

**BEACONS** 





# **HELLA BEACONS**

### PLAY IT SAFE - WITH BEACONS FROM HELLA!

Whenever a special optical warning against dangerous situations is required, beacons are in the limelight. This is not restricted to rescue missions but also occurs during assignments with large, heavy and/or slow vehicles, such as harvesters or heavy-duty transport. HELLA beacons have a strong warning effect, which signals to other road users: Attention, please be considerate – work is being done around the vehicle. Therefore, our beacons do their part in providing greater safety. This safety is also achieved thanks to the optimal light focus and distribution, the resulting long range and the very high luminous intensity of the applied LED technology.

In addition, HELLA beacons are characterised by outstanding quality in terms of workmanship and stability – as proven by their long lifetime.

Do not leave safety up to chance – put your trust in HELLA beacons.



# FIXED ATTACHMENT

### PRACTICAL SCREW ATTACHMENT POINTS

Almost all HELLA beacons have the same spacing and feature the same number of screw attachment points (pitch circle diameter: 130 mm). Consequently, it is simple to exchange or replace them with a new beacon model. Halogen and LED lighting technology models also feature the same attachment points. As a result, it is very easy to replace a halogen beacon that was purchased for fixed mounting with an LED beacon that is also going to be a permanent fixture.



## PIPE SOCKET MOUNTING

### SUITABLE FOR DIN PIPES

The varying shapes of vehicle roofs, extensions or restricted installation spaces do not always permit fixed mounting of beacons. The beacon must be adequately visible to achieve the statutory 360° warning effect. Angled pipes are suitable for this purpose. These are fixtures that can, for example, be attached to the side of the vehicle to make sure that the beacon protrudes from the vehicle roof and is easily visible from all sides. Our beacons with pipe socket mounting are suitable for pipe diameters of 24 mm and are perfect for widely used DIN pipes. These can also be purchased as accessories from HELLA in a variety of variants.



# MAGNET MOUNTING

### SLIM DESIGN, HIGH DEGREE OF RETAINING FORCE

The slim shape of the magnetic adapter makes it fairly inconspicuous. It is enhanced by a rubber sheath to provide scratch resistance and to protect the vehicle's roof. Our high-performance neodymium magnets boast a very high retention force and, depending on the beacon, can be used up to a top speed of 200 km/h $^*$ . This retention force is available within an ample temperature range between -20 $^{\circ}$ C to +60 $^{\circ}$ C.

### **OUTSTANDING ANTI-SLIP CHARACTERISTICS**

The rubber material used is particularly soft, thus creating a sufficient resistance and lending magnets a particularly high anti-slip resistance. As a result, the vehicle's paintwork is well protected from scratches and the magnet sheath copes perfectly even in tough weather conditions and low temperatures as well as when exposed to UV radiation.



## K-I FD 2.0

Height 88 mm, Ø 169 mm\* Height 161 mm, Ø 165 mm\*



Multi-voltage 10-32 V, automatic change between day and night mode, rotating or flashing light function, upright position of use, amber polycarbonate light dome, total current consumption 0.45 A (12 V) to 2.5 A (24 V), power consumption 0 30 W/max. 72 W, degree of protection IP 6K7/IP 6K9K, SAE Class 1, ECE R65 and ECE R10 approval, CISPR 25 Class 5



 2XD 011 557-101
 Fig. 1
 Fixed mounting

 2XD 011 557-201
 Fig. 2
 Pipe socket mounting

 2XD 011 557-301
 Fig. 3
 Magnetic mounting

Also available as a version with a black housing: 2XD 011 557-841 Fig. 4 Fixed mounting

**2XD 011 557-841 Fig. 4** Fixed mounting **2XD 011 557-811 Fig. 5** Pipe socket mounting

min. ← → max.

Warning effect

Robustness

Lifetime

Suitable for continuous operation

## K-LED Rebelution

Height 60 mm, Ø 149 mm\* Height 105 mm, Ø 149 mm\*\*



Multi-voltage 12/24 V, rotating or flashing light function, upright position of use, polycarbonate light ring, total current consumption of rotating light 1.1 A (12 V)/0.5 A (24 V), power consumption of rotating light 12 W, total current consumption of flashing light 3.1 A (12 V)/1.6 A (24 V), power consumption of flashing light Ø 14 W, max. 38 W, degree of protection IP 6K7/IP 6K9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 3 (rotating), CISPR 25 Class 5 (flashing)



2XD 455 255-001 Fig. 1 Fixed mounting, flashing 2RL 455 256-001 Fig. 1 Fixed mounting, rotating Warning effect 2XD 455 255-011 Fig. 2 Pipe socket mounting, flashing Robustness 2RL 455 256-011 Fig. 2 Pipe socket mounting, rotating Lifetime 2XD 455 255-021 Fig. 3 Magnetic mounting, flashing Suitable for continuous operation 2RL 455 256-021 Fig. 3 Magnetic mounting, rotating





# K-LED Blizzard

Height 88 mm, Ø 149 mm\* Height 132 mm, Ø 149 mm\*\*

Multi-voltage 10-30 V, flashing light function, double flash signal, upright position of use, crystal-clear polycarbonate light dome, amber LEDs, total current consumption approx. 1.3 A (12 V)/approx. 0.7 A (24 V), power consumption Ø 16 W/max. 48 W, degree of protection IP 6K7/IP 6K9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 5



2XD 012 980-001 Fixed mounting Fig. 1

2XD 012 980-011 Fig. 2 Flexible pipe socket mounting

2XD 012 980-021 Fig. 2 Magnetic mounting

min. ← → max. Warning effect Robustness Lifetime Suitable for continuous operation



# **KL 7000 LED**

Height 119 mm, Ø 165 mm\* Height 194 mm, Ø 165 mm\*\*

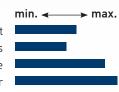
Multi-voltage 10-30 V, rotating light function, upright position of use, PMMA light dome, total current consumption 0.8 A (12 V)/0.4 A (24 V), power consumption max. 9 W, degree of protection IP 5K4K/IP X9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 5



2RL 011 484-001 Fixed mounting 2RL 011 484-011 Fig. 2 Pipe socket mounting

2RL 011 484-021 Fig. 3 Magnetic mounting

Warning effect Robustness Lifetime Suitable for continuous operation



<sup>\*</sup> Dimensions for fixed attachment variant \*\* Dimensions for pipe socket mounting variant



# Rota LED Compact

Height 119 mm, Ø 165 mm\* Height 164 mm, Ø 165 mm\*\*



Multi-voltage 10-30 V, rotating or flashing light function, upright position of use, amber polycarbonate light dome, power consumption  $\emptyset$  10 W/max. 30 W, degree of protection IP 6K7/IP 6K9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 5



2XD 013 979-001 Fig. 1 Fixed mounting, flashing
2RL 014 979-001 Fig. 1 Fixed mounting, rotating
2XD 013 979-011 Fig. 2 Flexible pipe socket mounting, rotating
2XD 013 979-021 Fig. 3 Magnetic mounting, flashing

Magnetic mounting, rotating

win. ← → max.

Warning effect

Robustness

Lifetime

Suitable for continuous operation

## K-LED 1.2

2RL 014 979-021 Fig. 3

Height 123 mm, Ø 169.5 mm\* Height 196.5 mm, Ø 169.5 mm\*\*



Multi-voltage 10-30 V, rotating or flashing light function, upright position of use, amber polycarbonate light dome, total current consumption of rotating light 1.6 A (12 V)/0.8 A (24 V), power consumption of rotating light max 20 W, total current consumption of flashing light 1.8 A (12 V)/0.9 A (24 V), power consumption of flashing light  $\emptyset$  22 W, max. 53 W, degree of protection IP 6K7/IP 6K9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 5



2XD 012 984-301 Fig. 1 Fixed mounting, flashing
2RL 012 983-301 Fig. 1 Fixed mounting, rotating
2XD 012 984-401 Fig. 2 Pipe socket mounting, rotating
2RL 012 983-401 Fig. 2 Pipe socket mounting, rotating







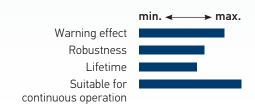
# K-LED NANO

Height 68 mm, Ø 146 mm\* Height 125 mm, Ø 109 mm\*\*

Multi-voltage 10-32 V, flashing light function, upright position of use, amber polycarbonate light dome, total current consumption 1.6 A (12 V)/0.8 A (24 V), power consumption max. 19 W, degree of protection IP 6K7/IP 6K9, SAE Class 1, ECE R65 and ECE R10 approval, CISPR 25 Class 5



2XD 066 146-001 Fig. 1 Fixed mounting 2XD 066 146-011 Fig. 2 Pipe socket mounting







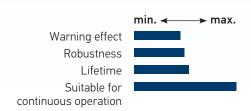
FL Mini Height 111.5 mm, Ø 98 mm

Multi-voltage 10-80 V, flashing light function, upright position of use, polycarbonate light dome, power consumption max. 8 W, degree of protection IP 67/IP 9K, SAE J845 Class 3, UL certified and ECE R10 approval



2XD 014 959-111 Fixed mounting, flashing

Recommended for industrial trucks on commercial/ non-public premises. Not approved for use on public roads in the European Union! Outside the European Union, please observe the national requirements.



<sup>\*</sup> Dimensions for fixed attachment variant \*\* Dimensions for pipe socket mounting variant

# KL 7000

Height 194 mm, Ø 155 mm\* Height 240 mm, Ø 155 mm\*\* (Fig. 3)



With H1 bulb, rotating light function, upright position of use, amber polycarbonate light dome, power consumption max. 55 W/12 V, 70 W/24 V and 42 W/230 V, degree of protection IP 5 K4 K/IP X9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 3



Magnetic mounting, 12 V

Magnetic mounting, 24 V

2RL 008 061-101 Fig. 1 Fixed mounting, 12 V ➤ max. 2RL 008 061-111 Fig. 1 Fixed mounting, 24 V Warning effect 2RL 008 064-101 Fig. 1 Fixed mounting, 230 V Robustness 2RL 008 060-101 Fig. 2 Pipe socket mounting, 12 V Lifetime 2RL 008 060-111 Fig. 2 Pipe socket mounting, 24 V Suitable for continuous operation Flexible pipe socket mounting, 12 V 2RL 008 063-101 Fig. 3 2RL 008 063-111 Fig. 3 Flexible pipe socket mounting, 24 V

# Rotafix/Rotaflex

2RL 008 062-101 Fig. 4

2RL 008 062-111 Fig. 4

Height 174 mm, Ø 130 mm\* Height 222 mm, Ø 130 mm\*\*



With H1 bulb, rotating light function, upright position of use, amber polycarbonate light dome, power consumption max. 55 W/12 V and max. 70 W/24 V, degree of protection IP 5K4K/IP X9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 3









# Rota Compact

Height 157 mm, Ø 132 mm\* Height 217 mm, Ø 135 mm\*\*

With H1 bulb, rotating light function, upright position of use, amber polycarbonate light dome, power consumption max. 55 W/12 V and max. 70 W/24 V, degree of protection IP 5K4K/IP X9K, SAE Class 2, ECE R65 and ECE R10 approval, CISPR 25 Class 3



2RL 009 506-201 Fig. 1 Fixed mounting, 12 V 2RL 009 506-211 Fig. 1 Fixed mounting, 24 V 2RL 009 506-001 Fig. 2 Flexible pipe socket mounting, 12 V 2RL 009 506-011 Fig. 2 Flexible pipe socket mounting, 24 V Magnetic mounting, 12 V 2RL 009 506-301 Fig. 3

2RL 009 506-311 Fig. 3 Magnetic mounting, 24 V

➤ max. Warning effect Robustness Lifetime Suitable for continuous operation



**SLIM BEACON** 

Height 50 mm, Ø 142 mm



Multi-voltage 10-30 V, flashing light function, upright position of use, amber polycarbonate light cover, total current consumption 2.1 A (12 V)/2.1 A (24 V), power consumption Ø 10 W, max. 24 W, degree of protection IP 67/IP 69K, SAE Class 1, ECE R65 and ECE R10 approval



2XD 357 980-001 Fixed mounting



<sup>\*</sup> Dimensions for fixed attachment variant \*\* Dimensions for pipe socket mounting variant

# **OWS-E-LED**

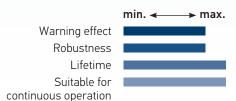
Height 177 mm, width 1000/1400/1600 mm



Multi-voltage 10-30 V, optical LED warning system in three different widths, flashing light function, upright position of use, total current consumption 2 x 1.3 A (12 V) and 2 x 0.7 A (24 V), power consumption max. 32 W, degree of protection IP  $\frac{5K4K}{IP 9K}$  (OWS)/IP  $\frac{6K7K}{IP 9K}$  (electronics), ECE R10 approval, CISPR 25 Class 5



**2RL 007 900-311** 1000 mm wide **2RL 007 900-321** 1400 mm wide **2RL 007 900-331** 1600 mm wide



# Modular Lightbar

Height 52 mm, width 1067 mm/1372 mm



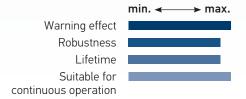
Multi-voltage 10-30 V, optical LED warning system in the form of a lightbar in different widths, flashing light function, upright position of use, incl. bracket for raised mounting, 4,000 mm cable with open cable end, power consumption: 5 modules Ø 80W, 7 modules Ø 90W, degree of protection IP 6K4K/IP X9K, ECE R10 approval, CISPR 25 Class 3, RCM



**2RL 014 567-011** 1067 mm width (5 centre modules) **2RL 014 567-021** 1372 mm width (7 centre modules)

Incl. wired control unit





# Micro Lightbar

Height 50 mm, width 255 mm



Multi-voltage 10-30 V, rotating or flashing light function (user-defined flashing pattern), polycarbonate light dome, amber warning signal, clear or amber cover lens, upright position of use, total current consumption approx. 6.2 A (12 V)/approx. 2.9 A (24 V), power consumption 66-72 W, degree of protection IP 6X/IP X4K/IP X9K, ECE R65 and ECE R10 approval, CISPR 25 Class 3



Amber cover lens
2RL 014 566-201 Screw mounting, connecting cable 500 mm
2RL 014 566-211 Mounting by bracket, connecting cable 500 mm
2RL 014 566-221 Magnetic mounting, connecting cable 2,500 mm

Clear cover lens
2RL 014 566-001 Screw mounting, connecting cable 500 mm
2RL 014 566-011 Mounting by bracket, connecting cable 500 mm

2RL 014 566-021 Magnetic mounting, connecting cable 2,500 mm

Warning effect
Robustness
Lifetime
Suitable for
continuous operation

# Mini Lightbar

→ max.

Height 50 mm, width 400 mm



Multi-voltage 10-30 V, rotating or flashing light function (user-defined flashing pattern), polycarbonate light dome, amber warning signal, clear or amber cover lens, upright position of use, total current consumption approx. 6.1 A (12 V)/ approx. 2.8 A (24 V), power consumption max. 70 W, degree of protection IP 6X/IP X4K/IP X9K, ECE R65 and ECE R10 approval, CISPR 25 Class 3



| Amber cover lens |  |                      | min. ← → max. |
|------------------|--|----------------------|---------------|
| 2RL 014 565-201  | Screw mounting, connecting cable 500 mm      | Warning effect       |               |
| 2RL 014 565-211  | Mounting by bracket, connecting cable 500 mm | Robustness           |               |
| 2RL 014 565-221  | Magnetic mounting, connecting cable 2,500 mm | Lifetime             |               |
|                  |  | Suitable for         |               |
| Clear cover lens |  | continuous operation |               |

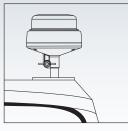
2RL 014 565-001 Screw mounting, connecting cable 500 mm
2RL 014 565-011 Mounting by bracket, connecting cable 500 mm
2RL 014 565-021 Magnetic mounting, connecting cable 2,500 mm

# Accessories

### Beacons



# Mounting examples



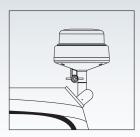
Socket pipe with base plate for screwing on



Socket pipe, angled, with base plate for screwing onto side



Socket pipe with screw mounting



Socket pipe, pivoting

# Electromagnetic compatibility (EMC)

### WHAT IS EMC (ECE R10)?

Electromagnetic compatibility (EMC) describes two factors that are major quality features for optical signalling systems:

- → Radiated interference: the limitation of radiated electromagnetic interference to a level that guarantees the operation of other devices in the environment without interference.
- → **Immunity to interference:** guaranteeing sufficiently high resistance to electro-magnetic interference acting from the outside

The legal foundations for this are CISPR 25 as well as ISO 7637 and 11452.



### **CISPR 25 PROTECTION CLASS STANDARD**

CISPR 25 is the standard for emitted interference: it applies a classification of 1 to 5. In doing so, category 5 products satisfy the most demanding requirements and are even suitable for surface mounting situations directly next to an aerial. The statutory standards are met by category 3, which guarantees adequate protection in standard practice. Most HELLA lighting systems satisfy at least category 3, many even category 5, and guarantee absolute functional safety in all application situations.

ECE R10: Minimum standard

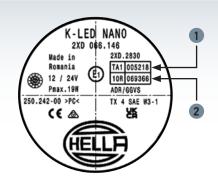
CISPR 25 Class 3: supplementary standard

CISPR 25 Class 5: Complies with automotive standard

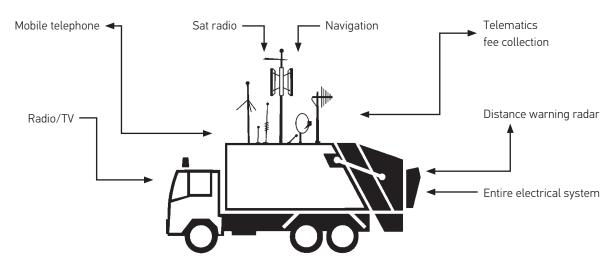
Only beacons that have both of these test numbers are authorised for use on public roads.

1 ECE-R65

2 ECE-R10



### **ELECTROMAGNETIC INTERACTIONS**



# The choice is yours - the HELLA beacon range

The strong warning effect of HELLA beacons sends out signals when it counts. Depending on the desired surface mounting and application situation, you can choose between different criteria and performance factors.

# min. ← → max. Warning effect Robustness Lifetime Suitable for continuous operation

### **WARNING EFFECT:**

Safety through visibility! The optimal light bundling and distribution offers high range and luminous intensity. LED beacons have a particularly high warning effect.

### **ROBUSTNESS:**

The material of the housing and the light dome, the workmanship, the lighting technology and the design are decisive for the robustness. This is achieved, for example, with polycarbonate housings and light domes, fully encapsulated beacons and flexible pipe socket mounting (which return to their original positions even after contact with branches, etc.).

### LIFETIME:

The technology used as well as the material influence the lifetime of the beacons. LED beacons are particularly durable.

### SUITABLE FOR CONTINUOUS OPERATION:

Safety when it counts. The range includes the right beacon for every duration of use. Even in 24/7 continuous operation.

# IP degree of protection

### WHAT IS AN IP DEGREE OF PROTECTION?

IP stands for International Protection. The IP degrees of protection are determined according to DIN 40 050, Part 9. The purpose of the standard is to provide an exact definition of the electrical equipment of vehicles against the ingress of solid foreign objects including dust, and against the ingress of water. The varying degrees of protection important for signalling systems are explained in more detail below.

### **PROTECTION CLASS IP 5K4K**

Dust may only penetrate to such an extent that the function and safety are not impaired. Water splashing against the housing from any direction at increased pressure must have no harmful effects: Water pressure approx. 4 bar.

### **PROTECTION CLASS IP 9K**

Water that is directed onto the housing during high pressure/steamjet cleaning must have no harmful effects: Water pressure approx. 80-100 bar.

### **PROTECTION CLASS IP 6K7**

Dust must not penetrate. Even during temporary immersion, no water is to penetrate. HELLA products meet the highest requirements and are optimally protected against all weather conditions.

### **Features**

#### Description

### Vehicle electrical system voltage



Defines the power supply of the lamp. This can be  $12\,\text{V}$ ,  $24\,\text{V}$  or a flexible voltage range for multivoltage (8 –  $33\,\text{V}$ ). "Multi-voltage" is the most flexible: it requires fewer versions, but has more electronic components and is therefore more expensive.

### Dust and water protection IP









POKTK

International Protection (IP) according to DIN 40050, Part 9. Specific definition for road vehicles. 5K = dust protected!

6K - dust protec

6K = dustproof

9K = protection against water during high-pressure/steamjet cleaning.

### Thermal management



Active

Active thermal management enables a very long lifetime.

### Operating temperature



Thermal management and an optimised housing design guarantee full functioning for all operating temperatures as a result of product testing ranging from -40° C to +60° C, for example.

### Continuous operation



Suitable for continuous operation without a break.

### **Energy Saving**



Using LEDs is particularly energy efficient and offers potential for energy and cost savings compared to halogen technology.

### Polarity reversal protection



Even if the connecting cable is connected with reverse polarity, there is still no danger to the electronics.

### Overvoltage protection



Supplement to electronics to protect the LED against high voltages/currents in the vehicle network as per ISO 7637-2.

# Approved for dangerous goods transport



Lamp approved for dangerous goods transport according to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

### Electromagnetic compatibility









Electromagnetic compatibility (EMC) tested and EU type approval issued.

### ECE-R65



Defines the light values to be achieved, the light distribution and also colour location of beacons. Only beacons that fulfil ECE R65 can be used on public roads.

### HELLA GmbH & Co. KGaA

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