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DETAILED CATALOGUE

LaneLED INOX48

LIGHTING SOLUTIONS

V0725

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

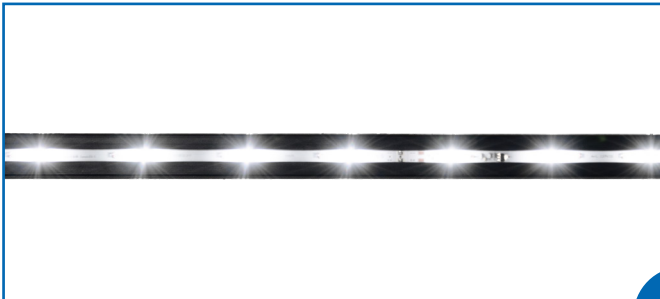
Product documentation



System components

Lighting components

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

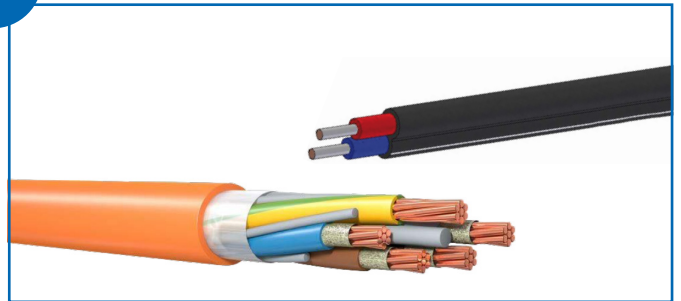
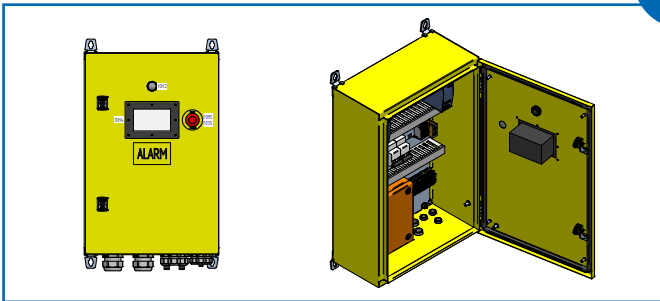


Mechanical components

- 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

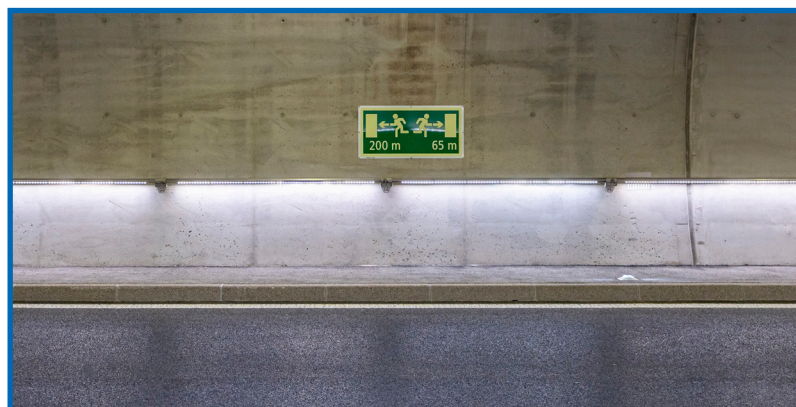
Supply/control cables; project-specific

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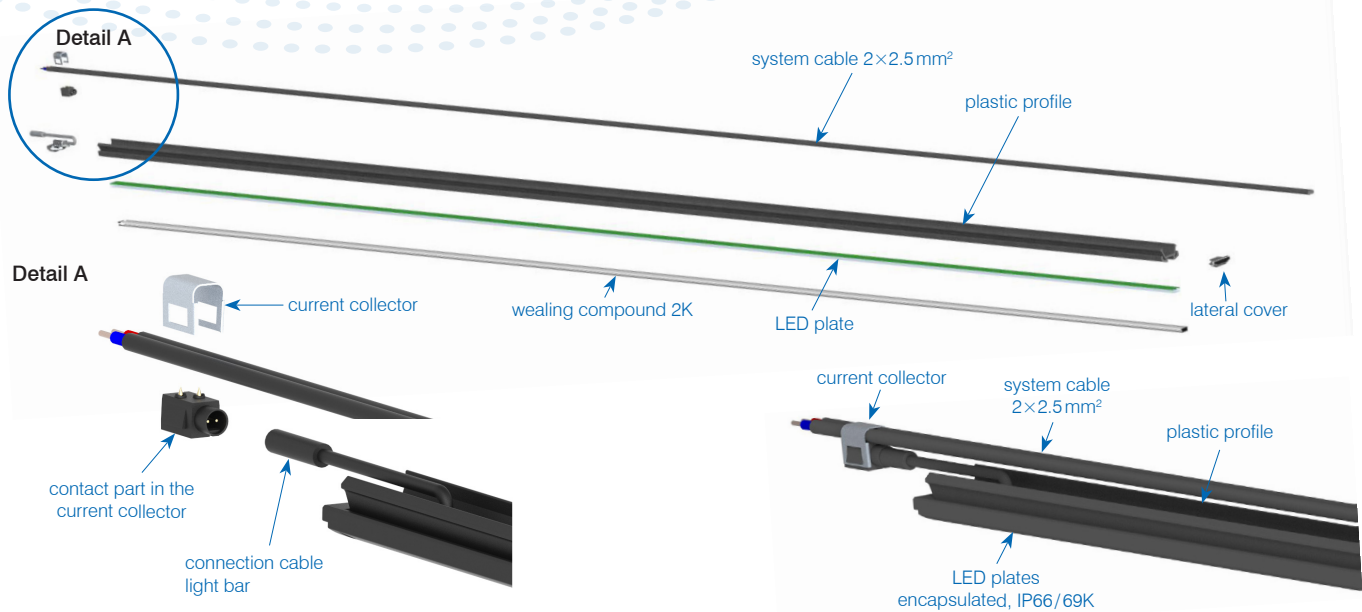
A product that has come from successful GIFAS development

LaneLED INOX48

Handrail with integrated emergency escape route lighting



Light bar LaneLED



GIFAS-LaneLED

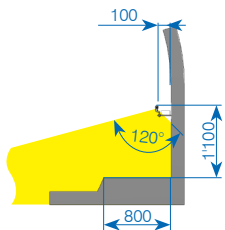
The LaneLED light bar from GIFAS is the base element for the illuminated handrail. The appropriate type is selected depending on the requirements of the operator, whereas the desired average light intensity is the most important specification. The other parameters of the LaneLED are carefully defined.

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

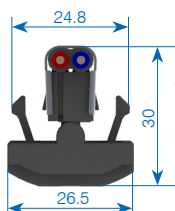


Current collector

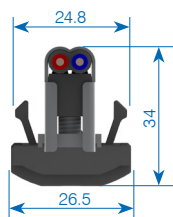
Each LaneLED is connected to the power supply via the current collector and is freely attachable to the system cable $2 \times 2.5 \text{ mm}^2$. The cable bushing serves as the interface to the current collector and the connection cable with plug of the LaneLED (IP66/69K connection).

Type SNAP

Type SCREW



View: cut profile with current collector



Accessories

209768	System cable black $2 \times 2.5 \text{ mm}^2$, flat cable CPR B2ca XLPO/XLPO
209769	System cable blue $2 \times 2.5 \text{ mm}^2$, flat cable CPR B2ca XLPO/XLPO
209770	System cable red $2 \times 2.5 \text{ mm}^2$, flat cable CPR B2ca XLPO/XLPO
136230	Current collector SCREW 2P, 42V-5A, V4A-1.4401, with metal bracket, thread base plate and set screw
860120	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	11
860354	1118	36	0.36	15	34
860355	2224	72	0.75	30	67

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	44
860357	1118	36	1.5	60	132
860352	2224	72	3.0	120	264

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	88
860515	1118	36	3.0	120	264
860516	2224	72	6.0	240	528

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	132
860359	1118	36	4.5	180	396
860360	2224	72	9.0	360	792

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	2×11
860362	1122	36	2×0.36	2×15	2×34
860363	2227	72	2×0.75	2×30	2×67

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	2×22
860365	1122	36	2×0.75	2×30	2×66
860366	2227	72	2×1.50	2×60	2×132

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

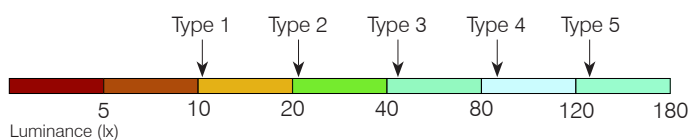
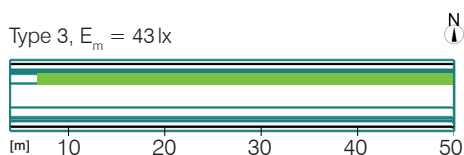
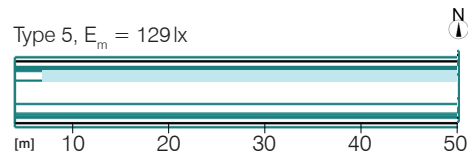
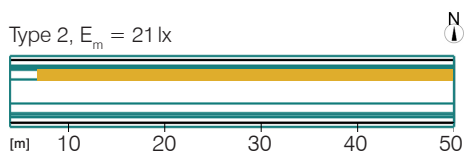
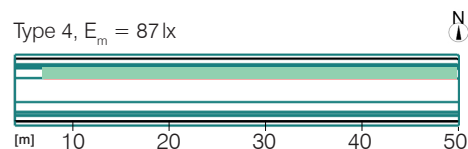
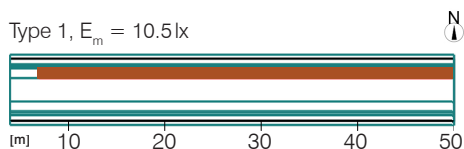
Item no.	Length mm	Number of LED	Output W	Power mA	Luminous flux lm
860520	384	12	2×0.50	2×20	2×44
860521	1122	36	2×1.50	2×60	2×132
860522	2227	72	2×3.00	2×120	2×264

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	2×66
860368	1122	36	2×2.20	2×90	2×198
860369	2227	72	2×4.50	2×180	2×396

Other versions on request

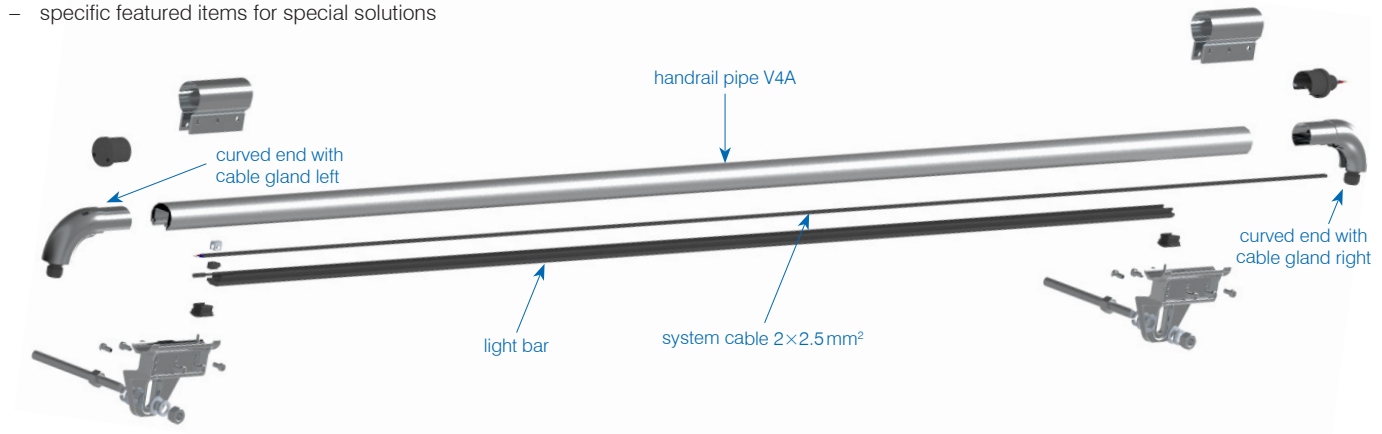
Light data



Handrail INOX48

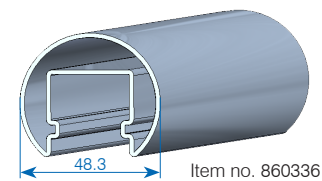
The LaneLED INOX48 handrail made of V4A stainless steel is the support element for the illuminated handrail. The profile shape is selected to guarantee the safety handrail function, as also to allow the installation of the light bar (by click function) and the necessary power supply. The handrail has 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



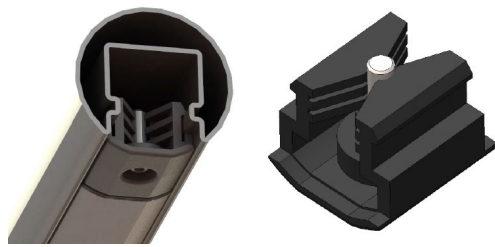
Handrail profile

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.



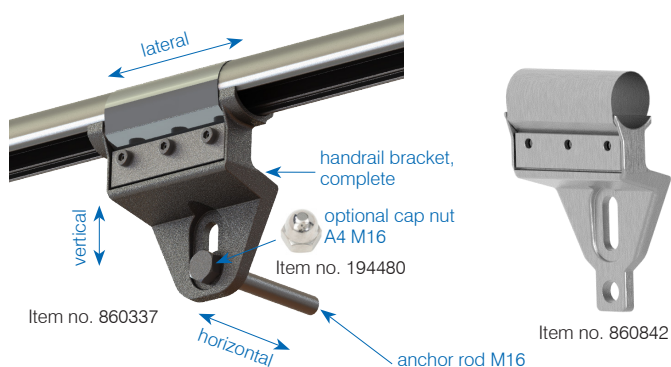
Blind cover and securing element

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

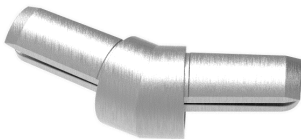
An insulating piece is available to avoid potential shift and to separate electrically individual supply sections from each other.



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° .



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.



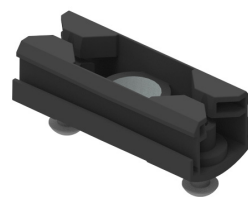
Item no. 155544



Item no. 155547



Item no. 218301

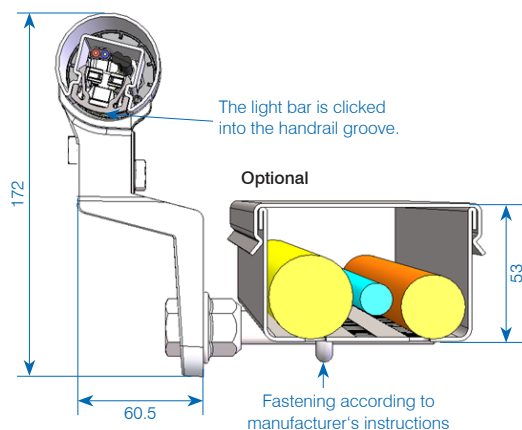


Item no. 860843

Special solutions

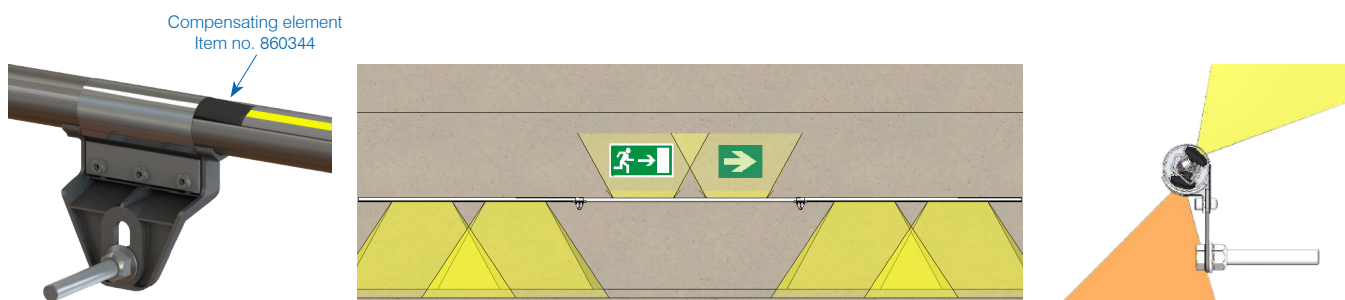
Cable conduit optional

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).

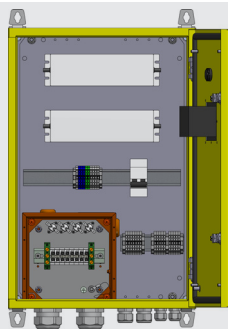


Assortment

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

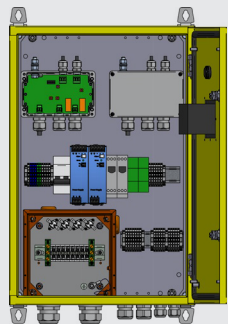
Power supply unit

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

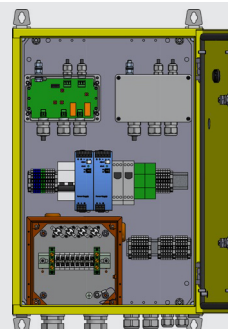
Designation LaneLED, power supply cabinet, 1.4301 (V2A)
RAL1023 (yellow signal colour), 400×645×260.8 mm
2 power supplies 230VAC/24VDC - 240 W, IP66



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

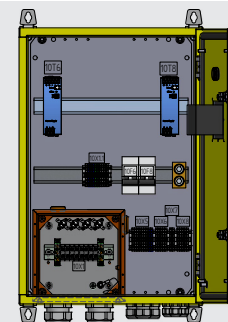
Remark plus failure monitoring when switched off (cold conductor monitoring), failure monitoring during operation (current monitoring relay) and power supply feedback via DC-OK contact



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

178362	Supply cable FE180/E90, orange, 5×6 mm ² (LNPE), Ø20.1 mm
115421	Supply cable FE180/E30, orange, 5×6 mm ² (LNPE), Ø14.2 mm
037552	Control cable FE180/E30, orange, 3×2.5 mm ² (LNPE), Ø9.9 mm
132930	Control cable FE180/E30 orange, 7×1.5 mm ² (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.

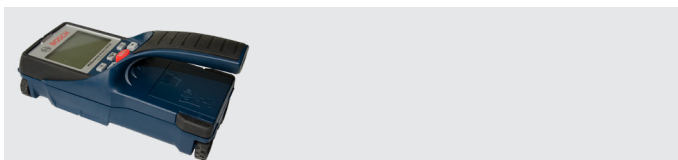
 A complete system can be viewed in the «Hagerbach» test gallery.

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
SOLUTION
PARTNER**

GIFAS-ELECTRIC GmbH
Dietrichstrasse 2
CH-9424 Rheineck

+41 71 886 44 44
info@gifas.ch
www.gifas.ch