

**09 19**  
DETAILED CATALOGUE

## **LaneLED INOX48**

LIGHTING SOLUTIONS

V0625

# Utilising synergies – achieving safety

## LaneLED INOX48 – the system for self rescue measures in tunnels and galleries

Various damaging events and fires in train tunnels have shown that it is essential to improve self rescue measures for independent passengers and personnel.

Protection of life and limb – evacuating people – introduce fire-fighting and safety measures.



A system was developed and tested in cooperation with notable manufacturers, which is in line with the requirements of the TSI (Technical Specification for Interoperability - Directive 2008/57/EC of 17.06.2008).

The LaneLED INOX48 Handrail System allows operators and planners to install a complete product, tested as a system, made from stainless steel V4A, that meets all technical requirements of the TSI.

Based on guidelines (e.g. SBB I-20036 regulations on self-rescue measures in tunnels or international TSI requirements), we have developed the following solution:

### LED illuminated handrail with functional maintenance

#### Applications

- railway tunnels
- tunnel lighting
- power plant and cavern corridors
- safety tunnels, access and evacuation tunnels
- mines
- versions with or without functional maintenance

#### Your advantages

- easy and quick installation
- type-approved components

#### Product documentation

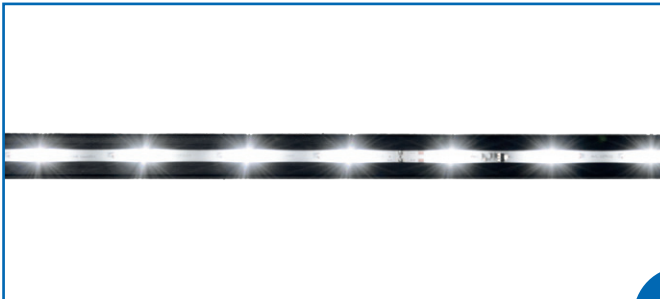




# System components

## Lighting components

LaneLED light bar in a special profile made of plastic including electrical supply

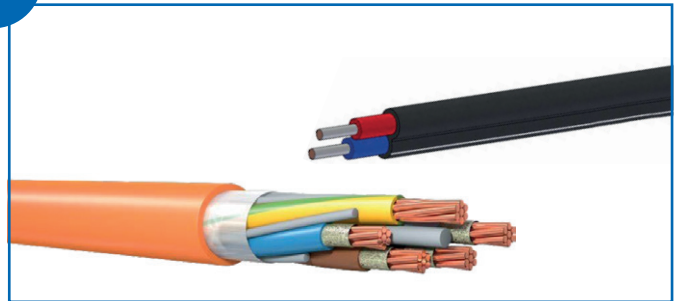
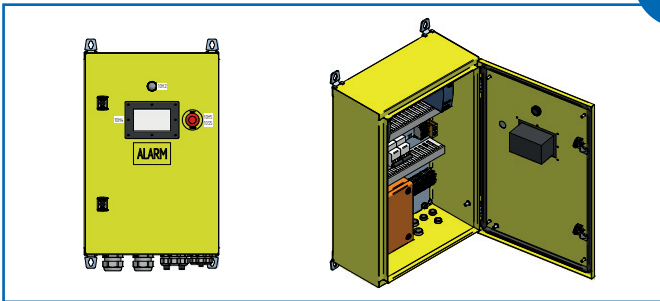


## Mechanical components

- handrail INOX48 – V4A
- wall mounting, brackets and accessories V4A
- connectors and angle parts



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## Control unit V2A E90 yellow

## Connecting components

Individually assembled combinations, consisting:

- fire-proof junction box
- power supply unit
- alarm unit

Supply/control cables; project-specific

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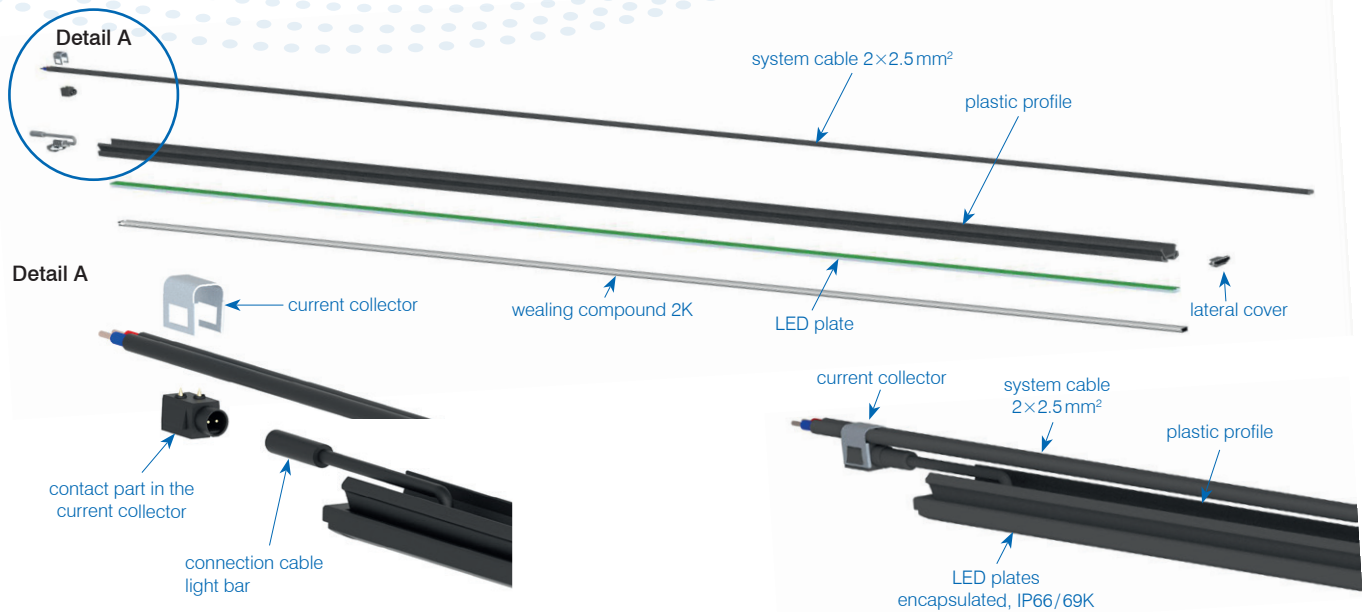
A product that has come from successful GIFAS development

## LaneLED INOX48

Handrail with integrated emergency escape route lighting



# Light bar LaneLED



## GIFAS-LaneLED

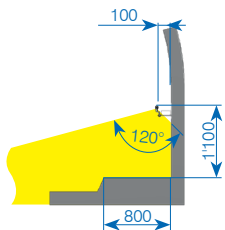
The LaneLED light bar from GIFAS is the base element for the illuminated handrail. The appropriate type is selected depending on the requirements of the operator, whereas the desired average light intensity is the most important specification. The other parameters of the LaneLED are carefully defined.

The carrier profile of the LaneLED light bar consists of a special synthetic profile. A flexible LED strip is inserted incorporated into the profile with 2K casting compound. The encapsulation leads to the high protection class of IP66/69K.

There is room for the cable guide and the current collector in the upper part of the profile (in between the flanks).

Light colour:	4'400K
Voltage LED modules:	21 - 32VDC
Beam angle:	120°
Operating life:	L90/B10 100'000h +25° C
Protection category:	IP66/69K
Operating range of temperature:	-25° C to +45° C
Dimensions:	~30x26.5mmxvariable length (see assortment)

## Illumination/light cone during use

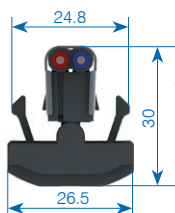


## Current collector

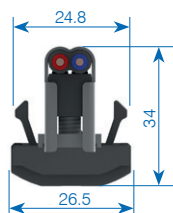
Each LaneLED is connected to the power supply via the current collector and is freely attachable to the system cable  $2 \times 2.5 \text{ mm}^2$ . The cable bushing serves as the interface to the current collector and the connection cable with plug of the LaneLED (IP66/69K connection).

## Type SNAP

## Type SCREW



View: cut profile with current collector



## Accessories

<b>209768</b>	System cable black $2 \times 2.5 \text{ mm}^2$ , flat cable CPR B2ca XLPO/XLPO
<b>209769</b>	System cable blue $2 \times 2.5 \text{ mm}^2$ , flat cable CPR B2ca XLPO/XLPO
<b>209770</b>	System cable red $2 \times 2.5 \text{ mm}^2$ , flat cable CPR B2ca XLPO/XLPO
<b>136230</b>	Current collector SCREW 2P, 42V-5A, V4A-1.4401, with metal bracket, thread base plate and set screw
<b>860120</b>	Current collector SNAP 2P, 42V-5A, V2A-1.4310 (requires special pliers item no. 860565)

# Assortment/light data

## Technical data LaneLED – light comparison measurements

Perfect light for each application! An overview of the values that can be achieved with light bars LaneLED type 1 to 5 as following.

- maintenance factor: 1 (value as new)
- light mounting height: 95 cm
- emergency escape route width: 1 m

## Assortment

### Type 1: LaneLED INOX48, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860353	380	12	0.12	5	8
860354	1118	36	0.36	15	24
860355	2224	72	0.75	30	48

### Type 3: LaneLED INOX48, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860356	380	12	0.5	20	32
860357	1118	36	1.5	60	96
860352	2224	72	3.0	120	192

### Type 4: LaneLED INOX48, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860514	380	12	1.0	40	64
860515	1118	36	3.0	120	192
860516	2224	72	6.0	240	384

### Type 5: LaneLED INOX48, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860358	380	12	1.5	60	96
860359	1118	36	4.5	180	288
860360	2224	72	9.0	360	576

Other versions on request

## Redundancy

The LaneLED light bar has two independent lighting circuits which are fed separately. This ensures that, if one lighting circuit fails (power supply failure, wire breakage, electronics defect, etc.) the LaneLED light bar retains 50% of its functionality.

## Assortment redundant

### Type 2: LaneLED INOX48 redundant, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860361	384	12	2×0.12	2×5	2×8
860362	1122	36	2×0.36	2×15	2×24
860363	2227	72	2×0.75	2×30	2×48

### Type 3: LaneLED INOX48 redundant, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860364	384	12	2×0.25	2×10	2×16
860365	1122	36	2×0.75	2×30	2×48
860366	2227	72	2×1.50	2×60	2×96

### Type 4: LaneLED INOX48 redundant, 4'400 K, 21 -32 VDC

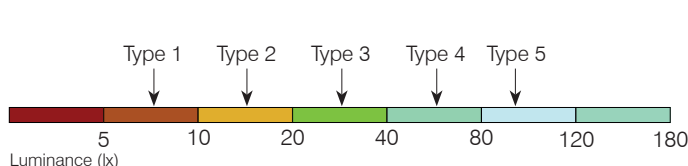
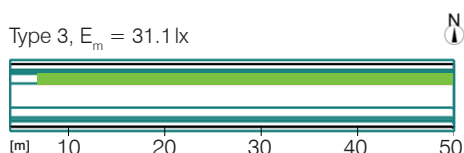
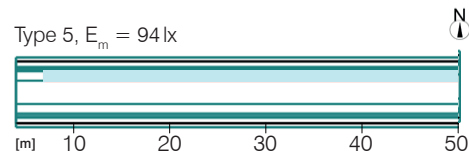
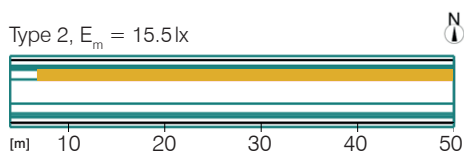
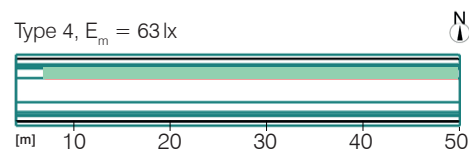
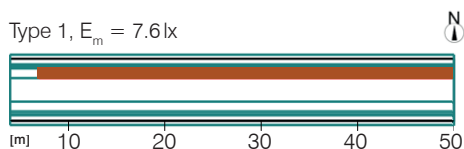
Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860520	384	12	2×0.50	2×20	2×32
860521	1122	36	2×1.50	2×60	2×96
860522	2227	72	2×3.00	2×120	2×192

### Type 5: LaneLED INOX48 redundant, 4'400 K, 21 -32 VDC

Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860367	384	12	2×0.75	2×30	2×48
860368	1122	36	2×2.20	2×90	2×144
860369	2227	72	2×4.50	2×180	2×288

Other versions on request

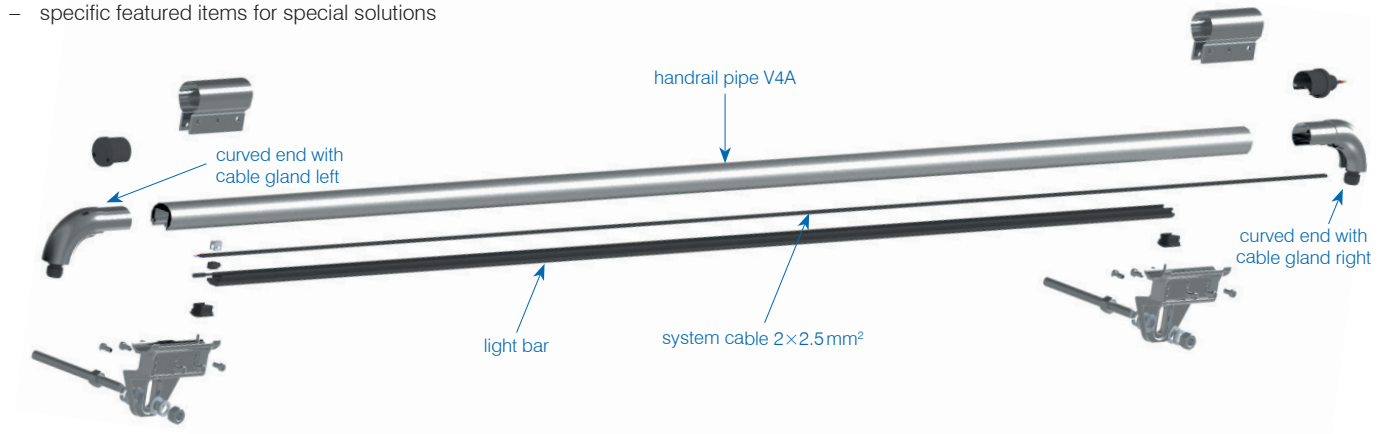
## Light data



# Handrail INOX48

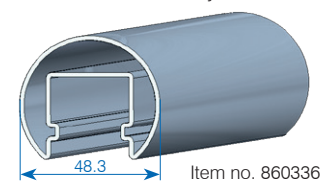
The LaneLED INOX48 handrail made of V4A stainless steel is the support element for the illuminated handrail. The profile shape is selected to guarantee the safety handrail function, as also to allow the installation of the light bar (by click function) and the necessary power supply. The handrail has been a proven product for many years with conceptual adaptations for use as self-rescue measures in railway tunnels.

- handrail profile V4A, steel 1.4571 (AISI 316Ti), cold-rolled
- accessories for quick and easy assembly
- specific featured items for special solutions



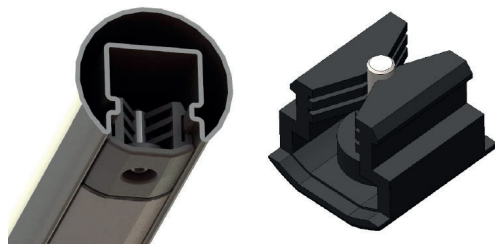
## Handrail profile

The profile for the LaneLED handrail is the core element of the setup. The LaneLED light bar is clicked into the light slot from below after completing the hand rail assembly.



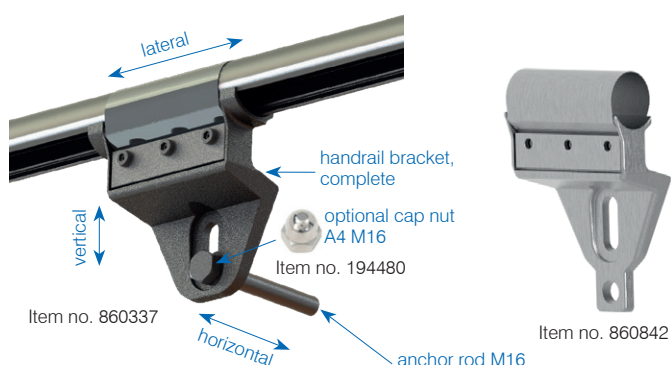
## Blind cover and securing element

Similar in design to the LaneLED profile, a blind cover is available that covers gaps in the longitudinal direction. A securing element is used for the assembly.



## Handrail bracket

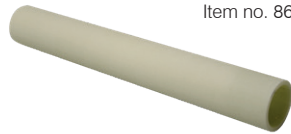
The specially designed handrail bracket, made from V4A steel casting, is placed directly on the anchor rod. It is designed in such a way that the mounting tolerances can be absorbed in all three axes. It also guarantees proper and quick assembly.



# Handrail INOX48

## Insulating piece

An insulating piece is available to avoid potential shift and to separate electrically individual supply sections from each other.



Item no. 860345

## Corner connector left / right

Angle connectors are used to change the direction. The supply cable can be inserted inside without interruption. The angle connectors allow changes in direction of  $+30^\circ$  and  $-30^\circ$ .



Item no. 860850



Item no. 860851

## Handrail elbow left / right, supply element

Two curved ends (left / right) with cable inlet for the supply are available. (Cable gland M20 and sealing insert available separately)



Item no. 840656



Item no. 840657

## For direct feeding via handrail pipe profile

A supply element, straight and angled connection nipples as well as the appropriate flexible conduit, are available for feeding via the handrail pipe profile.



Item no. 155544



Item no. 155547



Item no. 218301



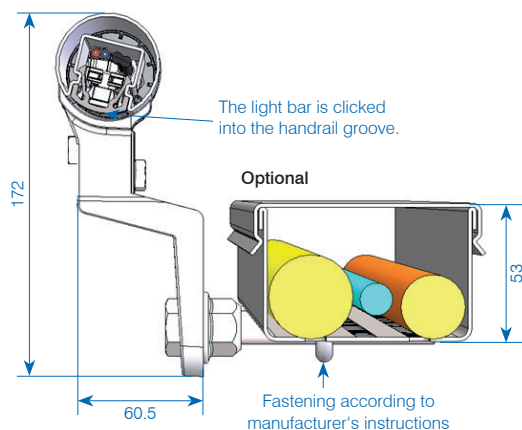
Item no. 860843



## Special solutions

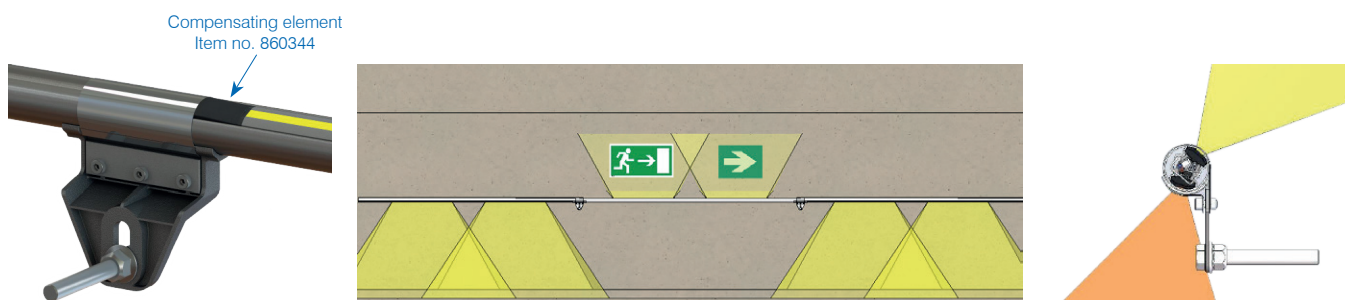
### Cable conduit optional

The handrail can be used either with or without a cable conduit (cable tray). A guide rail can be attached to the M16 anchor rods if required. (Follow the manufacturer's instructions)



### Sign lighting optional

Certain elements of the hand rail can be turned 180° upwards for any necessary lighting of warning signs (installed above the hand rail).



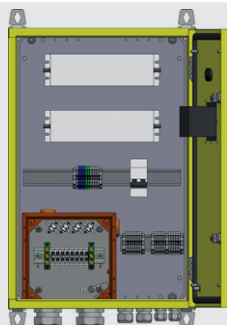
### Assortment

<b>860336</b>	LED hand rail tube V4A, steel 1.4571 Ø48.3×1.5 mm, length 2'500 mm, cold-rolled
<b>860337</b>	Hand rail support V4A, 1.4401 incl. clamping plate and securing screws
<b>194480</b>	Cap nut A4, M16 high profile
<b>860842</b>	Hand rail support V4A, 1.4401 with end connection incl. clamping plate and securing screws
<b>860343</b>	Blind cover, V0 UL94
<b>860342</b>	Securing element GFK, V0 UL94
<b>860345</b>	Insulating piece GRP 15 kV, plastic pipe 1½", length 350 mm
<b>860850</b>	Elbow V4A 30° right, closed, light inclination 20°
<b>860851</b>	Elbow V4A 30° left, closed, light inclination 20°
<b>860843</b>	Supply element GFK, V0 UL94 with thread M16
<b>218301</b>	Conduit gland AGRO M16 sz 90°, for plastic hose ø15.8 mm
<b>155544</b>	Conduit gland AGRO M16 sz straight, for plastic hose ø15.8 mm
<b>155547</b>	Flexible conduit ROHRFLEX PA12 black 12, 0/15.8 mm flexible (VE=50 m)
<b>840656</b>	Curved end right excl. cable gland M20
<b>840657</b>	Curved end left excl. cable gland M20
<b>051507</b>	Cable gland M20×1.5
<b>153775</b>	Cable gland joint-inlet for cable gland M20 corresponding to system cable
<b>860344</b>	Compensating element GRP, V0 UL94



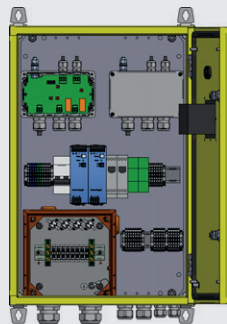
# Power supply unit

The orientation light in the hand rail is supplied by a power supply unit. At the same time, it ensures connection to the mains and also fulfils the relevant regulations for fire-resistant design.



**Item no.** 188456

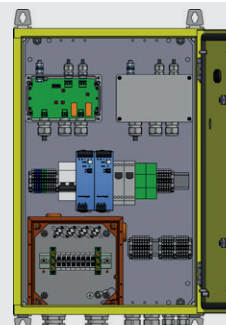
**Designation** LaneLED, power supply cabinet, 1.4301 (V2A)  
RAL1023 (yellow signal colour), 400×645×260.8 mm  
2 power supplies 230VAC/24VDC - 240 W, IP66



**Item no.** 193933

**Designation** LaneLED, power supply cabinet, 1.4301 (V2A)  
RAL1023 (yellow signal colour), 400×645×260.8 mm  
2 power supplies 230 VAC/24VDC - 240 W, IP66

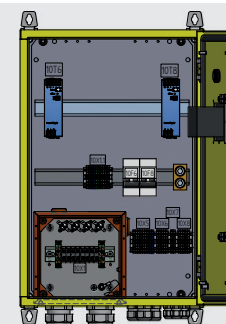
**Remark** plus failure monitoring when switched off (cold conductor monitoring), failure monitoring during operation (current monitoring relay) and power supply feedback via DC-OK contact



**Item no.** 192834

**Designation** LaneLED, power supply cabinet, 1.4301 (V2A)  
RAL1023 (yellow signal colour), 400×645×260.8 mm  
2 power supplies 230VAC/24VDC - 240 W, IP66

**Remark** plus failure monitoring when switched off (cold conductor monitoring), failure monitoring during operation (current monitoring relay) and power supply feedback via DC-OK contact



**Item no.** 213219

**Designation** LaneLED, power supply cabinet, 1.4301 (V2A)  
RAL1023 (yellow signal colour), 400×645×260.8 mm  
2 power supplies 230 VAC/24VDC - 240 W, IP66

**Remark** power supply feedback via DC-OK contact

# Cables

The supply/control cables are object-dependent: with/without feedback, fire-resistant FE180/E90 or in FE05 design.



## Assortment

<b>178362</b>	Supply cable FE180/E90, orange, 5×6 mm <sup>2</sup> (LNPE), Ø20.1 mm
<b>115421</b>	Supply cable FE180/E30, orange, 5×6 mm <sup>2</sup> (LNPE), Ø14.2 mm
<b>037552</b>	Control cable FE180/E30, orange, 3×2.5 mm <sup>2</sup> (LNPE), Ø9.9 mm
<b>132930</b>	Control cable FE180/E30 orange, 7×1.5 mm <sup>2</sup> (Num. + PE), Ø11.5 mm

*Other versions on request*

## Further services/assembly support

### Our services (incl.)

- relux lighting calculation
- consultation and support through our field service
- mutual support within partner companies, contact mediation

### Our services (excl.)

- planning and concept development as per specifications
- creation of object-specific plans and documents
- instruction and assistance on site or at GIFAS
- assembly support on site

### Assembly

Please ask for our detailed installation instructions.

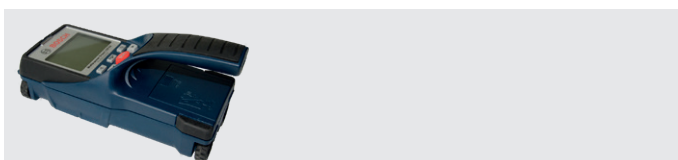
 A complete system can be viewed in the «Hagerbach» test gallery.

### Assembly aids (provided on loan)



**Item no.** 138524

**Designation** cable reel trolley for cable reel max. Ø 500×500



**Item no.** 176955

**Designation** Wall scanner for detecting iron



**Item no.** 860565

**Designation** Crimping tool mechanical for current collector SNAP



**Item no.** 179280

**Designation** Battery pack 24V, 7.2Ah



**THE  
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PARTNER**

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