	Dry, frost-free
Atmosphere	Non-explosive

2.4.4 LED strip 24V white 9.6W/m neutral white

Colour temperature	4,200 K
Brightness	750 lm/m
Dimension (WxH)	8 mm x 2 mm
CRI value	85
Efficiency class	A
Separable	every 5 cm

2.4.5 LED strip 24V white 9.6W/m cold white

Colour temperature	6,700 K
Brightness	800 lm/m
Dimension (WxH)	8 mm x 2 mm
CRI value	80
Efficiency class	A
Separable	every 5 cm

2.4.6 LED strip 24V white 9.6W/m warm white

Colour temperature	2,700 K
Brightness	600 lm/m
Dimension (WxH)	8 mm x 2 mm
CRI value	95
Efficiency class	A
Separable	every 5 cm

2.4.8 LED transformer

Input	90 ... 264 V AC / 127 ... 370 V DC
Output	24 V DC
Temperature monitoring	Yes
Model	PLC
Colour	White
Current	0 ... 2.5 A
Power	60 W

2.5 Unpacking and installing

- ▶ Proceed with care when taking the LED handrail out of the packaging.
- ▶ Check for damages.
- ▶ Dispose of the packaging according to waste management regulations.

2.5.1 Mounting

CAUTION!

Risk of eye injuries!

Eye injuries due to looking into the LED spotlights for some time!

- ▶ Mount the LED handrail in such a way that direct radiation is improbable.

WARNING!

Risk of tripping!

Risk of tripping arising from loosely laid electrical lines!

- ▶ Lay and fix electrical lines outside the movement space.

- ▶ Take the hole size of the LED handrail
- ▶ Drill holes according to drilling instructions
- ▶ Mount M8 sleeves onto the wall
- ▶ Pull cable with cinch-plug through hole D9
- ▶ Mount LED handrail onto sleeves in the wall
- ▶ Tighten grub screws M5 of the wall spacer
- ▶ Connect cinch-cable according to scale drawing
- ▶ Connect power supply unit to power source
- ✓ LED handrail is ready to operate

2.5.2 Electrical connection

DANGER!



Danger arising from electric voltage!

- ▶ Work on electrical installations to be conducted by qualified electricians only!
- ▶ In case of visible defects, have the power supply unit exchanged by qualified electricians immediately!

- ▶ Connect electrical power supply, electrical signals and electrical consumers according to valid electrical documentation.

3 Maintenance and cleaning

3.1 Cleaning

- ▶ Clean LED handrail only with a damp cloth. Do not use any aggressive detergents.

3.2 Safety measures during maintenance

⚠ WARNING!

Risk of injury during maintenance activities!

- ▶ Unplug the power supply plug prior to maintenance work.
- ▶ Observe applicable accident prevention and safety precautions.
- ▶ Working on electrical installations only by qualified electricians!

4 Disposal

4.1 Disposal of the LED handrail and its components

ATTENTION!

Danger arising from unqualified disposal e.g. by

- Uninstructed personnel
- Stored energy
- Breakage during dismantling

Observe the following during dismantling and disposal:

- ▶ Instructed technical staff only
- ▶ Wear personal protective equipment if necessary (PPE)!
- ▶ Do not dispose of in domestic waste



5 Declaration of Conformity

STRUKTURMETALL
Der Spezialist für strukturierte Edelstahlbleche

EG-/EU-Konformitätserklärung

Der Hersteller:
STRUKTURMETALL GmbH & Co.KG, Moosbachstr. 22, 74626 Bretzfeld-Schwabbach

erklärt eigenverantwortlich, dass das Produkt:

Produkt	LED-Handlauf
Typenbezeichnung	D 35
Baujahr	2017

konform ist mit allen Bestimmungen der folgenden EU-Richtlinie:

2009/125/EG	Richtlinie 2009/125/EG des Europäischen Parlaments und des Rates vom 21. Oktober 2009 zur Schaffung eines Rahmens für die Festlegung von Anforderungen an die umweltgerechte Gestaltung energieverbrauchsrelevanter Produkte, Amtsblatt der EU: L285/10 vom 31.10.2009
2011/65/EU	Richtlinie 2011/65/EU des Europäischen Parlaments und des Rates vom 8. Juni 2011 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten, Amtsblatt der EU: L 174/88 vom 01.07.2011
2014/30/EU	Richtlinie 2014/30/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit (Neufassung), Amtsblatt der EU: L 96/79 vom 29.03.2014
2014/35/EU	Richtlinie 2014/35/EU des Europäischen Parlaments und des Rates vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt, Amtsblatt der EU: L 96/357 vom 29.3.2014

Folgende harmonisierte Normen wurden angewandt:

EN 55015:2016-04
EN 61347-1:2016-05, EN 61347-2-13:2017-10
EN 61000-3-2:2015-03, EN 61000-3-3:2014-03
EN 61000-4-2:2009-12, EN 61000-4-3:2011-04, EN 61000-4-4:2013-04
EN 61000-4-5:2015-03, EN 61000-4-6:2014-08, EN 61000-4-8:2010-11,
EN 61000-4-11:2005-02

Bretzfeld-Schwabbach, den 2-1-2018


Ton Janssen, Managing Director a.i.